

**LESSON : 1**  
**MISCONCEPTS OF HEALTH COMPONENTS OF HEALTH**  
**PHYSICAL & MENTAL HEALTH**

**AIM: -**

After going through this lesson you can –

- Understand the common mis-concepts of health.
- Understand different health conception and factors effecting it.
- Learn and bring into practice different ways of improving physical and mental health.

**SUBJECT:**

- 1. Health**
  - 1: 1 Introduction
  - 1: 2 Mis-Concepts of health
  - 1: 3 Health definations
  - 1: 4 Phylosophy of life
- 2. Different Extensions of Health**
  - 2: 1 Physical
  - 2: 2 Mental
  - 2: 3 Social
  - 2: 4 Spiritual
  - 2: 5 Emotional
  - 2: 6 Professional
  - 2: 7 Other
- 3. Factors determing health**
  - 3: 1 Hereditary
  - 3: 2 Environment
  - 3: 3 Life Style
  - 3: 4 Social, Economical Factor
  - 3: 5 Health Services
- 4. Physical Health and its care**
- 5. Mental health and its care**
  - 5: 1 Helping factors of mental health.
  - 5: 2 Symptoms of mental health.
  - 5: 3 Mental Health and joint personality.

**HEALTH**

From ages health is considered as identical factor of all culture and civilization. May be that the form of health changed with the change of civilization. It is seen that always every culture had its own definition and attraction towards health. Every human being either a king or a poor, a man or a woman, a young or an old wants to be healthy. Each and every one desires to have good health, the one who understand the valve and always tries to achieve or the one who does not understand or know the merits and advantages of Health. So, now the question arises – What is health? Generally, Lack of disease in body is considered to be good health. In many ancient culture health & harmony is considered to be one. Harmony is considered to be an undivided and balanced component of Self, Society, God and the universe. Based on this concept only the ancient Indian and Greek thinker investigation have given a wrong notion – that whenever there is an imbalance in the physical harmony of a body than it gets a disease and the health is effected.

Whenever our health is effected we start finding its treatment and cure and least bothered regarding our health. That time we think only about the disease and its cure. We find that modern therapy system helps us in curing our disorders, because it is not related to health, it is only concerned with disease. Because these modern therapy system do not focus on the progress of health, they only project on the treatments of disease and that is why we are unaware of the mis-concepts of health. Today we all know the factors which are responsible for different types of disease, but we do not know which are the factors responsible or helps us towards good health. There are many different types of instrument which can identify and measure the intensity of any disease, but we have only few countable instrument to assess good health. So it really very important to improve and progress in this field. Through which we can know how to progress gradually in this direction.

After investigating the situation, the conclusion derived tells that ignorance is not the only reason behind. Actually in our real life, we find that whatever importance we give to money, power, position, status etc. We do not give even a percentage of it to our health. It has been seen personally that until and unless our health reaches to savageous stage, we do not take care of it. Not only this, but if we study on social, national and international level we find that health has been given least value. After the first world war, when the bill was announced by the group of nation - health had no place in it. It was added later. Similarly after second world war when UNO has announced their declaration – health had no place in it and later on it was added. Health was not an important topic of discussion in the conference organized by UNO in Sanfransisco in 1945.

But in last two decades in changing situation and new environment, people have become quite aware of health. Now they are trying to present health in form of cardinal human right. Now all over the world health is presented in as a social need. Now the stress in on the qualitative life rather than quantitative, means a healthy life rather than a long life. In 1977 it was decided by World Health Organisation (WHO) that in coming years, government of all nations along with WHO will decide, that each and every human being should get a chance to live a healthy life beside living a useful and meaning ful life. This proposal was accepted by UNO in 1979 that health is an important factor of social and economical progress. The acceptance not only gave importance to health, but it was also considered as an important factor in social progress.

### **MIS CONCEPTS OF HEALTH:**

To know and understand what health is ? first we have to understand all different mis-concepts related to it. It is also important to know health because it is defined differently in different spheres of the society. And also it principles are different in each and every spheres' but due to new search and investigations the definition of health kept on changing and new ideas came in front. Health has been considered from personal to social level world wide. And now it is considered as to be a qualitative base of human life. It is necessary to know the true definition of health in every specific spheres of society.

**They are as follow:-**

1. Bio – Medical Misconcepts
2. Environment misconcepts
3. Psycho – Social Misconcepts
4. Over – all view

(1) **BIO – MEDICAL MISCONCEPTS:** Generally lack of any disease in the body is said to be a healthy body and the person is considered as healthy person. On the basis of this a notion came into existence called, “Bio-medical – mis-concept” and which was very popular in modern medical science in 20<sup>th</sup> century. According to modern medical science a body works as a machine and whenever there is a disorder in the machine it appears in the form of a disease, and then the responsibility of medical science is repair the system. So then it is concluded that the aim of health is limited only up to few medicines. This concept

explained the importance or contribution of environmental, Social, Physiological or cultural factors effecting health. So in spite of the success of medical science, it was unable to solve many disease such as' lack of nutrition, intoxication, mental disease, environmental, pollution, increase in population etc; had no solution in medical science, and that is why health did not expected importance in medical science.

(2) **ENVIRONMENTAL MISCONCEPTS:** The short comings and failure of medical science gave birth to other mis-concept. Environmentalist brought a very interesting imagination, which said that there is a strong balance between human being, health and the environment and all the disease are the result of imbalance between them. According to Dubose a famous environmentalist, "Health is that state in which pains and inconvenience are in negligible amount and are in balance with environment. Due to which all our activities mental or physical function smoothly. The change in environmental and cultural balance not only give birth to diseases but also effects the availability of food and also in the increase of population. And which finally effect health. Environmental mis-concepts mainly give rise to two points. (1) Imperfect Human being. (2) Imperfect Environment.

Imperfect human being means – imbalanced behaviour of person, whereas imperfect environment means – imbalance in essential factors of environment. From the study of all these it is concluded that good health and long life is the result of balanced behaviour of man and nature; although it lacks the facilities of modern medical science. The give and take process between man and nature non stop goes on development of a human being is also due to these environmental happenings. In which even form or proportion these factors are present during our birth with the same proportion these factors changes and are present in the body. And for all activity environment is very helpful. So we find that if the process of give and take between nature and man is smooth and balanced than the body remains healthy.

(3) **PSYCHO – SOCIAL MISCONCEPTS :** The contemporary investigation in the field of social science has shown that health does not has its limitation only up to Bio-science, but it is effected by many social, psychological, cultural, economical, political factors also. The rules and regulation any specific field has indirectly deep effect on human health. The daily routine of a person is affected by psychological situation, thinking etc., and cultural practices compel a man to follow old ideologies. Economic factors effects the standard of living of a man deprives him of getting the necessities of life. Due to political factors, government aids and services do not reach a common man. So we have to take all these factors into account while estimating the health of a society. Here one more thing should be cleared that health is also affected in the same way by social or organic factors also. That is why we cannot ignore any of these.

(4) **OVER ALL VIEW :** If we mix all the 3 mis-concepts discussed above, than over all view comes out in which all Social, economical, political and environmental are given importance and graphed. We can say that over all view is derived after including all the above factors. It is a multi-dimensional process in which person's health is estimated in on environmental outlook along with all above mentioned factors. And further efforts were made to progress towards the best. This mis-concept is similar to a very ancient Indian belief in which it had been said "A healthy mind can only dwell in healthy body, healthy family and healthy environment". According to over all view all the fields of a society i.e. agriculture, cattle farming, food, industry, education, residence, social and public activity, communication etc – they all effect health in some or other form. But the aim of all these is to nourish and protect good health.

### **DEFINATIONS OF HEALTH**

We all know what health is? But when it comes to define it is really difficult. This is the reason why everyone has defined it differently. Every institution, thinker or scientist have given their view in different way. Important one are given as follows:-

- (1) **According to Webster:** A combined and excellent stage of body, mind, and consciousness in which there is no physical disease or pain is called health.

- (2) **According to Oxford English** : Health is a stage of mind and body when they are fully active and function smoothly, on time and with their full capacity.
- (3) **According to World Health Organisation (WHO) report No.137 in 1957** : When the qualitative stage of a person's routine works smoothly and in time in any genetic or environmental level, then it is called health.
- (3) **According to Devbose, R 1968** : Health is such a preface of human life, which enables a man to lead his life peacefully in adverse circumstances in complete world.
- (4) But commonly accepted definition is given by WHO in 1948 in its constitutional proposal. Definition was as follow:-

"Health is a stage of complete balance between physical, mental, social factors and not only lack of disease or helplessness of a body". In later year this definition was revised and was explained in much better way; in which it was said, "Health is physical, mental, and social balance of life alongwith economical and social forms".

Some have criticised WHO'S definition – saying that it is not practical, at all, it is only idealistic. According to it – Health is not a stage but it is an art or capacity of balancing in the ever changing situation. A person can enjoy life because of good health. These critics agree that this definition of course is suitable with the life style of few people but not with every ones, in every situation on every society. Some people has taken this definition unrelavent because hardly there is some one who is biologically, psychologically or socially active. So this means if we accept this definition, then according to it no one is healthy – every is sick. After considering all we come to an conclusion that, the definition given by WHO is preferably good and can be accepted. And to achieve good health we use this definition as our base.

### **PHILOSOPHY OF HEALTH**

In recent years philosophy of health has been given new acceptance. The main principles of it are as follows:-

- (1) Health is an important part of Development.
- (2) Custody of Health is an important social responsibility .
- (3) Health is combined responsibility of man, society, nation & world.
- (4) Health is the pivot point of qualitative & meaningful life.
- (5) Health is the mirror of life.
- (6) Health is an Cardinal Human Riight.
- (7) Misconcept of Health are not related to any caste or creed.
- (8) Health is the aim of world.

When we give an over all view to all the above mentioned principle then it becomes philosophy of life. The success of any philosophy depends upon its practical use its principles. And all the principle mentioned in philosophy of life are not only use full a particular human being but they are the foundation, the base of progress of human civilization.

### **DIFFERENT DIMENSIONS OF HEALTH**

There are many dimensions of health but 3 main dimensions are commonly excepted, they are Physical, Mental and Social dimensions. Many scientist , philosopher & thinker have discussed about other dimensions also e.g: Spiritual, Emotional, Vocational and Political dimensions. According to Acharya Mahapragy among physical, mental, knowledgeable and emotional dimensions, emotional dimension is most effective. Due to this dimension most of the radical changes in health and personality is seen. Though all these dimensions works independently but they all influence each other by working independently. All these has their own specific quality and it is important to understand each of them.



**(1) PHYSICAL DIMENSION:** A body working according to its need in a balanced way is called physical health. Biologically if we see then we find that each cell, each organ of our body, when function with their full capacity, helping each other and maintaining the equilibrium of the whole body - This state of the body is called physical health. It can also be considered as clean skin, bright eyes, dark black hairs, fit body, smooth breathing, good urge of eating and drinking, sound sleep, smooth functioning of excretory system etc., We can also see good physical health if all the organs of the body are well developed, work in normal way – sense organ functioning normally, normal blood pressure and normal functioning of nervous system.

**(2) MENTAL DIMENSION :** Good mental health does not mean absence of any mental dimension. But mental health is to work according to the situation, balancing intelligibly and effectively. According to new definition of mental health – Balance between a man and its environment, with the world, amenity between us and others, being courteous in nature, realization of self and others with the feeling of co-existence is known as mental health.

Few decades back body and mind has got recognition as independent entity, which does not influence each other. But according to modern scientist body and mind influence each other completely. New research has proofed it that psychological reason not only give birth to mental problem but due to them many disease which comes in the category of physical disease arises, e.g – High blood pressure, peptic ulcer and bronchial asthma. Not only these but there are many disease which are connected to mind but arises due to the biological and physical disorders, e.g. Sadness, illusion etc., So, it is proofed that for mental health the balance between psychological, biological and practical activity is essential. Only the balance of all mental activities are not sufficient enough to keep mental health strong.

Although mental health is an important factor for stability, its scientific fundamentals are not very clear. And may be because of this only, the mechanical techniques to analyse mental health were not developed. It is analysed only on the basis of psychological questions test and some instruments.

**(3) SOCIAL DIMENSIONS:** The simple meaning of social health is the feeling of friendliness for the society and also for the whole humanity. In other words we can also say social health means limitation and quality of mutual relations of a person and the society. A persons inclinations and capability towards social activity and his dedication towards the society can be considered as his good social health. A man is a small unit of a family and a society is made up of many such families – So personal contribution of a person stands for social health.

**(4) SPIRITUAL DIMENSION:** Life is of 2 types – Aimless and Aimful, who are we ? From where did we come ? Where will go ? What is the meaning & aim of our life ? To lead the life for finding the answers to these questions is known as aimful life. And this is the first stage of spiritual dimension. Leading aimful life balances all the activities, behaviours and daily routine of a human being. And anyone from any field can go on this path. The difference is only that the person leading such life thinks or behaves some what in which his physical & mental action rises up from the level of reactions and he naturally from common man to an important man. In this type of life style important place is given to physical –mental indivisibility, ethics, compliance of life values and the urge to do something very special in life. Existence of these qualities only rises the level of health and life of a person.

**(5) EMOTIONAL DIMENSIONS :** Health's emotional dimensions is related feelings. In mental dimension where we have discussed about the different factors related to knowledge and cognition, when we bring this knowledge and cognition to our level of mind and we feel them and define them on the basis of there mutual relation and when we are ready to derive any imaginative result then that comes in the category of emotional health. Scientist have tried to analyse it in detail, under a branch in science called psychobiology. When we imagine the result of any incidence or experience either negative or subjective it badly influences our health and the result are normally aggressiveness or tension.

**(6) VOCATIONAL DIMENSIONS:** Every man adopts a work field. And his workfield becomes the source of his living and also an undetachable part of his life. This field only is known as vocational or his career. And this professional knowledge get attached to his health and influence his health. A man's position recognition increase according to the nature of his professions, its result its obstacles, its respect and recognition and respect in the society. A person estimates himself best or most according to his profession and due to it only his self – respect and level of confidence increase or decrease. These all directly influence his health. A person who is well settled, well – satisfied, well recognised and has good position in society is definitely healthy.

**(5) OTHER DIMENSIONS:**

*Some of the less influential dimensions are listed below:*

- (1) *Philosophical Dimensions*
- (2) *Cultural Dimensions*
- (3) *Socio – economic dimensions*
- (4) *Environmental dimensions*
- (5) *Educational Dimensions*
- (6) *Nutritional dimension*
- (7) *Curative dimensions*
- (8) *Preventive dimension*

All above mentioned dimensions are some or how related to a man and the changes in them influences the health. It is not necessary that all the dimensions should be medial in nature – eg – Cultural, Education and Social. Altogether they help to raise the health of a man to that stage where he leads a healthy and meaning ful for himself and for society. Lack or imbalance of any of these effects the health and creates problem in life.

**DETERMINANTS OF HEALTH:**

Health of a person depends on many factors. These factors can be interpersonal or can be external in the environment or society in which the man lives. Mainly there are two reasons for the disorder in health. First one is related to man's birth that is Hereditary. Second are those which are related to the environment in which a man lives. Cause of any disease depends upon the co-ordination of these both. Many times, positive and qualitative progress has been seen due to the mutual co-ordination of both. So it is understood now that health depends upon the balanced and imbalanced activities of internal and external factors. The factors of these 2 are many but some important ones are discussed below:-

- (1) Heridity
- (2) Environment
- (3) Life Style
- (4) Socio-economic conditions
- (5) Health Services
- (6) Others

(1) **HERIDITY:** It is clear from the biological construction of a human body that what ever qualities are found in him were decided during his birth by his genes in his chromosomes, and once it is decided genes cannot be changed. So it means that we cannot even change our own qualities. Every human cell has 23 pairs ( total 46) of quality and genes are placed on them. During ovulation, 23 qualities from father and 23 quality comes from mother. They both combine and in this process genes are re-suffled, which changes the numbering of the genes in such a way that some qualities comes in focus in the form of hereditary disease in front of us. These disease influences the health for life time. And than the human being has to face problems in leading a normal life. These diseases are non-curable. Thelusmeia and diabetes are burning examples of this.

(2) **ENVIRONMENT:** Environment affecting human being can be classified into 2 parts. (1) Internal environment (2) External environment. Internal environment is related to bodies each cell, each organ, each system and not only to their co-existence but also balance and homeostasis between mechanical and bio-chemical activity of these. The different types of activity performed by these creations determine the health of a human being. External environment which is also known as macro environment is related to those external objects or situation which are attached with human being after his birth. Means the things which are around him, which surrounds him. External environment can be divided into physical, biological and psychosocial categories. Summer, Winter, Rain, Dampness, air, and all climate, related things comes in physical category. Adverse change in this effects the health, mutual activity of other living things ( tree, creatures etc.) also effects the health. Due to these living beings human beings biological and bio-chemical activities are effected and which in turn effects the health.

Residence, environment of living, fulfillment of water and electricity, psychosocial tensions, family environment and relation with society, monetary help etc., are factors which effects health falls in psychosocial category. The environmental factors of all these 3 are co-related in such a way that cannot we can study them individually. Whenever we discuss about environment factors then we have to take these 3 jointly and analyse straight and simply. If we see we find that when environment is favourable than a man can utilize all his mental and physical powers nicely, which in turn result a good health – mentally & physically. May be this is the reason that, no the aim of whole world is to bring qualitative progress in family and environmental situations.

(3) **LIFE STYLE :** Social values, following traditions, daily routine and behaviour - they all together are known as life style. Along with all cultural and practical ways, man's personal habits are also included in it. E.g. Smoking & Drinking etc. Many aspects of life style are learned from parents, elders, friends, college etc., The eating habits, the way of communication with people, timings of eating, sleeping etc., are such normal things which seems to be very simple but even they influence the whole family's, Society's and personal health. The figures of scientific research shows clearly that there is a definite relation between life style and health. The mechanical life of developed and is cause of many serious disease ( Heart disease, Lung Cancer, Intoxication) arising there little bit of change in life style are helpful in progress of health. Eg. Adopting healthy food habits, Sufficient Sleep, Including Yoga & Exercise in daily routine etc. For having excellent health we have to adopt health promoting Life Style.

(4) **SOCIO – ECONOMIC CONDITIONS:** It is a truth that social & economical conditions of a place effects the persons health. It has been found by the research done by many countries, that the health of that particular country changes according to the socio-economic condition. Per capita income, education, opportunities of employment, nourishment, standard of living and political system are the factors of social and economical changes and they should be analyse. Among these factors economical status, education and political system are the most important one.

- (i) **Economical Status:** - The best way assess economical status of a country a group is to assess per capita income. And the research figures shows the improvement in economical status has reduced the death rate. It increases the average age and improves the quality of living ( List – 1) Economical status determines the trading power, life style of citizen, quality of living, results of family, birth of disease and common people's reaction on it. The progress of health increase & decrease with economical status. So finally it can be said now that economical status in the mirror of health.

High economical status doesn't always mean good health. Many economically sound countries are problems of many serious disease like heart problems, diabetics, etc.,

**LIST – I: SELECTED HEALTH & SOCIAL SELECTORS 1995:**

Sr.	Subject	Underdeveloped countries	Developing countries	Developed countries
1.	Life expectation on birth (in years)	50.6	62.4	74.5
2.	Death Rate (Per 1000)	119	62.4	14
3.	Death rate in 1-2 years of age (per 1000)	33.4	20	2.4
4.	Doctors-Population ratio (per 1000)	1.6	4.7	25.1
5.	Nurses-Population ratio (per 1000)	2	7.5	51.6
6.	Average per capita income (in U.S \$,1993)	213	520	16,000
7.	Per capita national health loss (in U.S.\$,1991)	5	20	2000
8.	Rate of Adult Education	40	65	97

- (ii) **EDUCATION:-** Rate of education also influences the health of a common man. Specially final education plays an important role in uplifting personal and health of society. The graph of poverty, ill nourishment, sickness, infant death rate etc, the health related problem, goes with the graph of illiteracy. Only education can bring wakefulness for health in the society. And than only we can over come the above mentioned problem and can be helpful in maintaining health of a common man.
- (iii) **OCCUPATION:** Working in for the business of his taste and to be satisfied by: Where as unemployment and anxiety for future makes a man sad and sick. Unemployment and unwillingness towards occupation develops guilt feeling in a person. And if this situation prolongs then results are disrespect in society and many other types of psychological problems arises due to economical problem, which harms the health very badly.
- (iv) **POLITICAL SYSTEM:** Political system also influences health. The politicalization of health services had unabled them to reach a common man. In multiparty political system, each party has their own agendas of them own interest. Because of this the policies and decisions of non technical health services are not granted and a common man is deprived of getting those services. We can raise the level of health in political system by allotment of processings, introducing mass power using policies, and by determing right technique.

(5) **HEALTH SERVICES:**

Many different programes are organized under health and family welfare services in which comes treatment of disease of a person and mass, control of disease and health nourishment. The aim of these programe is to bring progress in health. Immunization help to fight many disease in children. Many dangerous disease arising from water can be controlled by the availability of clean water. Death rate of mother and child can be controlled by taking proper care of pregnant lady. Life at national level can be improved by proper health service in down trodden or lower class of the society. Near about all the states try to achieve the goal of good health under primary health service.

- (6) **OTHER FACTORS:** Besides above mentioned factors there are some factors also, which influence the health of common mass such as : - Agriculture and food grains, Social welfare, Rural development, Population, Normal Social environment are the factor which influences the health of common mass. The determination and activation of all policies of health services should be decided by keeping these factors in mind, then only there will be progress in the state of health.

#### **PHYSICAL HEALTH AND ITS CARE:**

Physical health is an important factor of complete health. In it comes total care of each and every part of body and to practice those things, which are helpful in smooth functioning of their parts. These parts and System are taken care under physical health.

- (1) Skin
- (2) Hair
- (3) Teeth
- (4) Eyes
- (5) Ears
- (6) Nose
- (7) Hand & Legs and their nails
- (8) Digestive System
- (9) Respiratory System
- (10) Circulatory System
- (11) Reproductive System

- (1) **CARE OF SKIN:** Skin is made up of external skin called “EPIDERMIS” and internal skin called “DURMIS” and between them is found oil glands and perspiration. Skin protect our body, it helps in temperature regulation. It also works as excretory organs. Following are the ways to take care of our skin: -

- (i) Regular bath:- Cold water bath, warm water bath, steam bath & oil bath.
- (ii) Blanced Diet
- (iii) Use of mosquito net
- (iv) Use of safe cotton cloth.
- (v) Minimum use of cosmetic

- (2) **HAIR CARE:** To some extent state of hair tells us the nourishment level and normal health of the body. Thin and weak hair depicts the low nourishment level. If hair is breaking that means all nourishment of shaft of hairs. Whitening of hair before time is due to shocks and ill nourishment. Hair should be washed regularly with good soap and shampoo. Scalp massage is important for hair. It increases the blood circulation in hair and give good nourishment. Once in a week we should put coconut or badam oil in our hair. Plus we should properly massage our scalp with finer tips. Clean scalp protect us from many disease.

**CARE OF TEETH:** For taking proper care of teeth, following ways should be followed.

- (i) **BRUSHING OF TEETH:** We should brush our teeth twice in a day with soft bristle tooth brush after meals, so that food particles does not stuck in any corner. Neem stick brush are also very useful for brushing teeth. While brushing we should gently move the brush up and down. Then rinsing the mouth with Luke warm water, use tongue cleaner to clean the tongue. We can use a quality tooth paste for brushing teeth, though it is not that important. After brushing, we should massage the gums gently with finger tips.

- (ii) **USE OF FLOURIDE:** Places where preparation of fluoride is less than 0.5 milligram per litre, there people should use fluoride tooth paste. But place where flourid is in sufficient quantity in water, there use of fluoride toothpaste is not necessary.
- (iii) **REGULAR DENTAL CHECK-UPS:** Disease related to teeth takes the form of complex disease in future, if not taken care properly. So we should go for dental check-ups twice in a year.
- (iv) **FOOD:** Avoid eating food like – Sugar, Cakes, Pastry, Chocolate, Sweets, Biscuits etc., as they stick to our teeth. If we eat these food then immediately after that we should brush or rinse our teeth properly.
- (v) **CARE OF ARTIFICIAL TEETH:** Just after meals we should remove the teeth set and clean it. At night remove the set and dip it clear soda mixed water. After removing the set wash your mouth with luke warm water.
- (3) **CARE OF EYES:** For proper eye care following ways should be follows:-
- (i) **CONTROL OF EYE INFECTION:** Eyes are very delicate and sensous organ. Any type of discharge, reddening of eyes or pain in eyes should be soon treated or eyes will be effected by नेत्रश्लेष्मा शोष disease. Eyes should be give proper treatment till it becomes normal. We should also follow good health habits of using clean clothes, Control on house flies etc.,
- (ii) **HURT OR WOUND:** Sometime while working or playing or while bursting cracker our eyes gets hurt. In such situation we should irmediately consult an eyes specialist. Dust particles, Coal particles or glass bits makes wound in the eyes. If they fall in our eyes we should immediately splash and wash our eyes with cold water and take the particle out. We should not rub our eyes.
- (iii) **EXERTION ON EYES:** We put exertion on eyes by reading, writing or doing very minute technical work with eyes. Insufficient light, light coming from wrong angle, reading in a moving train, reading while lying – all these exerts pressure on eyes. Always sit and read. A book should be placed at the distance of 1 ½ ft. From the eyes in angle of 40 To 70. Never read in a moving vehicle. Give rest to the eyes while reading from less distance or while working. Protect eyes from very powerful & dazzling lights. Wash your eyes 3 times a day, splash at least 100 times with cold water.
- (iv) **NUTRITIOUS FOOD:** Many eyes disease arises due to lack of nutritious. We should include green leafy vegetable, fresh fruit, milk, butter in our food. We should include those food items in our meal from which we get enough quantity of Vitamin A.
- (v) **SQUINT EYE:** If there is squint eye problem, then it should get proper treatment from childhood only. It is possible to get rid of squintness of eyes. It cannot be cured when a person grows up.
- (vi) **REGULAR CLEANING & EXAMINING OF EYES:** Cleanliness of eyes should be maintained regularly. Eyes and its surrounding should be cleaned by good soap & water. Wash your eyes before going to bed at night. Everyone should use separate towel to wipe face and eyes. We should do yoga, exercise for relaxation of eyes in the morning. Contact eye specialist immediately if any type of problem arises e.g. watering of eyes, pain in eyelids, swelling in eyelids, vision is not clear, headache etc. We should not take these problem lightly and should not be late in consulting doctor for it.
- (1) **ENTERTAINMENT:** Entertainment means separating yourself from work and relaxing. Entertainment decrease tiredness of body and freshness your mind. Entertainment can be

active or passive. Doing exercise comes in active entertainment. Radio is entertainment which can be done alone or in mass. After the work we should take out some time for entertainment. It makes both body & mind health. But it should be seen that entertainment remains only on entertainment, it should not form a habit.

#### **NOURISHMENT AND DEFECTION:**

Good nourishment is the base good health. Ill nourishment is the cause of many disease, lot of carbohydrate, protein, fats mineral salts, vitamins, bran and water, should be present in our daily food. This type of food is called balanced diet. Before you have learned about balanced diet in detail. We good nourishment for balanced diet only. Balanced diet has the capacity to activate the body for normal and special function it give energy to the body and also has the capacity to control disease, making our body healthy.

The process of metabolism in each and every cell of the body start with help of nutrients obtained from food and oxygen. Many waste and लयाज chemical substances are produced through this process. And it essential to excreate them out of the body. In defecation process following things are important.

- (2) In take of water and liquids should be in large quantity.
- (3) Lots of Yoga exercise related to abdomen should be practiced regularly.
- (4) Habit of going to the toilet twice in a day at fix time should be made.

#### **MENTAL HEALTH AND ITS CARE:**

Mental health is the personality and positive, balanced behaviour of a person which depicts his behaviourism with his friend and colleagues. Mental health does`nt mean behaviour between 2 person but a persons with the mass, society and with the organization where he works, because these mass, society, organizations determine his life style , working style,..... Economical status his permanent position and his self.

In 1950 a committee of WHO has examined all the definations of mental health and said that both biological and social factors influences mental health deeply. There are always changes going on in mental stages. This change is related to the changing living environment of a creature changes or mental level determines that how a person or creature is going to behave with his co-creature. How far he can maintain stability with changing situations and what will be his creative contribution to the society

#### **MENTAL HEALTH AND ITS RELATED FACTORS:**

Though the foundation of mental health starts in the childhood only by, but there are other factors helping in development of brain – Some of them are as follows:-

- (1) **Physical Health:** It is always said that a healthy mind dwells in healthy body. When all the parts and systems, all biological and bio-chemical activities works smoothly then the body is healthy.

When any of these are diseased or sick than even our mind become sad and sick. So it is proofed truth that good physical health is the first stage of good mental health.

- (2) **Basic Needs:**Without fulfillment of basic needs mental health cannot be acquired. Main are physical, psychological and social basic needs.

- (a) **Physical Needs:**– Food, clothes, residence, entertainment, Sleep are the things which comes in physical category.
- (b) **Psychological Needs:**– Fulfillment of freedom, love affection, fame achievement, appreciation etc. are psychologically needed.



(c) **Social Needs:-** Reputation, Status, Social appreciation honour are needs which are fulfilled under social needs.

(3) **HABITS:-** Every person has some habits – Some are good where as some are harmful, adiction of work, studying, relaxing & sleeping at fixed time are some good habit which are helpful in maintaining good health. Control on our feeling in and outside our house, stable in any stuation appreciating and honouring others work, maintaining self confidence, working according to his aim are some habits which help to build on mental health strong.

### **CHARACTERISTICS OF MENTALLY HEALTHY PERSON:**

Some of basic characteristics of a mentally health person is as follows:-

- (1) Always Self Satisfied
- (2) Never criticizes self or others or never sympathies himself.
- (3) Always tension free and happy
- (4) Always be organized and does organized work.
- (5) Never gets disturbed or angry on his criticism. Thinks over them seriously, analyses them and does needful.
- (6) Respects other, their feelings and requirement and behave humanly
- (7) Faces the situation patiently and tackles them intelligently.
- (8) Stable and balanced behaviour in happy & sad moment, favourable and unfavourable condition and maintains self control.

### **MENTAL HEALTH AND PERSONALITY RELATED:**

There are 4 extensions of any personality – physical, mental, intellectual and emotional , physical organization like – Height, length, weight, colour texture etc comes under physical extension. Under mental extension comes capacity to think and understand, analyse thoughts. Under intellectual extension comes the sharpness and capacity of persons mind. Stability of mind in unfavourable and tense situation comes under emotional extensions. According to Acharya Maha pragya among all these 4 extension, emotional extension is most important . Person's balanced and imbalanced behaviour depends upon it. It controls the balance of mental health of a person and develops all round personality of a person. That is why it is said nourishment of mental health is helpful in the development of a personality.

### **SAMPLE QUESTIONS FOR PRACTICE.**

(1) **Essay type long question:-**

- (a) Explain different extensions of health, define health ?
- (b) Explain in detail – physical and mental health.

(2) **Answer in brief ( in 1 page)**

- (a) Which are health determining factors ?
- (b) Explain factors related to mental health.

(3) **Short Question ( Answer in One word or One sentence )**

- (a) What do we get from sleep ?
- (b) Life is of 2 type aim full and .....
- (c) What is the literacy rate in adults in depended countries.

## LESSON : 2

### ENVIORNMENT & HEALTH

**AIM:** - After the study of this lesson a student will know: -

- Enviornment and its factory.
- Will able to explain the inter-relation between a human and environment.
- Their contribution in maintaining environment from health point of view.

**SUBJECT:**

**1. Introduction**

**2. Enviornment**

- 2:1 What is environment ?
- 2:2 Factors of environment ?

**3. Ecology**

- 3: 1 Introduction
- 3: 2 Meaning
- 3: 3 Definition
- 3: 4 Ecology and human health..

**4. Ecosystem**

- 4:1 Types of ecosystem
- 4:2 Human is ecosystem

**5. Enviornment Pollution and health.**

- 5:1 Water pollution & health
- 5:5 Air pollution & health
- 5:6 Land pollution & health
- 5.7 Noise pollution & health

**INTRODUCTION:**

From ages man is been influenced by environment. It is helpful in maintaining good health if environment is balanced, gets fresh air, no noise, excessive cold, hot, rain and humidity. Opposite to this if there is impurities in water, poisonous gas in air such as Carbon dioxide, Sulphur dioxide etc effect the human health adversely. It proofs that there is a relation between evour health and environment from ages and will continues in future even. We don't have any other option rather than to keep environment clean, if we want to be healthy.

In Indian culture maintenance & importance of environment is explained every where in different forms. A cultural person will see nature very personally, closely and will try to obtain its essence. He will ner tolerate exploitation of nature. A wish of desire has been explained in gayatri mantra “.....” it's a request that “The sun which is enlighting yhe earth, the sky the heaven - should enlighten my mind also”. To combine the power of sun to the power of intelligence our mind in what ? It is combining natural substance with culture.

In Vaman puram the stress was given on recollecting all the 5 element of nature, so that the bless us early in the morning with there own specific qualities. i.e. fragenance of earth, flow of water, power of fire, sound of sky and touch of air ( Vaman puram 14.26).

Alongwith the worship of Sun and 5 natural element intimacy with earth is also said in Athav Ved. According to it – The earth on which grows vegetation and medicinal plants, where exist immovable or stationary and movable creatures, we are obliged to it and take a vow to protect its independence” ( Athary Ved 12:1:31).

1. Jain religion 21/6 elegance of nature has been described and said that as Lotus of winter is floats on water without connecting or being effected by it, in the same way, inspite of all the feelings of affection we should be determined to protect the nature.

In spite of all these lively example when a person destroys nature and environment due to his greed the results are very dangerous. We all are aware of this fact that, world of vegetation and creature is directly related to social welfare many painfull diseases arises due to pollution of environment. And this time vegetation with medicinal qualities only give relief from pain and such disease.

According to famous historian Sri. Radha Kumud Mukherji that “ a very practical form was given to all the instruction of pedagogy of ancient Indian education.....learning from plant life was an essential part of medical studies. From the subject ( list 123) we come to know that we have to put pressure to arise the feeling of examining, health queries and detation, which important factors of intellectual culture.

Other religion also had accepted the importance of environment. There are 2 important elements in Hindu religion “ Similarities and Compassion with every livingthing”. Besides this many other things like river, pond, many types of plants – like – Banyan tree, Peepal, Fulsu etc.m and air, fire it has been given equal importance. Non-Violence has been give a special importance in Jain religion, respect is given to each and every creature and plants. These theme towards environment should be respect and followed. According to Buddhism respect should be given to each creature and damage to the nature for bidden. Islam and Christianity says that we are not the lord of nature, we are only its care take and we can be safe and healthy by taking care of environmental factors.

After going through all these theories now it becomes essential to study environment in detail. And accept its principals to create healthy society & contributing in fulfillment of aims of Biology.

## 2:1 What is environment ?

Environment means our surrounding what ever surrounds a specific thing is called its environment. According to it – air, water, sun, humidity, forest, vegetation, living creature etc comes in human environment. These all influence a human being every second in some or any way. Whatever man is today – its because of environment.

Any creature cannot dwell alone, that is why every species has a large number of its creature. And they live with their own kind together. It influences the condition and origin of existence of these co-habitants. Physical environment is also very important from this point of view. Because maximum energy of a creature is spend in the adjustment with physical situations. In this way a creature and its environment are co-related to each other. The same thing goes with human being also. Including man, every creature depends on plants for their food. Many plants even depends on creatures. Plants also depends on light, humidity, water and soil for its growth. So it proves that human being & other creature are influenced with materials in any how. And this world and life are the result of their eternal relation.

While defining environment it can be said that – It is the combination of physical and biotic situation which influences all different types of their responses.

According to Douglas & Holland:- Environment is a word which explains all external powers, effect & situation in a group, which effects the life, behaviour, nature, development, growth, strength etc., so that means what ever is these around us are a part of environment.

We can also call environment as biosphere. After re-analysing we come to know that biosphere is not only a creation but a combined form of Hydrosphere, Lithosphere and Atmosphere. In 1951 Hess has said for these factors of Biosphere that – though many type of creature and plants are found in air but then also it does not have any fixed characteristics. In hydrosphere 2 types of creatures are found

oceanic or salted water creature and non-salted water creature. In Lithosphere only land comes into account. Although we can say that environment is such a thing which is not stable on fixed, it changes with the influence factors. If it is a fact that man is influenced by the environment, it is also true that man influences the environment most.

## 2:2 FACTORS OF ENVIRONMENT:

1. **Atmosphere:** - Air envelopes the earth. And this envelope of air is called atmosphere. It is the fastest changing factor of environment. It changes with the change in climate and change with the change in sea level. When we examine the atmosphere under the water in ocean, we find 78.9% Nitrogen gas and 21% Oxygen there. As we come up towards water level, oxygen level reduces. In the same way when we go higher from the sea level the density of air decrease. From 32 km of earth level, density of air is approximately 99%. Scientist have divided atmosphere into 4 level. -

- |                  |                                       |
|------------------|---------------------------------------|
| (a) Troposphere  | - From earth level to 12 km up        |
| (b) Stratosphere | - From 12 km to 50 km up              |
| (c) Mesosphere   | - From 50 km to 85 km up              |
| (d) Thermosphere | - From 85 km and above ( till 500 km) |

### TILL 500 KM

- |                |   |
|----------------|---|
| * Thermosphere | * Temperature increases 85              |
| * Mesosphere   | * Temperature decreases (Mesosphere) 50 |
|                | * No effect of climate change           |
|                | * Best for flying air craft             |
| * Stratosphere | * Temperature increases                 |
|                | * Ozone found here 12                   |
|                | * Temperature decreases                 |
| * Troposphere  | * Clouds, Storm restricted till here    |
|                | o earth level o                         |

Temperature decreases with the rising height in troposphere which is from earth level to 15 km up. All clouds, storms are restricted in this region only. Next to this is stratosphere in which there is no climate related activity or cloud - this layer is best for flying air craft. In this level the temperature increase. In this layer only the ozone gas is found which destroys the effect of ultra violet rays and protects us from its harmness. Above it is mesosphere which is also known as ionosphere because in it is found electrically charged particles which turns the electric- magnetical waves - resulting the... of radio waves. As we go up in this level the temperature decreases. Height of the top most layer which is known as thermosphere is near about 500 km. As we go up in the layer temperature increase due to Ultra Violet rays.

2. **Lithosphere:** Lithosphere is the concrete part of rocks on earth. Loose soil, Sub Soil, rocks transformed rock, natural rocks are found there. The width of this layer is nearly 60 km. Ocean Sea covers near 71 percent of the earth. Only 29 percent is land of different island. And all land creature and plantation depends upon the soil of this land.
3. **Hydrosphere:** - The water part of Biosphere is known as Hydrosphere in this includes all the rivers, ponds, water falls, oceans Sea all the water source 71% of earth is covered with water. Some water is found in form of ice on mountains and some underground. Other than is some water is found as water vapour in air and in the body of creature in enough quantity. There is a water cycle going on the earth. The water gets warm on the earth, evaporate goes up in the sky, than cools down their and comes down in form of rain. This water cycle is known as Hydrological cycle. The metabolic activities of creature, the temperature all depends on this water cycle.

## 3.0 Ecology:-

**3.1 Introduction:** All the activities of nature are planned and automotive. There is no fault in it. The body of a creature is designed according to its quality and its environment in such a balanced way that we cannot see any default in it. Human being is also a part of this nature. But human being due to his prejudice and ego has forgotten this and is busy in collecting luxuries of life. And this mistake because the cause of many diseases. Know it is very important to see all its work association with nature and also the factors which take him far from nature. First we will see ecology under these factors..

**3.2 Meaning of ecology:** It is an Latin word which is derived from 2 words Oikos and Logos. Oikos means home And logos means knowledge. So together it means to get knowledge of home life of creatures. Home is the environment of all creature. How a creature acts in his environment are going to study all those things in ecology. We can consider ecology as same as environmental science, through there is a difference between the principals of both but yet they both are

**3.3 Defination of Ecology:**Defining ecology a German Bio-scientist has said “ Ecology is not only related to environment but also with complex mutual relation of a creature, which Darwin has named as struggle for life “ Different environment have defined it in different way – Some of the important ones are as follows:-

1. Relation of creature or creatures with its environment is ecology.
2. Ecology is science of mutual relation of creature and its environment – Philips Handler (1970)
3. Ecology is the Science of all creations of all creature with all its environment – Tailor(1936)
4. Ecology is the study of relation of intra specific and inter specific with physical environment
5. The study of relation of plants and creature with their surrounding environment is ecology.
6. The study of conservation and function of nature is ecology science – Odum.
7. The study of relation between alive systems and environment is ecology science - Turk & witts ( 1972)
8. The totality and pattern of the relation of creature and its environment is ecology.
9. Ecology is nothing but environment bio-science in which relation of creatures is defined.

In easy word “ ecology is that field in which we study the relation of creature and its environment”.

**3.4 Ecology & Human Health:** As much as a human being is related to himself - the same is he related with environment and co-dwelling creatures. He take food and air for other creatures for his existence.He uses it for metabolic activities inside the body and creates different types of chemical products on the inter relation of which depends the movement of mechanical and chemical activities of body. Due to there activities what ever everatory product are formed are returned to the environment. The factors of environment - Temperature light & heat, etc influences these activities and also influence other, creatures apparently or non apparently. The balance between above mentioned activities and contribution of influencing factors is essential for good health. This shows that ecological balance is the key point of human health. It is important to determine the points referring ecology for studying human health in detail. Some of the important ecological balancing points which are important for taking care of health are given below:-

1. Knowledge of difference, Cohabitation and progress of creature.
2. The definite knowledge of food chain going on between creature and their obstacles coming in this chain.
3. Sources of energy, their conservation and their diffusion with environment.
4. Detail study of , adaptation related environment change.
5. Study & knowledge of a ecotype of a place.
6. The study of factors and reasons influencing the habitational capacity of a place.

Keeping there points as base, if we adopt environment and its co-habitate creature with broad and humanism and determine their lifestyle then our health and it nourishment and protection is possible.

**ECOSYSTEM:** Ecosystem is a working unit of community of creatures and their physical environment. Solar energy, water, air, soil etc are Abiotic factor and plants and creature and biotic factors working is ecosystem. Mutual functioning through the flow of energy & matter goes on between biotic and abiotic factors and influences each other through them. It is same with human health also. Till the functioning of matter and energy goes on it normal speed the health of a man is good. All the ecosystem jointly makes a big unit called Biome. All the Biomes of the world altogether make a sustainable unit called Biosphere.

The term ecosystem was first used by A.G. Tansel in 1935. According to him it is a shapeless complex nation. In this system a creature obtains matter and energy from its environment & grows and creates carbonic matter. Later these carbons matter breaks up into components. And in this way cycles of Carbon, Oxygen, Water etc goes on. Human being has to take his health resources from these cycles only. We are healthy till the give & take process from cycles is balanced. Otherwise we have to face health related problems.

**TYPES OF ECOSYSTEM:-**

1. Terrestrial Ecosystem
2. Aquatic Ecosystem

We can divide Terrestrial ecosystem into 4 category.

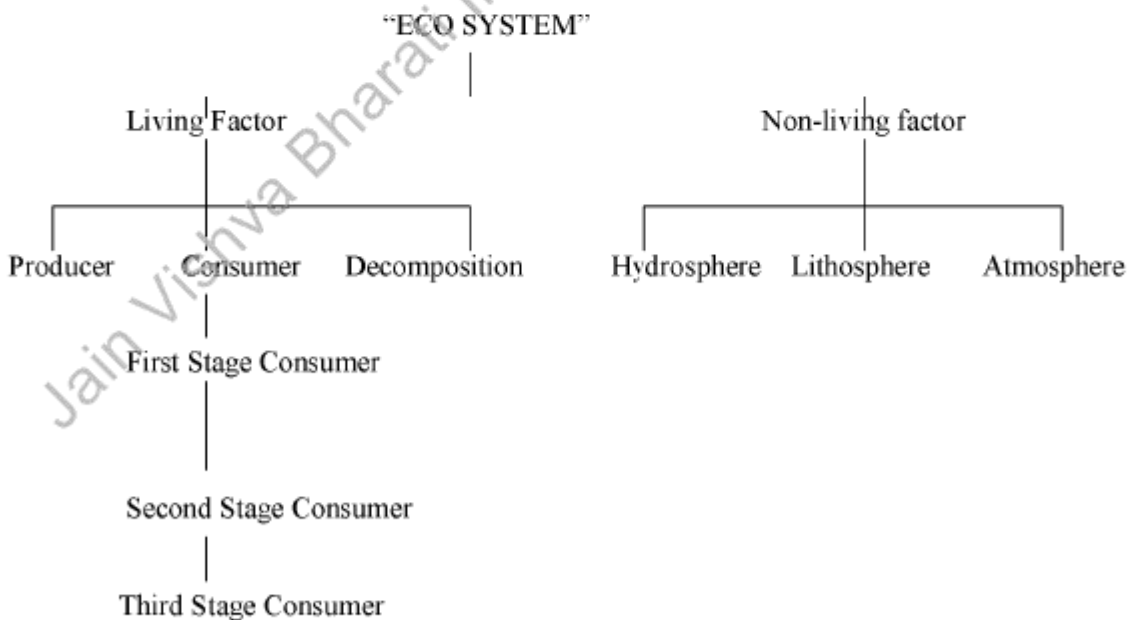
1. Grassland
2. Forests
3. Desert
4. Tundra

Aquatic ecosystem is also divided into 3 categories according to the presence of salt in water.

- |                 |   |                       |
|-----------------|---|-----------------------|
| 1. Fresh Water  | - | Sea, Lake, Pond       |
| 2. Medium Salty | - | Mouth of river, Bays  |
| 3. Ocean Water  | - | Excessive Salty Water |

Ecosystem can be categorised in following way also:-

**HUMAN BEING IN ECOSYSTEM:**



Modern man has impressed world's ecosystem and nature's balance with scientific worders. On the basis of his scientific achievements man has mistaken him self to be the master of ecosystem. Actually man is just a biotic factor of ecosystem. Due to his bigotry nature he uses physical matter and other creature in his own self interest. In the effort of developing self dependence is himself sometime he make the whole environment against him. In this effort man has destroyed many species living in parts of universe and tried to develop artificial species. They are cutting tries blindly in order to satisfy there needs and luxurious wants. All the green lands are slowly converting into deserts. On the other side we see man had spread the network of cannals and made the deserts green. He had transferred water from heavy rain fall area to low rainfall area and had destroyed the balance of nature. In order to give speed to the progress rate h started using harmful pestisides, chemicals and radio active matters which not only effected the balance but polluted the environment. Now the presence of man, his existence and his health are in serious pproblem by this polluted environment. And this problem increased with the increase in population. So it can be said that the ecosystem is much effected by the man.

Agriculture land are decreasing because of Urbanisation and industrialization water and mineral from industry is polluting water whereas of machines and vehicle have polluted air and noise pollution increased. Now seeing all these it has become in dispensable that we should take increatives to balance the ecosystem or the results are going to be very dangerous ( For details see Lesson : 5)

#### **ENVIRONMENT POLLUTION AND HEALTH:**

It is best to use the organs of environment in their pure forms but it is difficult to get any product in its pure form. There are some impurities in the water we drink, the food we eat or the air in which we breath. In water, there are solid dust particles, dissolved salts and some germs even. In air we find Carbon Mono-Oxide, Sulphur – di-Oxide and dust particles. The same thinh can be said about soil and food. Pollution is mixing of portion of one matter with other. We call any product or matter polluted when the proportion of mixture increase from normal to some what more. And the use of that matter becomes harmful. If the matters in the environment which we live is polluted then it will influence our health adversely and sometimes it is really dangerous. We find that pollution of matter and its negative effect on our health, all, these information are neglected. The environmental factor which when polluted effects our health most are as follows:-

1. Water Pollution.
2. Air Pollution
3. Soil Pollution
4. Sound Pollution
5. Radio active Pollution

**WATER POLLUTION:** Life is not possible without water. Water is essential for any type of Life. Even our body is made up of two third water. Water plays an important role in different mechanical and bio-chemical activities of our body. Water being an important nourishment for body also carries other element in it. There is 55% of water in our body blood it carries essential nutrients to different tissues, parts and even to each and every cell through blood circulation. This blood helps in discarding the excretory products obtained by metabolic activities. Besides physical activities, water is essential for life's basic activities. Water is indispensible in activities like Cooking, Washing, Cleaning, Industry, Production of electricity, factories etc.,

**WATER SOURCES:** Rain is the main sources of water in world environment. Water which is accumulated in water bodies through rain evaporates slowly and goes up into the atmosphere and taken the form of clouds. Due to the temperature change in atmosphere this water comes down in form of rain.



After rain water is available on the earth in 2 sources (1) Ground water and (2) Under ground water. Ground water is easily available for human beings to use. We get water from following bodies.

1. River (2) Lakes (3) Pond (4) Waterfall (5) Tanks.

**DEFINITION OF WATER POLLUTION:** Water can be defined in following ways:

- (1) Mixing of outer elements in water decreasing its qualitative capacity and making it unfit for use is known as heater pollution.
- (2) The degradation of physical and chemical form of water by the mixing of carbonic and non-carbonic element is called water pollution.
- (3) The decrease in the real use of water due to the luxurious activities of a man is called water pollution.
- (4) Presence of any solid or liquid element in water can be called water pollution, which influences its chemical and physical qualities and makes it harmful for health.

Water pollution can be divided into 4 groups on the base of their form and intensity to Pollute water. (1) Physical Pollution (2) Chemical Pollution (3) Body functioning pollution. (4) Biological Pollution.

Physical pollution means, change in physical qualities of water as – colour, odour, tastes

Etc., chemical pollution is due to mixing of industrial waste in water. These chemicals harms the chemical quality of water. When the due to water there is a negative effect on different parts of body and their functioning then it is called body function pollution. When different types of bacteria, germs and other creature comes in water then it is called bio-water pollution. This water is highly poisonous for health.

**5.3.1. SOURCES OF WATER POLLUTION:** There are 2 ways how water gets polluted. First is natural and second is through human activities.

**5.3.1. NATURAL WATER POLLUTION:** Soil erosion, remains of chemical element, plants and creatures when they mix slowly with time then such pollution is called natural water pollution. Dust particles, Atoms, carbon particles, dust and many gases mixes with the rain water. These pollutions are very slow, that is why we never realize any harmful effect of it normally but when situation changes when there is scarcity of water, natural water sources dries up, then these slow pollution take a dangerous form.

There is mud, chemical matter near the natural sources of water as well, pond, waterfall and they get mixed up with this water. When the preparation of these chemical product increase in water than it has ill effect on human health.

**5.3.2 WATER POLLUTION DONE BY HUMAN BEINGS:** Although growth of human civilization took place in midst of natural water sources but due to his enjoyment attitudes, he is destroying these sources. Man have destroyed many natural properties in the name of modernization, industrialization and urbanization and water is one of them. Due to human beings daily activities these matters get mixed up with water and pollutes it.

1. Domestic effluent
2. Sewage
3. Industrial Effluent.
4. Agricultural effluent
5. Thermal Pollution
6. Oil Pollution
7. Radio active materials waste.

#### 5.4 WATER POLLUTION'S EFFECT ON HUMAN HEALTH:

Water is an important element for life's activity. Man depends upon water to lead his life. If the water is polluted it surely effects his life. According to world health organization 75% of death in developing countries is due to water pollution. 80% of abdominal disease are caused due to polluted water. Near about 65% diseases are caused due to polluted water. In list 1 details of main diseases caused by water is given. Human health is effected by polluted water in 3 ways:-

- (1) Through drinking water
- (2) Coming in contact with water
- (3) Due to dissolved chemicals in water.

##### 5.4.1 EFFECTS OF DIRTY WATER:

If we drink dirty water then many there is possibilities of water born disease. Because there are many types of micro-organism, bacteria and virus in polluted wter. These diseased micro-organism carry different types of disease.

Details of some of the disease carrying micro-organism are given in list (1) and also name of disease caused due to them.

#### LIST : 1 DISEASE CAUSED BY WATER POLLUTION:

Sr.No.	Chemical Product Causing water pollution:	Expected disease & harm
1.	Carbonic & non-carbonic matter mixed in sewage.	Disease of Digestive System
2	Calcium & Magnesium Sulphate .	Burning in Instant time
3.	Sodium & Pottassium	Poisonous effect
4.	Floride	Dental diseases
5.	Sulphide	Breathing problem
6.	Chloride	Kidney Problem
7.	Amonia	Breathing Problem
8.	Urea	Disease of digestive system
9.	Chlorin	Breathing problem
10.	Fenol	Breathing problem
11.	Oil & Greese	Disease of digestive system
12.	Synaid	Poisonous effect
13.	Mercury	Kidney, heart& nervous system problem
14.	Zinc	Kidney problem
15.	Cronnium	Ulcer
16.	Lead	Kidney, heart and joint pain
17.	Colour and colour dye	Skin disease & headache
18.	Tenil	Skin
19.	Pesticides products	Disease of Skin, Head-ach, insomenia, lungs and kidneys

**LIST: 2 SPREAD OF MICRO ORGANISM DUE TO WATER AND DISEASE CAUSED DUE TO IT.**

Sr.No.	Name of germs & parasites	Disease caused due to them
1.	Virus	Viral hepatitis, Polio
2.	Bacteria	Dysentery, typhoid, paratyphoid, gastro, diarrhoe
3.	Protozoa	Amibic diarrhea, Giardiasis, Thremboisis
4.	Hetimenthic	Round worms, Hook worms, Thread worm (All diseases related with germs inside the stomach)
5.	Snail	Schistosomiasis

**5.4.2 HEALTH PROBLEM DUE TO CONTACT WITH POLLUTED WATER :** There are many parasites in ponds, rivers and other natural water sources. When man goes near these sources for bathing, washing or any other water activities then these parasites enters our body through our skin and cause many types of diseases. Schistosomiasis, Ankylostomiasis, Strongloidiasis, Leptospirosis are the example of these types of disease.

**5.3.5 ILL HEALTH EFFECT OF CHEMICAL PRODUCTS PRESENT IN POLLUTED WATER. :** Many types of chemical products are present in water. But when their proportion increases from normal, then it influences our health, e.g. Fluoride is essential for our teeth but when the quantity of fluoride increases in water then our teeth become rough and also makes cavities in teeth, makes teeth yellowish. In the same way excessive ferrous bio-carbonate in underground water causes indigestion and constipation.

Due to agricultural activities, the nitrates which are absorbed with water go inside our body and change into nitrites and mix with hemoglobin found in red blood corpuscles and decrease the supply of oxygen. This type of poisoning of blood sometimes becomes the cause of death in infants. In the same way D.D.T., Mercury, Lead, arsenic etc., present in pesticides go inside our body with food, accumulate and increase body salt. The increase in chemical proportion causes constipation, Nephritis, Wrist drop, Foot drop types of diseases.

**5.5 AIR POLLUTION:**

**5.5.1 INTRODUCTION :** As pure water, even pure air is needed for good health – Normally we find Nitrogen, Oxygen, Carbon-di-Oxide, Neon, argon etc gases in air. Air on Sea level is said to be pure. In it the proportion of 5 gases are as follows:-

Gases	:	Proportion (%)
Nitrogen	:	78.084
Oxygen	:	20.956
Carbon-di-oxide	:	0.934
Argon	:	0.931
Neon	:	0.002

Besides these gases we find water vapour in air. When this air is on sea level, the proportion of gases changes

Each and every living being breathes for life, plants and creature take oxygen and give out Carbon di-oxide. Plants with Chlorophyll take in carbon-di-oxide for the photosynthesis process and breathe out oxygen during the process. This process maintains the balance of oxygen and carbon-di-oxide in air. So green plants play an important role in maintaining balance in the ecosystem.

As other creature human being also needs oxygen for breathing, which he takes from air of atmosphere. A healthy person, normally breathes 21000 to 22000 time and intakes near about 20 kgs of air inside. The quantity of air consumed is more than the quantity of food and water. This only fact shows the importance of air in human being life. But because of Urbanisation, industrialization and modernization, and in the race of gathering the luxurious of life, man is destroying the purity of this life giving air. We know the results are going to be very dangerous.

**5.5.1 FORMS OF AIR POLLUTION:** Any in predictable change in physical, chemical or bio-qualities of air which is harmful for human being, other creature is called Air Pollution. World Health Organisation had defined air pollution as - Air pollution is limited only upto where the harmful elements from outer atmosphere increase are harms the environment.

**AIR POLLUTION CAN BE SEEN AS :-**

1. Aerosol – The perplexity of very minutes solid gas atoms creates clouds which is called aerosol e.g – smoke, fog.
2. Dust – There are some solid particles bigger than colloidal shapes, are present in air, known as dust. These particles settles down with time due to gravitational forces.
3. Fly ash: - By burning of various facts the ash obtained, mixes up with air and is called fly ash.
4. Mixture of poisonous gases:- When the proportion of useless and poisonous gases increase in the air then, it becomes harmful for the health.
5. Smoke: - The carbon particles produced by burning of different fuels, makes smokes.

**5.5.2 SOURCES OF AIR POLLUTION:** Generally air is polluted by activities done by man. But there are some air pollution which are caused due to natural factors. So we see both man and nature are sources of air pollution.

- (a) Natural Source:- Ash obtained by arubtion of volcanoes, Dust spread due to storm, smoke, from jungle fire and methan gas formed due to natural swamps are some of the factors which cause gas in our body, so they do not effect health too much.
- (b) Human Source:- The main cause of getting poisonus gas and its particles is various activities done by human being. Mainly among these are carbon-di-oxide, mono-oxide, sulphur-di-oxide, clorine, Nitrogen oxide, Amonia, Aldihaidus, Verilium, Lead, Arsonic, Cadmium, Asbestos, Benjipiarin, Hydrocarbon and Radio active minerals. Commonly industries are claimed to be main air pollution. Because maximum amount of air pollution is done by them. Besides this burning of fuel and use of pestisides pollutes the air. In Urban area, unlimited moving of vehicle also come under consideration.

**5.5.4 EFFECT OF AIR POLLUTION:** Our respiratory system is mainly effected by air pollution. Asthama, Bronchitis pain and burning effect in throat, phenumonia are the some breathing problems which are caused due to air pollution. If a person has to stay in air polluted air for a longer period then possibilities of lung cancer is there.

**BREATHING SYSTEM:** The main function of breathing system is to take out Carbon-di-oxide produced by metabolic activities of each cell and to take oxygen to them. Air goes through nasal cavity and air pipe to both of our lings ( fig.No.1). There is a network of Blood capillaries on the walls of our lungs in which there is no stop of blood flow. Red blood corpusules are found in blood in which we find a product called Hemoglobin an which does the work of oxygen carrier.

When our lungs are filled with air after breathing then takes place – Gaseous exchange function. In this process through diffusion, oxygen enters into blood and Carbon-di-oxide come out of blood and mixes up in the air present in lungs. Which is taken out of lungs through exhalation. After entering blood, oxygen

combines with hemoglobin and produce “oxyhemoglobin” which is carried to each and every cell of body by blood circulation.

As oxygen Carbon-mono-oxide, Combining with hemoglobin makes “Carboxyhemoglobin” which interrupts in blood circulation. We feel suffocated if it is in excess and with inadequate supply of oxygen. Brain and Heart stop working in this situation and if the situation is prolonged it causes death. Uncountable Alveolar sacs present inside the lungs plays important role in Gaseous exchange. Big dust particles closes the opening of these sacs and cause interruption in gaseous – exchange. There are hairy cells and mucous cells present in nasal cavity, air pipe and Bronchi and Bronchioles. Dust and other particles are obstruct by these hairy cells while entering lungs. But when they increase in air due to air pollution then pass through bronchioles and enters lungs from there it is impossible to take them out. These particles interrupts in gaseous exchange and enters into blood through blood capillaries making sore in it. It cause Bronchitis, Bisinosis, throat pain, phenol and dangerous disease like lung cancer. And full chances of Asthama if these particles get accumulated in air pipe and Broncholes.

Besides these, smoke from the vehicles have lead in it, which mixes with our food and water and enters our body an damages the tissues of lever and Digestive canal. Benjopairin and multiple hydro-carbon present in air causes lunh cancer, and due to sulphur-di-oxide and Nitrogen-di-oxide, there is problem of disease like cancer, heart problem Diabaties and Amfisema.

The details of factors of air pollution and disease caused by them is given in LIST (3) main air pollution, their source and their ill effects.

**LIST : 3 SOURCE OF AIR POLLUTION & THEIR EFFECT**

<b>Polluters</b>	<b>Sources</b>	<b>Effects</b>
Carbon-di-oxide	By burning process vehicle	Increase in earth's temperature and poisonous effect of gas.
Carbon-mono-oxide	Incomplete burning Process and burning Of petrol.	Dangerous disease caused by lack of oxygen in body.
Sulpher-di-oxide	Vehicles which run on Coal and diesel, smoke From factory and oil Refineries	Dangerous breathing disease, coughing with too much cough
Nitrogen-k-oxide	Solar instruments, burningOf fuel in vehicle, forest Fire	Breathing problems Burning sensation on skin and eye.
Solid particles of Other matters	Heavy industries Factories, cement industry, Electric houses, coal and Rock mines.	Poisonous effect on internal body parts, breathing problem, Poisonus effect on skin.

**5.5.5 GREEN HOUSE EFFECT:** Green house effect is used for the temperature of earth. It is said that the temperature of earth which is 15 C from last 50 years, is increased by 1 C . Scientist believe that it is because of gaseous pollution in the atmosphere, due to which carbon-di-oxide in atmosphere has increased - resulting increase in earths temperature. If carbon – di – oxide is doubled then the temperature can even increase upto 50 C. If the temperature increase only by 3.6 C then the ice on artic and antartica will start melting, increasing water level in Oceans from 12Cm to 1.5 meter. Scientist

believes that if same rate of pollution continues till next 50 years than due to green house effect, temperature of earth will increase atleast upto 4.5 C , On the poles 9 C increase is possible. This will be a dangerous situation, because due to increase in water level all the towns and cities will submerge under water. Glasgo, Flourida, Stockholm, Copenhagan and Kolkatta etc. will surely submerge underwater.

**5.5.6 HOLE IN OZON LAYER :** The ozone layer present in stratosphere level of atmosphere. It absorbs the ultra violet rays from Sun rays, so they do not reach earth. Due to ultra violet rays the upper layer of skin cells gets damaged and the blood cells present in layers of skin swells up and get damaged. Due to this there is burning effect and soars on skin. Burning, Swelling and soars in eyes. It influence the reproductive capacity of creatures. It also effects the changes and setting of germs during division of reproductive cells, due to which the child born has many disease. And also decreases the capacity to fight a decease.

Scientist have tried to find the cause how holes are formed in ozon layer. They found that presence of C.F.C. and Helon gas in atmosphere is main reason for these holes. They also believe that chlorofluro – Carbon gas, halon gas are 90% responsible for damaging ozon layer. Beside them Nitric Oxide and Chlorin-Oxide gas are also responsible for the damage. All these gases are product due to air pollution.

**5.3 EARTH POLLUTION:** The lose of productivity and utility of soil by unwanted physical and chemical changes is called earth pollution. It is caused to mixing of soiled, liquid and poisonous waste of matters with soil. Mainly earth pollution is due to following reasons:- (1) Domestic Wastes (2) Municipal Wastes (3) Industrial Wastes (4) Agricultural Wastes.

All types of dry and moist waste, skin of fruits and vegetables all rotten fruit and vegetable, used tea leafs are included in domestic wastes. In municipal waste comes - waste from houses, urine and faces, rotten vegetable and fruit waste from vegetable market, waste from small scale, waste from roads and gutters and any type of waste from public places.

In industrial waste comes – Bio- decomposable chemical matter, inflammable, poisonous foul smelling and in ative chemical matter.

In Agricultural waste comes – Rat poison, Snake poison and poisonous gas and their residye etc. Pesticide kills the pest and make the soil poisonous. They are the cause of soil pollution.

**5.3.1.1.1 EFFECT OF EARTH POLLUTION ON HUMAN HEALTH:** On one hand where earth pollution damages the lush green earth, on other had it spread very bad & foul smell. Due to garbage there is an increase in mosquitoes, flies and rat and also many types of diseases germs. Inflectious germs of dysentery, Typhoid, Cholera, Eye disease which harm human health come out of these garbage.

When urine and faces are not properly released, it cause soil pollution which spoils the whole environment and then there is full possibility of dangerous disease like – Typhoid, Dysentery, Cholera, Hepatitis, Polio etc. If there is a heap of garbage near our house then possibility of plague increase. And if there is blocked water on which mosquito breeds then malaria can attack.

Some time in agriculture faces water is used for irrigation which blocks the soil pores slowly and after some time soil is totally cog due to which air cannot circulate through soil. Land with such soil is called sick or dead land. Not only these particles of face water is circulated in the fruit and vegetable growing on that land and when consumes these, it effect the health adversely.

**5.7 NOISE POLLUTION :** Sound of flowing water, thundering noise of sky, loud and continuous sound of ocean are nature's truth. Even due to each human activities, sound is produced. When they make noise during celebrating the good and sad moments, vehicles sound, Noise of loud speaker during public functions all together they take the shape of noise pollution. Human ears can hear sound of 20 vibration per sec to 20000 per sec. We measure the intensity of sound by a unit called Decibel. It is based on a scale.

Sound intensity, Decibel –  $10 \log ( I / I_0 )$  here  $I_0$  is that intensity of sound through which we measure the intensity (  $I$  ) of other. Due to proportion a little change in Decibel brings major effect on its hearing. We can see in List (4) the common sound on Decibel Scale.

**LIST (4) COMMON SOUND LEVEL ( IN DECIBEL)**

Heart beats	13	Decibel
Whispering	20	Decibel
Type writing	40	Decibel
Vehicle Noise	40 – 70	Decibel
Barking	66	Decibel
Noise of Car & Truck	80	Decibel
Inside Jet Plane	85	Decibel
Noise from factory	90 – 140	Decibel
Horn – from 8 mts	100	Decibel
Aeroplane Sound –from 10 mtr	130	Decibel

Research done by – Environment studies – Dr. R.B. Saxena, Arya book department, Delhi (1998)

It is believed that less than 80 decibel sound is not harmful permanently. It comes lack of sleep, Roughness of behaviour, irritative nature, frequent anger and headache. If the sound level increase from 80 decibel to 100 decibel then it harms human health seriously, creating complex problem. It creates hearing problem, high blood pressure, Heart diseases, problems in digestive system, breathing problems, sometime it cause abortion. When level increase from 100 decibel then blood vessels contracts, obstacle in blood circulation and causes Heart Attack.

**SIMPLE QUESTION FOR PRACTICE**

1. Essay type question : -

- (1) Define ecology and ecosystem.
- (2) Explain different types of environmental pollution and their effect on human health.

2. Short question ( Answer in 150 words)

- (1) What are the effect of water pollution on human health
- (2) What do you understand by environment.

3. Objective question ( Answer in 1 word )

- (1) Stratosphere is which level of Atmosphere ?
- (2) What is the proportion of increase in temperature of earth from last 50 years.
- (4) Proportion of Oxygen in air is.....percent.



## LESSON 3 : - HEALTH EDUCATION & COMMUNITY HEALTH

**Aim:** - After studying this lesson you will learn:-

- You will understand the basic mis-concepts of Health Education.
- You will know various working fields of Health education.
- You will get the knowledge of educational process of health, obstacles coming in way and their solution.
- Can inspire in increase of community health and can help in appointing yourself in it.

**Subject:-**

1. Introduction
2. Definition, Aim and observance
  - 2.1 Definition of Health education.
  - 2.2 Aims of Health education
  - 2.3 Observance of increase in Health
  - 2.4 What can we get from Health education.
3. Work fields of Health education.
4. Theories of Health education.
5. Communication in Health education
6. Observance of health education
7. Community health Nursing.

### 1.0 Introduction:-

Public health is community effort of branch of Art and Science which is helpful in controlling different disease, long life, increase in health and development in its capacity. In ancient time relation of public health with the help of law was to make environment clean and to keep contagious disease away. By the changing time it was felt the need of making mass aware of health conservation and its increase. It was also felt that in this services we should also find out the factors influencing public health. In fact health education is a medium to understand the total behaviour of a man. Previously the stress on this was given by both un developing and developed countries, on public health its increase and control on diseases. They have understood that man is the cause of increase in health and origin of disease. And public health is noting different from it but a community effort and a part of a programme in which we put in practice our view point for health.

### 2.0 Definition, Aims and Observance:

**2.1 Definition of Health Education:** Health education is a process which is started with definite aims which has benefited the large part of society. The scope of this education is very wide, it pays attention to the health nourishment of each man. But the aim is nourishment of health of the whole society. Each and every man has different needs & problem, so when we talk of health nourishment of society then we have to think differently for different class of people. All these needs are taken into consideration in health education. Some of the people think health education is only a publicity, where as some think that it is unknown to the health specialist and is trying to carry minute health details to the uneducated, illiterate mass. Some people think it to be a chain between quality health and normal health.

A specialized committee of world health organization has defined Health Education in 1954 as- "As any other study, education, even health education changes the behaviour, knowledge, experience of common mass. Much attention is given towards health techniques in this creative process which is essential for attending quality and complete health". According to health education union ( 1988) – " Health education is a consolidated form of Planned Social Activities and experiences, due to which common mass can

control factors of health, health transactions and social situations, which influences the health on different levels.

According to world health organisation's definition health education is an important component of knowledge point of view and behaviour. Health education brings notable change in all these component through person, family and society's behaviour. It is a fact that any study of knowledge, should be based on scientific theories and current situation. Aim of education also should be such which can utilize the available sources and take the capacity of mass to the activation level. This is possible only when the view of mass, their mis concepts, their faith, values, needs and sources is studied properly and then the rules are made. The same can be applied with health education. If we run the programme of health education by keeping all these in view than definitely we will achieve success in health nourishment of a person, family and the society. M.R. Somars (1977) had given a definition which was accepted by all –

“Health education is such a process which accepts the health life style of common mass and helps, inspires them to move with full control.”

**2.2 Aims of Health Education:-** World health organization had ascertained 3 important aims of Health education which are as such–

1. To determined, that public health is a valuable possession and to accept the nourishment and protection of it.
2. To educate public about knowledge, capabilities and those tendency through which they can protect and care there own health.
3. To inspire and encourage mass to take full advantage of available government health services and also to contribute in them.

**NORMALLY WE FIND 3 MORE AIMS OF HEALTH EDUCATION:-**

**First** - To make common man aware of all health related mis concepts, doubts, ignorance etc and to erase them.

**Second** – Public themselves with their own efforts should help in health nourishment.

**Third** - To make public aware towards health to take part activity in such programmes.

Every society have their own believes, mis concepts, culture and tradition due to which people give least importance to health. Due to these believes, misconcepts they have to face serious health problems. Health education breaks those believes and misconcepts and brings the truth in front . It is also found that capable people also due to unknown causes are seen being careless with their health do not take even simplest care of their health. These type of people are educated and are inspired to take proper decision and to act on those decisions, under health education. It includes programes which changes people's habits, certain change in their behaviour and to develop their strong will power. Every government sometime or their runs such family welfare program for the betterment of their citizens. Even our government is also running many such program such as National program for abolition of Malaria, National family planning program, Polio abolition program etc. Success of such program depends upon the community help and participation of each Health education gives stress on this that each and every person concerning society should actively participate in such program.

**2.3 Proforma of health nourishment and its community process -**

**Three proforma can be applied on the process of health nourishment.**

- (1) **Through Controller law:-** Law should be made and implemented on government level. Little bit of indispensable problems arise in the way of success through this prices. First of all it will need a well organized big system. Secondly if people don't know about these laws then they do not participate

whole heartedly. e.g. government had made law for No smoking in public places and in vehicles – but we can clearly see indifference behaviour of people towards their law.

(2) **Through Services:-** Under this people get special health nourishing facilities free on administrative and National level, in hope that people will utilize them and improve their health. But it is seen that these facilities are beyond their understanding and also not yearly approachable, so inspite of being free, they are not used by common people.

(3) **Through Education:-** To active the laws of health, to bring progress in health, education is considered as best medium. Through this work of inspiring people, making them aware of many decisions and their positivity and negativities and benefits etc., Though the process through this medium is slow, but it is permanent and confirmed. It is also seen that some health related problems can be delt only through education e.g. nourishment, care of infants and kids, personal hygiene, family planning, immunization, malaria and aids are some of the dangerous diseases which are attached with lots of mis concepts and there problem can be delt by education only.

#### 2.4 What is achieved through Health education ?

The role of Health education..... an important role in improving the health level of each and every class people and making them aware about their health. Following things can be achieved by doing so :-

**1. Development of good health habits** – Health habits such as – Cleanliness, Drinking Clean Water, Personal hygiene, breast feeding, Infant care and health etc., can be developed with Health education.

**2. Control on disease** – Inspires to adopt those habits through which diseases can be controlled e.g. immunization against diseases, regular checkups at initial stage of any disease, mother and childs proper care etc.,

**3. Right use of medicine:-** We get the knowledge of right medicine in right time, which helps in curing disease and rehabilitation after care of few disease e.g T.B. and Leprosy.

**4. Identfication of disease on our body:-** Some times a common man does not recognize the disease after seeing the symptoms of that disease on his body due to ignorance or un awarness. Health education not only gives proper knowledge to be aware of disease but also educates where (Hospital and doctors) to contact on having such disease.

**5. Community Help** – Health education make mass aware about the primary health service given at state level and also inspires common public for co-operating.

#### 3.0 Working fields of Health Education:

Imaging community health with out health education is incomplete. So health education can be considered as the base of community health. We can reach to different levels of a community through health education only. When we are talking about different levels of community, then it is important to analy's those fields in which this programs can be implemented. From this point of view following fields can be considered.

1. Human Anatomy & Physiology.
2. Nutrition.
3. Sanitation
4. Mother and child care and family planning.
5. Immunization.
6. Preventive measure to avoid accidents.
7. Use of Health Services

**3.1 Human Anatomy and physiology:-** Human anatomy is very strange. Nature has given so many special qualities, which are very difficult to understand and are also amazing. After knowing a lot, still a lot remain un-understood. To know the basic anatomy of the body, it is essential to know function of each part of our body. Through Health education, simple knowledge of human anatomy and its function is given. Through which common man can understand, how our body works, what are its need, which are the factors influencing body function and how imbalance come in the functioning of body. How much physical efforts are needed for maintaining our health or how much rest or sleep is needed? What happens when there is an imbalance of body efforts and sleep? How health is effected by consuming of intoxicants like Cigarette, Liquer etc? Why not to consume them? Not only this but also how the reproductive cycle works? Important tips from pregnancy till the birth of child. All these important knowledge are given.

**3.2 Nutrition:** Balanced diet is essential for healthy life. The basic knowledge of nutrients in our food is always neglected ( e.g. Carbohydrate, Protein, Fats, minerals & vitamins), what are the sources of these nutrients? what is their function? Lack of these leads to malnutrition, and how they harm our health? Generally we are unaware of these important knowledge. In Health education we are made aware of importance of nutrients, how to cook? how to preserve food and all the mis concepts related to nutrients. It is essential to change our wrong habits related to food without which food instead of giving benefits, becomes harmful. Health education inspires and educates public as when to eat. How much to eat, How to eat habits

**3.3 Sanitation:-** While making health increasing programmes we should stress on sanitation. Keeping all bio and physical factors in there natural form is what we means by sanitation. This work can be done on two stages.

**Personal Stage:-** Daily personal activity ( toiletry) bathing, wearing of clothes, eating food, cleanliness of body, spitting, coughing, sreezing, taking care of sleeping and sitting areas etc. all comes in personal stage.

**Environmental Stage:-** Other than body, when man cleans his surrounding it comes in environmental stage. This also has 2 angles – Domestic and community. In domestic comes cleanliness of house, proper arrangement of light and air, cleanliness of floor and walls, sanitation of kitchen and control on pests ( rats and flies). And in community sanitation comes supply of safe drinking water, town planning, nice airy houses, proper drainage and proper discard of diseases and urine.

**3.4 Mother and child care and family planning:** Healthy child is the maker of healthy society. And a child can be healthy only when proper care of him is taken during pregnancy period. Many misconcept are attached with health care of pregnant mother. Different believes are attached with from her daily activities to her food. Due to which the pregnant mother passes her days in pain and the child inside, before his birth gets many diseases and does not get appropriate treatment through out his life. Through health education all these misconcepts are tried to abolish. During pregnancy balanced nutritious diet to the mother, benefits of vaccination, care during pregnancy and delivery, breast feeding for infant after birth, importance of vaccination for infants etc., Knowledge of all these are given in health education programmes. Explaining the benefits of difference between 2 children inspires them for family planning. A mother is educated for all these, which in returns educates the whole family. The result of which is Healthy society.

**3.5 Immunization:-**The environment in which a man, there is possibility of getting effected by germs and microorganisms and fall sick. There are many infections disease which not only effects a person but is harmful for the whole society. There are some disease which are caused due to virus and bacteria are not infections in nature but there ill effect are on greater mass. In health education awareness of many infections, disease ( like – polio, typhoid etc.), there nature, factors causing them, their ill effects is given.

And immunization program and its benefits are explained in these health education program and inspires them to participate in these programmes.

**3.6 Preventive measures to avoid accidents:-** It is natural to meet small accident while working. But it is a fact that big accidents occur only due to carelessness. Accident mainly takes place in 3 main places, such as – While coming out of the house – road accident, while working in kitchen – home accident or accident in our working field. Road accidents are caused due to rash driving, intoxication, breaking laws of traffic and pressure of increasing vehicles on road. Inside the house accidents are mainly due to either too much use of electrical appliances or due to LPG gas. In work field like factories all accidents, mainly occur due to breaking important laws. Through health education public is educated how to get rid of carelessness causing accidents. How they can follow small things to avoid big accidents. By controlling accidents not only public property is saved but even public health becomes safe.

**3.7 Use of Health Services:** Many programmes are made on state level for protecting and conserving public health. It is the duty of people to be aware of these services and take maximum benefits of them. Main aim of health education is to educate people for taking maximum benefits of these community health services. People living in far off villages fail to take advantage of these facilities due to their ignorance and disinterest. Programmes like abolition of Malaria, Polio abolition, mother & child health services and family planning etc are a boon for health conservation. Through health education public is inspired to take full advantage of health services.

**4.0 Theories of Health Education:-** Health education is not an object which is given to person to person. Activities like education, learning and understanding should be included in it. So that aspiration towards living a healthy life gets deep into their heart, they accept it full heartedly. Psychologists have thought seriously on the learning and memorizing technique and based health education on it. They say that every man keeps on learning something or other and plans his future on his learning. Learning and teaching is a 2 way process which goes on between a teacher and student. We cannot teach anyone; anything till he wants to learn. The teaching & learning process is not limited only up to classroom but runs at society level also. And health education is one of them. Educationists have given following theories on this basis.

- (1) Interest
- (2) Participation
- (3) Comprehension
- (4) Communication
- (5) Motivation
- (6) Reinforcement
- (7) Learning by doing
- (8) Good Human Relations
- (9) Leadership.

**4.1 Interest:-** According to psychologists, man does not pay attention to those things which are not of his interest. So to make health education effective and successful, it is essential to make it interesting. Now public is no more interested in slogan as “Take care of your Health” or “Keep Healthy”. So now health education workers have taken responsibility to find health necessities of common man and then base their health education programme on these necessities to make it successful.

**4.2 Participation:-** To listen and learn by being inactive and neutral, it is better to be active and learn. In health education programme chance is given to the learner to actively participate in it. That is why group discussion, expert discussion and workshop, has special place in health education.

**4.3 Comprehension:-** Any type of knowledge is not complete till the comprehensive level of the learning group is not clear. It is essential to know if the learning group has the capacity of understanding the topic

taught. Because if the topic taught fails to reach their brain, then teaching is useless. So before starting health education programme, it is necessary to know the comprehension of the Target group.

**4.4 Communication:-** Communication is in the base of technique of any study. It is very important how and in which language the teachers and learner interact. In target group generally people whose education is very less or little bit. That is why while teaching it is necessary to be partial about the language. Easy words should be used. By doing such the things which are taught can be understood and accepted easily.

**4.5 Motivation:-** Every man wishes to learn something from his heart. In some people this is very desperate, where as in some it's not so desperate. So the people in whom the wish of learning is not very cogent. So by efforts these wishes need to be made desperate. These efforts are known as motivation. It is also of 2 type Primary & secondary. Sex, hunger wish to live are primary inspirations where as appraisal, completion, award, punishment etc are secondary inspirations. Primary inspiration needs less effort to arise them. The inspiration got from health education help in new ideas and thoughts. Inspiration are attached with punishment and awards. It helps to make changing process fast & success. E.g. – If a lady is said to reduce weight for good health, she won't pay much attention, but if the same lady is said that if she reduces weight her beauty and position in society will increase then she will immediately practice it. Health education takes help of such inspirational processes

**4.6 Reinforcement:-** It is not necessary that things said in Health education will accept it immediately, so in health education each and every thing is repeated time and again, so that it is cemented in the mind of learners and its results are good.

**4.7 Learning by Doing:-** It is difficult to listen and learn, read and learn in comparison when we do and learn and it becomes clear in our mind quickly.

There is a Chinese Proverb –  
“ What ever I listen I forget”  
“ What I see, I try to remember”  
“ Whatever I do, I know it”

So following this, in health education total involvement is given preference.

**4.8 Good Human Relation :-** The success of a health educator is in his sweet behaviour not his technical qualification. Any thing to cement in mind and heart of people, depends how close relation the educator has with people. The educator should be very polite, sensitive and patientful. Through his behaviour he has make people believe that he is their true well wisher and friend, then only they will listen to him carefully and do what he says.

**4.9 Leadership:-** Psychologist believe that we listen and accept things from those people only, whom they respect and faith. Any policies can be put into practice by consulting the community leader or their head. Because these leaders or head works as agents of transformation.

**5.0. Communication Health Education:** - Education basically depends upon communication. A health educator should know how to interperate the things to the people with whom he is working. The work of communication is to interperate ideas from one person to other, one group to other. Through this expected changes can be brought. Main factors of communication are :-

- (1) Communication
- (2) Message or Information.
- (3) Audience
- (4) Channels of Communication.

**5.1 Ways of Communication:-** Communication is an art which essential for all human relations, to influence other by talking, to persuade, others to do according to your program depends upon our communication power. Following ways of communication can be used –

- (1) **One way communication:-** In this follow of ideas are from one side, its direction is from sender to the gainer. In this way there is no provision for feed back. Demerit of this process is that we don't come to know how much the learner has gained.
- (2) **Two Way Communication:-** In this way the learner listens the ideas and through communication tries to understand be satisfied. It is called feed back. This is better than one way communication and is effective also.
- (3) **Verbal Communication:-** In this, in front of each other with the use of language, ideas are put in front of the learners.
- (4) **Nonverbal Communication:-** In this beside using words message can be send to the audience by body language as – by smiling, by staining by body postures etc. Silence is also a type of nonverbal communication. Sometime it has been found that silence speaks louder and more effectively than words.

#### **6.0 Health education should be run mainly on 3 levels –**

- (1) Personal Level    (2) Group Level    (3) Public Level

#### **6.1 Health Education on Personal Level:-**

Health Officers who are personally in contact with patients and their relatives, give them health Knowledge. Tells them about symptoms of diseases, their prevention, how to be safe from them, Other measures of safety etc. The biggest benefit of health education on personal level is that, Can give knowledge on various aspects of healths, can do argument, can satisfy people. Health Officers and people both fulfills their responsibility and are fully satisfied.

#### **6.2 Health Education on Group Level:-**

In group comes school going children, same type of patient, industrial worker, pregnant women And after delivery mothers - Each group can be educated by selecting a topic related to them. For group level health education periodic select of the topics is important. Following process are used for group level health education

##### **(1) Didactic Process:-**

- (a) Lecture    (b) Film    © Flash Cards    (d) Chart

##### **(2) Socratic Process:-**

- (a) Group Discussion    (b) Pannel Discussion    © Symposium    (d) Workshop    (e) Play

**6.3 Health Education on Public Level:-** For education common public medium of communication are best. The medium are :-

- (1) Posters    (2) Health Magazines    (3) Radio & T.V.  
(4) Health Exhibition    (5) Health Museum

Posters are put to attract common mass, so its need artistic creativity. The message on the poster should be straight, simple could very clear and understood on first glance. Good health magazines with many types of knowledge is a important medium of communication. And newspapers are considered to be a broader medium for communicating. Radio and T.V. are very common and are available every where. By organizing health exhibition, people are made more aware. Health museums are also strong medium for inspiration.

**7.0 Community Health Nursing:-** Health level of the members of particular community, factors influencing their health level, their problem and health facilities available in the community is called Community Health Nursing. Promotion of health, prevention of disease, care all these activities jointly is



community health. The traditional and important duties of health ( as conservation of environment, prevention of contagious diseases are also included in this concept community health.

Actually community health is related to a small mass of people, so community diagnosis and community care are given stress in it. It means the whole community is looked upon as 1 patient and the health of community is looked upon as 1 unit health.

**7.1 Community Health Nursing and its theories.** Community health nursing is run under an organized and pre planned procedure. And its procedure points are –

- |                  |                |
|------------------|----------------|
| (1) Recognition  | (2) Assessment |
| (3) Intervention | (4) Evaluation |
| (5) Organisation |                |

- (1) **Recognition:-** Community health nursing starts with the health level of community which can be achieved by seeing, understanding and by assuming.
- (2) **Assessment:-** Through this all the technical and possible activities of health nursing is decided.
- (3) **Intervention:-** In this level the planning are activated
- (4) **Evaluation:-** After activation of all planning, getting their results is called evaluation. The analysis of the obtained result decides further direction.
- (5) **Organization:-** If community Health Nursing is expected to run on big scale successfully than working as organization is more success.

Community health services are based on above mentioned theories only, but when going into broader sense we can consider following points even –

- (1) Meeting with leader or head of the organization and taking their approval.
- (2) For recognition of problems and need of community health services, help of survey, available records should be consulted and inquired.
- (3) To determine the priority of the problem, help of source of problem, seriousness of problem, need of problem.
- (4) Identification of health problem and then decide for the necessary solution and keeping in view all these planning should be made.
- (5) Activation of the plan which is ready.
- (6) Solution for the problem and its positive assessment.

#### **SAMPLE QUESTION FOR PRACTICE**

##### **I. Essay Type Questions.**

- (1) Explain the fields of health education.
- (2) Explain in detail the theories of health education.

##### **II Short Answer Question – (Answer in 10 words)**

- (1) Define Health Education ?
- (2) Explain the ways of communication in health education.

##### **III Objective Question ( Answer in one word or 1 sentence)**

- (1) Health Education should be run on how many level ?
- (2) How many factors are there in communication ?

##### **Ref: Books:**

- (1) Park's Text book of preventive and Social Medicine – K. Park  
M/s. Banaraidas Bharot Publisher, "Jabalpur"

## CHAPTER -4: BIOLOGY AND HEALTH IMPROVEMENT

**AIMS:** After studying this chapter you will-

1. Get information about the relations between Biology and health improvement.
2. Understand the aspects of health improvement through Biology.
3. Be capable of providing practical training of Biology.

**Topics-**

- 1.0 Biology and Health improvement
- 2.0 Training process
  - 2.1 Excretion
    - 2.1.1 Defense
  - 2.2 Preksha-Meditation
    - 2.2.1 Process of Preksha-Meditation training
- 3.0 Health improvement through regulated life style
  - 3.1 Elements of 'Anuvrat'
  - 3.2 Anuvrat-Acharsamhita
  - 3.3 'Anuvrat'- also a social constitution

### 1.0 Biology and health improvement

Biology is the science of life. It is a teaching about how to live life. It is an art about how to adorn life. Health is the first step to achieve the ultimate goal of life. So definitely the attitude of teaching of Biology has been positive towards health. In this teaching, as much attention is paid to increment of physical, mental, spiritual and intellectual health as it is being paid in moral and spiritual development of a person. In order to increment of health, mainly three schemes are being paid more attention.

1. Theoretical training
2. Experiments of 'Preksha-Meditation'.
3. Following 'Anuvrat-Acharsamhita'.

Under theoretical training initially misconception of health, aspects of health, and various elements and situations affecting health are described. The way level of health changes according to the continuously changing conditions, it is necessary to know about it. Body has its own limitations. When body fails to accommodate changing environmental conditions, supporting mechanisms are needed. Various experiments of 'Preksha-Meditation' are supportive to maintain health. So in this order all the theoretical backgrounds of experiments and practical methods are arranged. For the protection and maintenance of health our life style is also equally important. 'Anuvrat-Acharsamhita' are the regulations of such a life style which created ideal conditions for health. Under theoretical training, definitions of all those regulations, their effects and possible benefits to health by them are acknowledged.

1. **Health, physical control and Biology :** Persons control is done by various systems of body. There is a competent system for accomplish- ment of each and every action. For this steady system, there are four elements working- Body, Breath, Speech, and Mind. In the sequence of health increment of a person, these four elements are adorable as well as obstructing. They are goals as well as hurdles in the sequence of evolution. If they are learned, then they are supporting, otherwise obstructing. So the basic question is of acquiring their training, and studying. Our body's controlling system is Nervous system which has two main parts- Brain and Spinal cord. These two form two poles. The upper pole is brain and the lower pole is the end of spinal cord at lower end of back bone. Brain exerts consciousness while the lower end of spinal cord exerts energy. Consciousness and energy are very important factors

in our life. Both of them are maintained by these two poles- Intellectual centre in the form of brain, and energy centre in the form of spinal cord. If both of them develop properly, then our activities are controlled with ease and comfort as well as health is also maintained.

The second element is Breath. It is usually under-evaluated. Every organ of body is full of life because of breath. It is as important internally as it is in external world. A person is associated with other animals, plants etc. in outer world. Breath is one of the aims for this. Breath is first inhaled and then exhaled. Apparently this is a very simple process, but is very important. It has got a very important role in affecting a person's health. With breath oxygen enters in body and with expiration, carbon-dioxide is exhaled. Without oxygen, no tissue can work. These tissues need energy to work which is derived from oxygenation of food. For this process to take place, presence of oxygen is necessary. The health of a body depends up on the competency of unit cells. This way, breath is a supporting factor in the maintenance of health.

The third element is Speech. Speech is the major gadget of our activities and sociality. There is no social life without speech. One person communicates with other through speech. Mutual correspondence can bring about favourable as well as adverse situations. Because of adverse situations, such stimulatory changes take place in our body that affect health. That is why control and training of speech is important.

The fourth element is Mind. Mind is the medium for memory, imaginations, and thinking. The journey of our life moves ahead on the base of these three. Without memories, life can not move ahead. Without imagination no one can think about progress and without thoughts these imaginations can not be materialized. It is mind which embodies these three elements. Besides this it is a fact that mind and body are the two inseparable parts of a personality. To achieve health, training of mind is extremely necessary because if mind becomes weak then these three elements will get dispersed and the person will become handicapped mentally as well as physically.

These four elements-Body, Breath, Speech, and Mind are the solid foundations of our activities. Without these four being coordinated, our activities can not be controlled and without the control of our activities, health can not be maintained. But sometimes they create hurdle also. In the process of this obstruction mind plays major role. Suppose a work is to be done. At this time unnecessary memories come in to play. Mind is distracted due to unknown fear, thoughts start to come in to mind. The work gets delayed and sometimes it is even left uncompleted. Memories start to play like a reel one after another and the cycle becomes infinite. Memories if are supportive, they are obstructive also. Imaginations if play creative part, futile imaginations even lead to failure on the other hand. Thinking is necessary as well as obstructive. Sometimes a person so much thinks that the whole sap of action is directed to thoughts and action does not occur. Until thought process breaks, no action takes place. Ultimately leads to depression and anxiety. For the improvement of health these elements have to be trained and to be given a proper direction.

Everyone understands the speech hurdle. A little bad word makes a good friend an enemy forever. All the activities of mind depend on speech. Memory, imagination, thinking, etc. all need speech. This way where breath plays assistance, it also plays as an obstruction. Excessive anger, lust, jealousy, etc. all have breath in their background. If breath is not mastered then it becomes a reason for the creation of all these feelings. There are two types of breath-deep breath and shallow breath. A natural breath should be deep. Some people believe that a natural breath is deliberately made deep, but it is not so. Biology believes that a natural breath has to be deep. 15-16 respirations per minute are not natural. According to our Anatomy, no more than 7-8 breaths per minute should be there. There are our mentalities behind this increased respiratory rate besides our anatomy. Breath becomes shallow when it is affected by mentalities. Breath becomes shallow during excitement, and excitement occurs when breaths are shallow. Our central nervous system aids in controlling our activities. In this process, if motor and sensory nerves are performing their functions properly then only our life can be balanced. If there is some disturbance in their

functions, then all the physiological processes are obstructed and this creates lots of perversions in our body. That's why for the better health of our body we have to train our body, mind, speech and breath.

## 2.0 Training Process

The process of health improvement with Biology involves training of all the above mentioned elements. There are four parts of this training process- 'Karyotsarg', 'Preksha', 'Anupreksha', and consciousness.

**2.1 Karyotsarg :** It is the process of getting relief from stress. It is necessary to learn this process to stay healthy. In modern times one person out of two is under stress. Stress despite of not being an illness itself, it gives rise to many diseases. So a proper direction can be achieved for health improvement by relieving stress. 'Karyotsarg' is done to eliminate harmful effects caused by stress. Below mentioned adverse changes take place in our body in a stressful condition.

1. Digestive process becomes sluggish.
2. Salivary secretions diminish.
3. Metabolic rate changes.
4. Respiratory rate increases.
5. Heart rate increases and blood pressure rises.
6. Contraction and relaxation of body tissues intangible increase.

Because of these changes, chemical secretions and bio-electricity increase in our body. If these changes are unwanted then excess of energy and secretions create tension in tissues. If this situation is prolonged or occurs repeatedly then it gives rise to serious consequences. For example, if raised blood pressure is prolonged; and constriction of blood vessels persists then it may cause heart attack or haemorrhage. If stomach and other digestive organs are deprived of adequate blood supply for a long time then digestive disturbances are created. If rapid breathing is prolonged then it brings about serious problems of respiratory system. Tension in body tissues causes pain in neck, back, etc. Besides these, persistent stress may lead to depression and other psychiatric problems.

**2.1.1 Prevention:** Tranquilizer drugs invented by modern medical science provide temporary relief. But after a long time these medicines themselves prove to be more dangerous than the ailment itself. At this point a question arises that whether we are destined to get exterminated because of situations of modern age and atmosphere or is there any other way through which we can accommodate these situations so as to protect ourselves from adverse effects of routine stress. Nature has provided us with such a defense mechanism due to activation of which such a physical condition is created which is different from Fight-or-Flight situation. Nobel Prize winner Dr. Walter has named this system as 'Topotrophic Reaction'. Describing this system as a defense mechanism, Dr. Walter has said that with this system an antagonist reaction can be generated against the reactionary process created by stress. Dr. Herbert Benson has named it 'Stress free mechanism'. Everyone can train himself and activate his defense mechanism by 'Autosuggestions'. By balancing hormones and there by establishing a proper coordination between sympathetic and parasympathetic nervous systems stress can be prevented. This Autosuggestion is the base of 'Karyotsarg'.

For the health improvement learning supportive elements of Karyotsarg are also equally important. This includes many physical activities as well as exercise. Exercising them aids blood circulation in body tissues. There are opponents for almost each and every tissue groups. When one contracts, other gets relaxed. If one group of tissues is kept tense for a long time then it causes reduction in blood circulation. This leads to accumulation of metabolic end products like lactic acid etc. in those body tissues. This causes pain and fatigue. So, to prevent such material in body tissues it is necessary to maintain blood circulation in those tissues.

Aasans and other procedures adopted for the tissues to get contracted and relaxed rhythmically, improves blood circulation and besides that, pain and fatigue are relieved. Our body tissues have to work against the gravity of the earth and wrong postures make this situation worse resulting in deformities in them. That is why, a proper teaching of aasans and postures is necessary.

**2.2 Preksha-Meditation :** Preksha-Meditation is the easy and ready to hand process which simply means- 'To See'. Glance of a soul by a soul, glimpse of mind by mind, attempting to see a hidden insight through material sight. 'To see' is the foundation element of Preksha-Meditation.

Achieving a sacred mind is the first step of achieving health. When mind is overwhelmed by bad mentalities, then the stream of self awareness can not flow in heart. Without this, bio-chemical processes and other mechanisms can not perform harmoniously in our body; at this situation the imagination of health is futile.

Various scientific processes are intended to find out truth, but their subjects are merely material. Scientific inventions take place only in the presence of physical equipments and machines. Perhaps this is the reason why it is stretched up to material things only. It can not reach the level of insight. This is the reason why science has not accepted the entity of independent reign of insight. It is clearly quoted in spiritual articles that meditation has an invaluable aim- Knowledge of self existence, experiencing the independent reign of insight. Now, science has started accepting that meditation relives stress and helps improving general health.

The aim of Preksha-Meditation in behavioural aspect is growth of the whole personality. Whole personality means complete and balanced development of all the components (Physical, Mental, Intellectual, and Emotional). Health is also included. A person having the asset of complete personality is having following aspects.

1. Balance of intellectual and emotional development.
2. Spiritual and scientific thinking.
3. Ability to control emotions.
4. Balance of mechanical and chemical processes of body.
5. Ability of various skills.
6. Want of stress habits (Mental and emotional).
7. Disciplined and merciful life style.
8. Ability of friendliness and cooperation.
9. Decision power and self confidence.
10. Sensitivity to human relationships.

Preksha-Meditation helps in developing all these qualities that ultimately contribute in enhancing health.

**2.2.1 Process of Preksha-Meditation Training :** In the syllabus of Preksha-Meditation, following processes are observed-

**1. Movement of 'Upasampada'** – This has five facets- 1. Bhavakriya, 2. Abstinence from Reaction ('Pratikriya Virati), 3. Friendship ('Maitri'), 4. Soft speech ('Mit Bhashan'), 5. Proper diet ('Mitahar').

**Bhavakriya-** Bhavakriya has three meanings-Living in present, devotion, and staying conscious. The one who lives in present, and feels the present moment can be free of feeling of jealousy. Such a person cannot receive physical stimulations. Without devoting to a work, results cannot be as per expectations. Because of this we have to face despair which is harmful to health. So, whatever work we do, we should do with devotion and commitment. Without consciousness, sacredness of mind is not possible. That is why we should be conscious about our activities.

**Abstinence from Reaction ('Pratikriya Virati')-** A person's aim should be action, and not reaction. We should safeguard from reaction out of getting affected from external environment and other situations; because, it is the reaction which creates physical irregularities.

**Friendship-** The third element is friendship-friendly behaviour. This is possible only if the person is free from reaction.

**Proper diet ('Mitahar')-** This means taking a balance diet in an adequate quantity. Diet has got equal effect on mind and insight as well as body and health. Unnecessary food creates deformity in body as well as in mind. So diet should be taken care of in terms of its type, quantity and time.

**Soft Speech ('Mitt Bhashan')** – Speech is necessary in our routine life, provided it has a limit. Speaking more than necessary becomes a reason for stimulation in some form which is harmful for body and health.

## 2. Supportive factors of Preksha-Meditation

There are four complimentary factors of Preksha-Meditation

1. Aasan,
2. Pranayam,
3. Mudra,
4. Dhvani

You have already learned about various types and procedures of Aasan, Pranayam, Mudra, and Dhvani and their benefits.

## 3. Major parts of Preksha-Meditation

There are eight parts of Preksha-Meditation which are described.

1. Karyotsarg
2. Antaryatra
3. Shwas Preksha
4. Sharir Preksha
5. Chaitanyakendra Preksha
6. Leshya-Meditation
7. Bhavna
8. Anupreksha

**Karyotsarg-** You have already learned about the principle and training of Karyotsarg.

**Antaryatra-** In meditation it is necessary to develop Nervous energy of the Nervous system. The main part of our central nervous system is 'Spinal Cord'. The lower end of spinal cord 'Energy Centre' is the main centre of vital energy. During Antaryatra, concentration is brought from this energy centre to knowledge centre through spinal cord. With the Antaryatra of insight, vital energy flows upwards. Repetitions of Antaryatra develop nervous energy of nervous system which is equally important for balanced health as it is for meditation practice.

The centre of our consciousness, knowledge is –Nervous System. It is extended in the whole body, but the area from lower end of spinal cord to brain is the basic centre of consciousness. It is the site of expression of soul. This is the site of mind. It is the site of nourishment of mind and senses. Sensations, reflexes, and impulses are all transferred from here. It is the site of energy too. It is the centre for sensory and motor fibers. It is only a human who can transmit energy upwards. By merely changing direction, the downward flow of energy changes to upwards. Flow of energy of brain downwards is the entrance in a materialistic world. Flow of energy upwards is the entrance in to spiritual world. On downward flow of energy, material pleasure is achieved and on upward flow of the same gives spiritual pleasure. This spiritual pleasure leads us to 'Pratikriya Virati' which lowers metabolic rate in body, provides physical peace and health is boosted.

## Breathing Preksha ('Shwas Preksha')

Breathing is the inseparable element of metabolic processes. Breath and life go hand in hand. Mind can not be caught directly. But to catch mind, catch life and to catch life, catch breath. By changes in breathing we can develop our mind. Breathing Preksha is the simple way to concentrate our mind.

For the concentration and peace of mind, it is very necessary that breath be calm. There are two forms of peaceful breath – 1. Mild breathing ('Sukshma Shwas-Prashwas') and 2. Deep and calm breathing ('Mand / Deergh Shwas –Prashwas').

In Karyotsarg, breathing is not stopped but it is made mild ('Sukshma'). Oxygen should be inhaled gently and should be exhaled gently. This is called 'Mand Shwas-Prashwas'.

There are many exercises of Breathing Preksha – Deergh-Shwas Preksha, Samavritti Shwas Preksha etc.

### **Deergh Shwas Preksha**

The one, who exercises Preksha-Meditation, first controls its breathing. He tries to make his respiration long and rhythmic. Usually a person takes 15-17 breaths per minute; deergh shwas Preksha reduces this rate. After general exercises this rate falls below 10 and after special exercises it can fall even further. To make the respiration mild or deep, diaphragmatic muscles are exercised. While exhaling abdominal muscles contract and while inhaling, these muscles relax.

Making respiration mild, deep or calm gives mental peace. With this, aggressions also calm down. Irritabilities, stimulations, and desires alleviate. When breathings are shallow, desires rise, irritations occur. All these mental perversions have one vehicle-Breath. Whenever you feel that irritation is coming to your mind, immediately make your breathing deep and find the irritation gone. The reason behind this is that the vehicle is not available then for the irritation to appear. No irritation or desire can manifest without dependency. A regular practicing of meditation provides a mastery to find out the depth of mind. The person then can know as to which centre of brain a perversion is arising from. So the person practicing meditation is not affected by those mental perversions and his health is not affected by the adverse effects.

Breath is the present fact. To observe it means living in stability, living free of bad feelings. The one who observes breath becomes free of stress. It is a simple procedure to train our mind to concentrate on current activities. It increases aptitude.

### **Samavritti Shwas Preksha**

This is also an important factor of Preksha-Meditation. Inhaling from left nostril and exhaling from right one and vice versa-is 'Samavritti Shwas Preksha'. Observing it, concentrating it and uniting it with mind are very important. Initially it is facilitated with finger and then it can be voluntarily done by decision power. With Samavritti Shwas Preksha, important centers of insight can be aroused. This way we can see that shwas Preksha is not only a gadget for concentration but also it can avail energy required for various physical activities that can be exercised to remove physical perversions.

### **Physical Preksha ('Sharir Preksha')**

In this all the body organs are concentrated and wherever some irregularity is observed, it is refurbished by vital energy. It also enhances immunity power. These works are fulfilled on the principle of 'Faith Healing'. An attempt is made to balance all the systems of body and achieve the goal of health enhancement.

### **Chaitanyakendra Preksha**

The aim of Preksha-Meditation is sanctity of mind. To make our mind sacred, we have to undergo purity of our feelings, habits and actions; and for that we have to understand where do these impurity arise from and where do they become evident. If we understand this then it becomes easy to make them sanctified. We have to think about it according to the 'Yoga therapy' and modern Anatomy.

According to science there are two types of glands in our body – Glands with ducts and Ductless glands. Ductless glands are endocrine glands. Pineal, Pituitary, Thyroid, Parathyroid, Thymus, Adrenal, Gonads, etc. are the endocrine glands. Their secretions are called hormones. These hormones have great



deal of influence over our physical, mental and emotional activities. They also have an important role in the metabolic activities of our body which are responsible for our health

Whatever habits a human develops, are all due to glands. Our body has two major control systems – Nervous system, and endocrine system. In Nervous system all our expressions are manifested, come to experience and then enter into behaviour. Behaviour, expression and experience are the functions of nervous system. But habits arise in endocrine system. These habits are then transferred to brain, are expressed and then come to behaviour. That is why a new term is developed in science-‘Neuro-Endocrine System’.

Hormones are of two types – one-the hormones which cause physical stimulation, and the other which reduce this stimulation. In the exercises of Chaitanyakendra Preksha, these hormones are balanced.

### **Leshya Meditation**

Leshya’ is a terminology used in Jainism, which means – ‘Result or level of insight being produced due to contact with a matter having a particular colour’. Waves of mental perversions and waves generated after their purity- embodying these waves in the form of emotions, and transferring them to thought, action and process is the function of ‘Leshya-Meditation’. Leshya is the synchronization between material and immaterial body.

Leshya is such a level where change in personality starts. The whole personality changes if Lehyas are good or bad. So the change will occur on both ways. Now the question is how to reach there? We will have to take resort to colours. Colours have a great influence on our personality. If we understand the procedures and psychological influences of colours then it provides a great help in personality development. Personality development directly affects our health. This way, development of health occurs along with personality development.

### **Feeling (‘Bhavna’)**

The person who studies feelings masters meditation. To master meditation, four feelings have to be studied.

1. **Gyan Bhavna** – Knowledge base study with abstinence from jealousy, and affection.
2. **Darshan Bhavna** – Vision base study with abstinence from jealousy, and affection
3. **Charitra Bhavna** – Practicing a balanced chastity with abstinence from jealousy, and affection.
4. **Vairagya Bhavna** – Practicing abstinence from affection, expectations and fear.

Whatever practice a person repeats, whatever a person mulls over, his culture is formed in that particular form. This is self-hypnotism. It is also called ‘Jap’. The one who spiritualizes soul, gets settled down to soul. That is what the gist of ‘Soham Jap’ is. Those who spiritualize ‘Arhat’ become ‘Arhat’. Some people are absorbed in God. The one who spiritualizes himself in any expert action, his spirit moves him to his goal.

Spirituality is like a boat; a boat takes it’s travelers to shore. Same way, spirituality brings a person out through sorrows.

Spirituality can change nature, behaviour and action. A spirit of being away from affection surely gives results. Spirit of calmness changes anger, politeness changes pride; spirit of satisfaction changes temptation.

The spirit of achieving health is one of the spirits. It can surely help beyond expectation.

**Anupreksha** : Meditation means ‘Preksha’- ‘To see’. After its end, concentrating over subjects which bring the mind in to conscious state is ‘Anupreksha’. Our mind becomes overwhelmed by the subject over which repeated contemplation is done. So the fulfillment of that contemplation is but natural.

Insight is the innovative form of soul. It has two functions- 'To see', and 'To know'. Our insight is not existent in its pure form, so our vision and our knowledge are undisclosed. It is behind a barrier. This barrier is called 'Darshanavaran' and 'Gyanavaran' respectively. This barrier is set by our own affection only. We do not only see or know, but with that a feeling of like or dislike is created. This stimulates maliciousness and spitefulness. These two elements create affection; and affection creates barrier before knowledge and vision. This cycle goes on. There is only one way to break this cycle, and that is 'Gyata Bhav' or 'Drashta Bhav'. You should only to see and know. The one who only knows and sees, utilizes his existence. The one, who develops the feeling of like and dislike along with seeing and knowing, gets away from his true existence and goes to ignorance.

### 3.0 Health improvement through regulated life style ('Anuvrat')

'Anuvrat' is the integration of small 'vrat' which inspires us to adopt such a life style which emphasizes coexistence, friendliness, and mercy. This helps us in observing those moral values which are not only helpful for personal benefits, but are also helpful in establishing natural and situational balance.

It provides us freedom from the sources of those physical and bio-psychic stimulations which create various deformities inside us. Anuvrat were setup for the purpose of moral and spiritual progress of common people; and inspiring them to adopt the principles of truth, non-violence and celibacy. Absence of these values in our life makes us weak in physical, mental, and spiritual aspects. By adopting 'Anuvrat', we can get rid of these scarcities and live a happy and healthy life. Morality and truth are the mottos of 'Anuvrat'. Self evaluation and self criticism are its gadgets. By observing it, we can achieve a great deal of physical and mental welfare.

#### 3.1 Elements of 'Anuvrat'

1. Sensibility towards the existence of others.
2. Unity.
3. Spirit of coexistence.
4. Religious cooperation
5. Non-violence.
6. Limited consumption.
7. Priority to behaviour.
8. Optimism
9. Fearlessness, balanced mind, and truthfulness.

#### 3.2 Anuvrat Acharsamhita

1. "I won't kill any innocent animal".
  - I will not commit suicide.
  - I will not kill foetus.
2. "I won't attack."
  - I will not support molest.
  - I will make efforts for global peace and non-violence.
3. "I won't participate in any sabotage activities".
4. "I will have faith in unity".
  - I will not believe in discrimination on the bases of race, or colour.
  - I will not believe in not touching people of lower community.
5. "I will observe religious empathy"
  - I will not spread out religious agitation.
6. "I will be honest in my profession and behaviour"
  - I will not harm others for my personal benefits
  - I will not cheat.

7. "I will observe celibacy and repression"
8. "I will not act immorally."
9. "I will not support bad social rituals."
10. "I will live an addiction-free life."
  - I will not consume intoxicating substances like alcohol, ganja, charas, bhang, tobacco, etc.
11. "I will be conscious about environmental problems."
  - I will not cut trees.
  - I will not misuse water.

### 3.3 'Anuvrat'- also a social constitution

For any constitution to evolve, regional situations play an important role. The aim of Anuvrat system is to establish such a system for human beings, which can form a balance between person and society. Thinking over social constitution with the view of Anuvrat, following mottos have been resolved.

1. Violence is not the solution of a problem.
2. Faith in unity.
3. Want of exploitation of other's work.
4. Development of human relations.
5. Decentralizing finance and authority.
6. Developing mercy in behaviour.
7. Empathy in thoughts.
8. Improved diet and freedom from addictions.
9. Prohibition of useless social rituals.

With the help of these mottos, such a social constitution can be established in which every person becomes physically and mentally capable and can contribute to the society according to his capacity. Following aspects of social life can be defined with the help of these mottos.

**Violence-not a solution-** For the constitution of a healthy society, violence can not be considered to be the solution of problems. In the present politics, weapon is considered to be the solution and this is the root of problem. At one end a weapon is made and at the other end, efforts are started to make a more powerful weapon against it. This competition has made the situation worse. The first motto of Anuvrat is that "I won't attack". If a person is not attacking someone, then non-violence will be established on itself.

**Unity** – We have to accept the fact of geometry and history that human society is divided in to many parts. This has created borders between nations. It is not possible to wipe these borders but emotional distances can be reduced if people have faith in human unity. Borders are lifeless but if there are borders between human minds, they are stronger. So faith in human unity becomes an important factor.

**Coordination** – One belief has always been there about social constitution that – a stronger one eats a weaker one and maintains its existence. This is in fact the rule of a jungle. Humans can maintain existence by coordination. One person's benefit is not against the other person's benefit but is for his benefit too. Let some people exploit poor people with their intellectual skill to achieve success, but this system can not last longer. In such a system, poor people keep mum for a certain period of time but ultimately they revolt. Here when a few people are compelled to live a miserable life, others can not live peacefully too. On the other hand if a man does not exploit others then not only he himself lives a peaceful life but also provides a background for peaceful life to others.

**Improvisation in diet** – Food is the primary requirement of humans. It is the major element of development of human personality. It doesn't only provide nutrition to body, but is also having a major role in formation of different kind of mentalities. At one end where people die because of dearth of balanced food, at the other end there are people who die because of over eating.

**Freedom from addictions** – Addictions have adverse effects on health. Insight also becomes fade. It sets off a sequence of crime. It has tarnished the image of humanity. The intensity of addictions has stirred the finance system of the whole world. Youths are having problems of black money and thefts. In such a situation the matter of improvisation of diet and freedom from addiction is applied necessarily.

**Comparativeness** - Every person has some personality and the first expression of a personality is – thoughts. Thoughts are expressed as disputes and difference of opinions. It is not possible that everyone starts thinking same. This is not natural either, because truth is so much multi-faceted that it can not be identified in a single form. In such a situation it is necessary that it is identified in multiple facets and is thought over in different angles. Where compulsion of thoughts takes a man to untruth, on the other hand comparativeness brings a man to confront truth. It is the revelation of comparativeness which can provoke empathy in human hearts. We have a privilege to believe in our own thoughts but at the other hand we are not entitled to reject others thoughts by considering them wrong. Spirit of empathy is the true religion. This universal acceptance can establish religions understanding.

**Traditions and morals** – Human is a social animal. Where there is a society, there are rituals. Every ritual or tradition has a useful occurrence. But as situations change by the time, many traditions lose their usefulness. These rituals not only themselves become burdensome and futile but they also make the social constitution sick. So Anuvrat has always been protesting rituals. Traditions can not be denied, but persistence of useless traditions is not the sign of a healthy society and nation. Thus, possibility of protesting blind rituals is always prevalent.

The gist of these statements is that observance of Anuvrat Acharsamhita helps in enhancing personal as well as social health.

### QUESTIONS FOR STUDY

#### 1. Essay

1. Define Biology and Health enhancement
2. How is 'Anuvrat Acharsamhita' useful in physical and social health?

#### 2. Short questions (Answer in 100 words)

1. Mention the visions of Anuvrat.
2. Which are the elements of Health education by Biology?

#### 3. Objective questions (Answer in a word or a sentence)

1. What does proper diet mean?  
(A). Eating repeatedly (B). Eating less  
(C). Eating three times (D). None out of these
2. There are four elements of healthy life-  
(A). Body, Breath, Physic, Mind (B). Body, Speech, Breath, Heart  
(C). Body, Breath, Speech, Mind (D). Body, Spirit, Mind, Life

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## CHAPTER-5: DEBILITY, VAYU IMPURITY, HIGH BLOOD PRESSURE, CORYZA, ACIDITY

**AIMS-** After studying this chapter students will-

1. Acquire knowledge of natural history and common causes of diseases.
2. Learn the process of symptoms, causes and diagnosis of some particular diseases.

### TOPICS

1. Preface
2. Causes of disease
3. Classification of diseases
4. Debility
5. Indigestion
6. Hyperacidity
7. Cold-coryza
8. High Blood Pressure

#### 1. Preface

Everyone knows that disease is the physical or psychological irregularity. Our body excretes impurities through expiration, pores of skin, perspiration, stool and urine. If due to any cause these normal functions are disturbed, than nature has to take resort to some abnormal ways to perform them. These abnormal ways are known as diseases. Disease is the impurity which is being accumulated in our body since long and to remove which, nature initiates some abnormal processes such as fever, abscesses, diarrhea etc.

Thus, the efforts and arrangements made by nature to remove impurities in order to protect our body can be known as diseases or symptoms. Disease is the other name of reaction of our body against over accumulation of toxins.

Famous Therapist Dr. Rakesh Jindal mentions in his book 'Prakritik Ayurvedigyan' that disease is the sign which alarms us that impurities have accumulated in our body, to which we should be cautious and conscious. Another name of disease is the abnormal stage of body.

According to Dr. Jesmimesar Gehmann, "The alternative adverse condition of health is called disease". Disease condition is different from that condition in which there is no pain, no problem, and there is no change in the normal functions. Because of improper life style, the internal environment of body gets contaminated leading to changes in health condition and disease. So it can be said that health and disease are the two conditions of one mechanism.

In baseline condition i.e. when disease is spread out through one single part or the whole body in its latent form as toxic material, there is no evidence of disease. But soon as it is manifested outwardly, it is known as different names. The stored toxin of body gets materialized in the form of fever, diarrhea etc. depending on the situation. The reason is same, but its manifestations are different.

After understanding that disease can be in both tangible and intangible forms in our body, it is difficult to say whether a particular body is free from disease because, even if the body is seemingly healthy there may be an underlying illness which can come to surface under favourable conditions. It is only after this manifestation of the disease that we can diagnose it.

It should be cleared that a disease does not take its form suddenly in a body, but it takes sometimes many days to achieve this stage. The latent form of disease is more dangerous than its visible form because when a disease comes to surface, then the toxic material gets excreted and the body becomes disease free

after a certain period of time. But when latent, it gradually damages internal organs. As a result the body becomes devastated. This condition of the disease is more dangerous.

If it is said that a disease comes in a body to provide health, then it sounds contradictory, but it is a hundred percent fact. We often see that a diseased person, who is otherwise healthy, becomes debilitated and thin when the disease continues for long, but once he gets cured, he starts feeling even better than before the illness. Here it is to be considered as to why the person fell ill? and why did he fall ill at a particular time? Actually, the person was ill for long time but as the disease was in its latent phase, no one could see it. This disease because of want of treatment went on increasing and took a serious form and became visible to all. It is this condition which we call illness. In other words, toxic material got accumulated in the body because of irregular lifestyle and improper food habits. This material has to be eliminated from the body, and to do so, body reacts in various ways called diseases.

When we get away from the nature and start disobeying the basic rules of thought process, breathing, food habits, rest etc. then nature gives us warnings for our benefit just like a good caring mother. These warnings are called diseases. This way, diseases are proved to be the results of our own mistakes.

Nothing happens in this world without a reason. So diseases also have to have reasons. Astrologers attribute them to stars and planets. Exorcists believe them to be due to ghosts and spirits. Vaidyas believe 'Tridosha' as the reasons of diseases. Doctors blame germs for the disease conditions. But, naturotherapists have different opinion. According to them, the patient himself is the reason of disease.

Disease mainly has two reasons-Objective, and Subjective. Behaving out of basic rules of health is the objective reason, and destructive mentalities, depressive anxiety, imaginative fear, etc. are the subjective reasons. All the physical and mental illnesses are due to these reasons. To remain healthy, it is necessary to observe timely meals, exercise, adequate sleep, restrain, etc. Being away from these basic rules invites disease. Same way, destructive mentalities like desire, anger, temptation, jealousy, etc. also create various mental and physical diseases. Objective reasons physically affect body and subjective reasons secretly affect mind. All the diseases arise at mental level and then get manifested physically.

Mahatma Gandhi has mentioned somewhere that an English poet Milton says that it is the human mind which is heaven or hell. It is the mind which is behind obstruction or emancipation. So it can be said that a man himself is responsible behind his health or disease. Just like we fall ill due to our actions, so as we do because of our thoughts.

## 2. Important causes of diseases.

**(A) Unnatural lifestyle-** Dr. A. Joust has mentioned that, "Many people believe that disease and early death are the results of love and grace of God. To support such a belief is like making God scorn at us. Because whatever disease we have are because of our unnatural lifestyles".

Not only Dr. Joust but also almost all of the doctors and learned people of western and eastern countries have started accusing our modern unnatural lifestyle. All of them are now emphasizing on natural lifestyle. They say that natural lifestyle is the only solution for numerous diseases of today's world.

If you want to rule over sadness, then destroy happiness. If you want to rule over insult, then destroy praise. If you want to rule over grief, then destroy pleasure. Same way if you want to rule over disease then you will have to destroy consumption (Unnatural lifestyle). This is the only method. In fact, we have some bad habits which do not let us stay healthy. Some of these habits are-

1. Food related habits
2. Laziness
3. Least use of five elements
4. Affection with unnatural things
5. Unregulated use up
6. Futile treatment
7. Bad thoughts

Natural life is a restrained life. It is called modesty. Restraint, modesty, saintliness are the synonyms.

**(B) Impurity (Toxins)-** Another reason for disease is the spread of toxin in our body due to irregular lifestyle and want of their normal excretion through body outlets. This toxin has many names like impurity, contamination, poison, perversion etc. In Ayurveda, it is called “Dosha”, and all the Vaidyas also consider this to be the reason for diseases.

All the impurities created in our body like stool, urine, perspiration, sputum, gas, contaminated breath or blood etc. can not be part of the body. On the contrary, it proves harmful to our body. This impurity is called toxin. It can be solid, liquid or gas.

Initially, toxic material gets accumulated around the outlets of body or surrounding organs like abdomen or pelvis, and then it spreads to rest of the body. These areas can not grow properly because toxic material which is accumulated in these areas hampers nutritional supply. So these organs are under-developed.

The toxic material has got a power to change its form. It is made of those particles which are dispersible and crushable. These particles can get depressed and during this depressive phase, microorganisms start growing in it which leads to growth of toxic material. This depression generates heat. The more is the depression, the more heat is generated. Two or more objects when subject to friction create heat. Because of this heat all the diseases like fever, coryza, headache, abdominal pain; dyspepsia, diarrhoea etc. are created. Because of toxic material heat increases in our blood which is known as fever. Fever occurs only when there is toxic material in our body and its all outlets are almost blocked.

Seasonal change, external injury, depression etc. set the toxic material in to action and it finally takes form of fever. Here by fever we mean a disease. If at this stage it is not provided a proper outlet to leave the body, then it destroys the particular organ by creating excess heat. On whichever part of body toxic material creates an impact, the impact is known as the disease related to that particular organ.

It is not only mistakes in diet which creates toxic material. There are some other ways also through which toxic material enters in body.

1. Fine dust particles, microorganisms, smoke etc. enter body through breath. (Result of environmental pollution).
2. Contamination, microorganisms etc. in water enter through oral route in body.
3. Venomous animals like snake, scorpion etc. introduce their poison through their sting in our body.
4. Toxic material is introduced in body through harmful medicines and injections.
5. Consumption of narcotic agents like tobacco, ganja, charas, cigarette, etc. also increases toxic material.

**C. Diminution of Vital Energy (Immunity Power) –** Reduction of vital energy in body is the third reason of diseases. It is well known that lean, thin and debilitated people are more prone to diseases. A debilitated body does not have strength to remove toxins. Due to overload of toxins, the person becomes charm less. He loses attraction and beauty; becomes irritable by nature. Appetite and sleep are lost. Development of body gets hampered and the body is always haunted by one or another disease. It is a non-controversial fact that the diseased condition of body is because of diminished vital energy which itself is a disease and is treated at the first instance by Naturopathy. This is because it is hopeless to treat disease without enhancing vital energy. There are three main reasons for the diminution of Vital Energy-

1. Over exertion.
2. Working at night.
3. Anxiety and other psychiatric problems.
4. Consumption of artificial medicines and unnecessary treatment.



**(D) Hereditary reasons** – Off springs of debilitated and unhealthy parents are also unhealthy and debilitated. This is a natural law. But in this condition also the culprit is the presence of hereditary toxic material. Because it is but natural that toxic material is transmitted through blood of affected parents to their children. Even if this material is minute in amount, it surely imposes its effect on children.

This starts from the very beginning when sperm and ovum of father and mother meet. According to previous actions, such a soul enters in this seed which is appropriate for this particular time and situation. This way many diseases of parents or ancestor get transmitted to children.

**(E) Unnecessary treatment-** Accumulated impurities in body is the actual disease. The one who believes this will never wish that any other toxic material enters in body and takes form of a disease. E.g. Entering choleric toxin in a healthy body for the protection from cholera, operating upon or completely removing a body organ unnecessarily which compels the disease to take a serious form. Or getting ill, introducing strong medicines instead of knowing and treating the disease in a proper way is the third example of unnecessary treatment. These methods introduce extra toxin in body and facilitate the disease to become more chronic.

**(F) External injury or accident** – A healthy person gets mechanical disease by getting injuries over skin, tissues, vessels, bones etc. by external injury or accident. Operative procedures also fall under this category because it is also an external injury.

**(G) Microorganisms** – All the microorganisms of the world can not initiate a disease process in a healthy body. But a little toxic material can do so by setting these microorganisms in to action because, these microorganisms grow on this toxic material. When these organisms prove to cause disease then they are called disease producing microorganisms. Still it will be a mistake to consider the cause of disease to be limited to microorganisms. These organisms are more responsible for production of enzymes than disease symptoms.

Just like they eat and produce decay in other things, they also eat and create decay in toxic material. These organisms multiply in this toxic material. This way it is cleared that organisms are reason as well as process of diseases. Many people die due to cholera, small-pox etc. because major portion of body is filled with toxic material in which microorganisms strike and create symptoms of that particular disease.

### 3. Classification of diseases.

**Types of diseases** – In relation to health, there are three aspects of human body-Physical, mental, and emotional. The body which is healthy in all these three aspects is considered healthy in a real sense. No one can stay healthy by ignoring anyone of these aspects. Debility causes mental diseases. Same way mental weakness gives rise to physical ailments. These three aspects are related to each other. According to Indian erudites there are three types of illnesses. Diseases created by fate are called 'Adhidaivik'. Physical illnesses are known as 'Adhidaihik'. Diseases created by elements, animals, etc. are called 'Adhibhautik'.

#### 1. Physical diseases

**Classification of physical diseases-** There are numerous forms and symptoms of diseases which are classified in to four groups in 'Ayurveda'.

1. Diseases caused by toxic material ('Dosha') are known as physical disease. E.g. Fever.
2. Diseases caused by external impact are called 'Agantuk'.
3. Diseases caused by anger, fear, sorrow are called mental diseases.
4. Appetite, thirst, etc. and deadly situations are called natural diseases.

Diseases created in body because of accumulation of toxic materials are divided in to two parts. One part comprises of severe diseases, and the other comprises of mild diseases.

**Severe disease** – This is known as 'Acute disease'. These diseases are severe-just like cholera, coryza etc. These diseases arise suddenly, same way they quickly subside also. These diseases themselves are their

treatment. When there is accumulation of excessive toxic material in a particular part, their excretion takes place in the form of an acute disease, which subsides itself once its purpose is solved and leaves behind a healthy body. Acute diseases are more common amongst those who have strong vital energy i.e. children and young people. Acute disease becomes chronic when an obstruction is created in the way of its process of excretion. Symptoms of acute diseases point out to our notice as to how body is making efforts in order to remove impurity and make the body healthy. These symptoms should be welcomed and not to be suppressed by medicines and injections. In acute diseases, fasting and rest are very helpful. This is the reason why nature compels a patient of acute disease to stay bed ridden. With that, appetite is also lost. Appearance of an acute disease in a body is the proof that the vital energy of body is strong enough.

Dr. Lindlhar has mentioned five common stages of acute diseases in his book 'Nature Cure'.

The first stage can be called the preparation phase of a disease. In the whole body or in a particular part, there is a stimulation because of accumulation of toxic material. After that, activation of that toxic material occurs either gradually or rapidly due to which the disease takes a particular form. This situation may last from a few minutes to many years. During this period complimentary processes of production of toxic material or bacterial growth takes place.

In the second stage the disease takes a serious form. Problems increase during this phase. Swelling, fever, redness etc. increase and the patient starts feeling weakness and pain.

In the third stage, the particles get destroyed at the site of disease, which paves a way. A wound is created. Pus and blood discharge starts as happens in case of a boil. Toxin gets excreted through urine and perspiration. Breath becomes offensive. Diarrhoea starts. Vomiting can also occur. In these vigorous efforts of excreting toxins, there might be loss of some useful elements along with toxic material. This gives rise to weakness, and debility. This is the most severe stage of an acute disease. It is a critical phase, a phase of ordeal of vital energy. If vital energy becomes strong at this stage, then it successfully excretes all the toxic material from the body and the patient becomes free of disease. A clever therapist aids vital energy by 'Satyopachar' at this phase and takes the credit.

The fourth stage is the initiation of relaxation of disease. During this stage, disease symptoms start vanishing one by one. Swelling, redness, fever etc. reduce. Offensiveness of breath also diminishes. Diarrhoea becomes less. Vomiting stops. Perspiration becomes natural. Body starts feeling somewhat strength.

Fifth stage is the stage of complete repose of the disease. Body becomes completely free of toxic material and the useful elements which were lost start to gradually form again. The body becomes normal within a few days.

**Mild disease** – When the toxic material in body remains suppressed and lasts for a long time in body. It is known as 'Chronic disease'.

When the cleaning process of acute disease is obstructed repeatedly, then a chronic disease is resulted. When coryza is suppressed repeatedly by medicines, it can take the form of asthma. On suppression of an acute disease, everything seems apparently normal but the toxic material gets hampered inside body and gives rise to a chronic disease.

Parents having low vital energy and suffering from chronic disease transmit the disease to their children in heredity.

Acute diseases are more troublesome. But chronic diseases despite of having no troublesome symptoms, life becomes miserable.

To remove chronic disease, decency of thoughts, patience, and faith on the therapist are very much necessary. With Naturopathy, chronic diseases get cured with difficulty, but they are cured for sure from their root. Long term complaints naturally take long time to get cured. If a patient gets discouraged

midway, then he can not achieve his target. In treating such a disease, patient's vital energy should be enhanced first. Then gradually they should be turned in to acute form. This stage is called effervesce ('Ubhar'). This stage requires a lot of caution or it can lead to dangerous situation. On treating the problem with patience and caution, every effervesce is followed by a better condition and the patient gradually gets rid of the chronic disease.

## 2. Mental disease

Mental diseases are more troublesome and dangerous than physical ailments. What is more surprising is that they arise out of such trivial matters that can be tackled easily if we deal with them rationally. Some of the reasons of these problems are-hatred, violence, temptation, anxiety, laziness, depression, pride, jealousy, ignorance, lust, selfishness, mistrust, doubt, etc.

**Reasons of mental diseases** – Even if mental diseases appear different from physical diseases, the reasons are not different. They also arise out of extra load of toxic material in body. According to Loui Coone, they arise when excess of toxic material affects through back to head and finally nerves of brain. Disturbed digestion due to loss of vital energy and unnatural life style leads to accumulation of toxic material surreptitiously and ultimately create mental diseases. Presence or absence of mental diseases depends upon amount and growth of toxic material.

People having balanced mind and descent thoughts are less prone to mental diseases. Females have less possibility of mental illness compared to males because females are more controlled compared to males. Also they have less consumption of alcohol, tobacco etc.

Besides this there are many points like loss of interest in life, sad atmosphere, unsuccessful marriage life, failure in achieving goals, financial crisis, obstacles in progress, physical unhealthiness, etc. which are the reasons for mental diseases. Excessive strain can also impact mental health. In children, mental peace is lost because of quarrels between their parents. In this situation, children easily become short tempered, thief, and fraud.

There is one more reason for psychiatric diseases. When a man controls and suppresses his malicious desires, they are not destroyed but get hidden. These desires by the time when find the man mentally weak, come to surface in he the form of mental diseases.

**Harms created by mental diseases and evolution of physical diseases out of them** - The famous American psychiatrist Berth Salon has written in one of his books that it is the complete health which is the natural and normal condition of a human. He says that one should get rid of thoughts of death, imaginations of diseases. Because such imaginations destroy our creativity and make us ill.

Mental perversions or illnesses hamper our nerve routes and destroy nerves obstructing the process of vital energy. Thus they hamper excretion of toxins and make the physical illness more serious. Anyone can see fever increasing due to impatience, anger, and irritability.

Same as good thinking helps in elimination of diseases, bad mentalities and mental perversions give rise to diseases. Western psychologists have proved that anemia, heart disease, hysteria, secretary dysfunctions, paralysis, tuberculosis, etc. diseases have mental perversions in their roots. So it is not an over say that 90% of diseases are related to mental condition. Physical illnesses are the gifts of mind.

Fear is a mental disease. It has got a very deep impact. People may also die due to fear. It attacks when body is filled with toxin and heart rate becomes high. Vision is disturbed or sometimes even lost. Appetite is lost. Diarrhea and other diseases begin to appear. The patient begins o shiver and becomes dull. Fear has many forms but all of them are efficient enough to shake the roots of life.

Anger is another mental disease. It also has got many forms. In this case also there is production of excessive toxin in the patient's body. In the situation of anger, chemicals being secreted from glands of

human body get changed. Adrenaline gland starts secreting adrenaline in blood which intoxicates blood. Anger reduces digestive power and the digestive juice gets changed in to toxin.

Anxiety is the third mental disease which is considered to be worse than myre ('Chita'). Anxiety is the enemy of beauty and health. Fear is the mother of anxiety. In case of anxiety, changes occur in blood just as in case of anger which makes blood impure. Body becomes lean and thin, skin becomes lusterless, lips become dry, cheeks cave in. An anxious person do not sleep well and life becomes miserable.

According to the famous erudite Arnold Vannat, it is for sure that our 80% anxieties are meaningless. And of course they are harmful too. Anxiety is such a bug which eats off the roots of happiness. If it is possible to live without meaningless and foolish anxieties, than the world is a heaven.

Jealousy is the fourth mental disease related to which not only psychologists have proved but also medical science has proved that it is as harmful for health as heart disease. These diseases not only bring about mental perversion but also give rise to paralysis, cancer etc. In case of jealousy also, our blood becomes intoxicated.

**How mental diseases can be prevented?** – Mental diseases are very much obstinate and difficult to cure but not incurable. But yes, if confidence is less, vital energy is almost destroyed and toxic material has achieved such a stage that it is impossible to eliminate it, than these diseases have to be considered incurable.

In the treatment of mental diseases, psychotherapy is very much helpful. Below mentioned regulations may help in preventing mental diseases.

1. On getting mentally disturbed, mind should be diverted from the cause of disturbance and one should stop thinking over it.
2. One should always respect others' privileges. Because we can expect the same thing from others only after we ourselves do so.
3. We should always oblige others. But if we do not receive the compensation for those obligations, we should not mind it.
5. Getting irritated, showing aggression, making arguments, scolding and threatening others, being self centered, etc. are mental weaknesses, and we will have to forget them.
6. If the mind becomes mischievous, then start reading loudly, or start enchanting God's name, or take a glass of cold water, or get away from that place.
7. Always keep feeling a sense of confidence and self respect.
8. Do not start defending with your mind on getting perverted mentally. Try to make your mind your slave which is its actual form.
9. Always keep in mind that whatever mental problems, and difficulties arise, are for others and not for us. Such thinking provides self satisfaction.

### **3. Imbalance of emotional health**

Person to person meet to form a society. The society is single but there are differences in the people of society. Some people are always happy, whereas some people are never. This difference is due to variation in emotions, which forms nature of a person. Formation of nature depends upon sensations. Where these emotions, sensations are located? We have two elements for them – Body and Mind, which are the external elements, whereas our emotions are internal. These emotions arise in the hypothalamus of our brain and then they affect our mind.

Our mental field is expressive whereas emotional field is unexpressive. Every event takes place there first, and then it comes out. We give importance only to outer events. That is why we can not reach

the origin of a problem. If we scrutinize, we come to know that the root of all problems is emotional field. Until this field is tacked, neither personal peace nor world peace is possible. We will have to face this emotional field because a commotion is originated here. Turmoil is taking birth from here. Thus we come to know that there is a direct relation between nature and sensation. By nature we come to know as to what sensations a person is living with. So for emotional health, identification of emotion and sensation are necessary. If a person wants to stay healthy in emotional aspect, then he has to be conscious about his sensations. Thus, emotional health is primary. Without that, no other kind of health can be achieved. One motto of emotional health is- keeping conscious about sensations and the other motto is- keeping conscious about digestion. Besides nature, digestion is also a facilitating factor in emotional health. If a person's digestion is not correct, then he can not maintain a good emotional health. His nature becomes irritable, due to which he has to suffer from a lot of physical and mental problems. Besides digestive system, endocrine glands are also connected with nature. That means, endocrine glands also have an impact over emotional health. Endocrine glands have to be in a balanced situation.

To summarize, a balance of emotions and sensations is very important. In absence of emotional health a person's nature and personality get perverted.

The imbalance of emotional health is marked as emotional disease. This becomes the reason of mental disease.

### **Causes and effects of emotional health**

As above said, balance of emotions and sensations is called emotional balance. This happens if there is an adverse situation for emotions and sensations. The person does not seek for solutions and become victim of this and many other problems. Gradually the intensity of sensations increases up to an extent that the person loses control over his thoughts and ultimately loses emotional balance and becomes victim of many emotional diseases.

### **Signs of a healthy body**

Today's man is so much away from nature that as a result it is very much difficult if not impossible to find a completely healthy person. Based on the statistics about healthy people, Dr. J. H. Tildon has mentioned that in this enormous world, there is not even a single healthy person amongst one thousand. Thus, it is difficult to decide how a truly healthy person should be. Keeping this fact in mind, Dr. Froyed has mentioned somewhere that a trivial ailment in a human body is the proof of health. According to Naturotherapists, that person is healthy whose body is free of toxic material and all of his senses and organs are functioning in a harmony and his mind and soul together are healthy. According to Dr. Loui Coone, that person can be called healthy whose organs are functioning with equilibrium without any stress. A healthy person has a sacredness and peace visible in his eyes. Excellent digestion is the chief sign of health. Defaecation should occur in such a way that it does not hurt the anal opening and it remains clear. A healthy person is always happy and is never afraid of anything.

Here are some signs of a healthy body through which a person can be judged whether he is excellent or average in health.

1. Heart says that he is absolutely free of diseases and is hundred percent healthy.
2. Does not have any information or experience related to health related problem.
3. Who does not need to know whether he has got an object called 'body'.
4. Who can enjoy work at the time of work and rest at the time of rest.
5. Who is having a great threshold, who is not afraid of hard work, having liberty of thoughts, brave, determined, confident, smiling, merciful, courteous, and long living. He should be rich in divine assets like truth, nonviolence, and love.

6. Skin is smooth, slimy, clear, and warm, which does not leave marks on scratching. Pores of skin are having beautiful and delicate hair. Perspiration does not smell. The person who can tolerate heat, cold and rain.
7. Face is wrinkle free, free of dryness.
8. Eyes are shiny, clear, big, and are having redness near the inner corners. Eyes should not be red, yellow or half closed.
9. Tongue is greasy, wet, pink, clear and even.
10. Teeth are complete, strong, and shining like pearls.
11. Every part of body is having good shape, functioning properly. Nails are pink and colour of soles of feet is matching with skin tone.
12. Waist is thin and chest is wide for about 5-7 inch than abdomen. Head is having eighth part of total height of body and is having good hair growth.
13. Neck is straight and is having adequate height.
14. Breaths are even, normal and are without any smell. The person is not keeping his mouth open while asleep.
15. Sleep is uninterrupted, long, and without dreams.
16. Body veins are not prominent.
17. Mouth is not having any bad taste and the person does not have to spit off and on.
18. On waking in morning, the person feels enough freshness and energy.
19. There is no abdominal discomfort following meals, there is no feeling of laziness also. Digestion is proper.
20. Stool is passed once in 24 hours which does not hurt anal opening. Stool colour should be wheatish.
21. Urination is easy and without any difficulty. Urine should be slightly warm, pale yellow in colour and flows in a stream.
22. Appetite is good and is at particular time which is sated by natural food.
23. Thirst is neither excessive nor less. It should be quenched by pure water.
24. Who is interested in natural foods like fruits, milk, and vegetables etc. balanced food.
25. Is not excited in food habits and behaviour.
26. Is having sacred thoughts and takes pure food.
27. Mind is controlled and is sacred by both mind and body.
28. Who is optimistic, and does not get panic when in trouble.
29. Who understands nature's signs and follows them.

#### **4. Description of some particular diseases**

##### **(A). Debility (Physical weakness)**

For the various physical and mental performances, energy is required. Source of energy is food which we take from outside. After a proper digestion and absorption, necessary nutrition is supplied to the blood vessels. In these vessels this food gets oxidized and energy is released. This energy is utilized by cells for the related functions of that particular organ. With the use of this energy, various mechanical actions are also performed. Besides this, as a result of complex procedure of metabolism, bio-chemicals are formed and reabsorbed which are required by the body to aid mechanical and bio-chemical activities. Due to unavailability of nutritional elements, abnormality in physical parts, or due to mental depression, body can not produce energy required by its functions. In this case the functions required in maintaining health and stamina does not occur in a proper time, proper ratio in a proper way and the person starts feeling weak. This is called physical weakness.

To protect ourselves from this problem, we require to make our life style regular and balanced, take food which is having adequate nutritious value, and 'Aasans', 'Pranayam', and meditation are performed regularly to keep our endocrine glands and other organs functioning.

### **(B) Dyspepsia**

This is also called indigestion ('Mandagni', 'Agnimandya'). It has got same reasons as constipation. Improper digestion of food, sour burps, abdominal distension, mild pain in abdomen, burning in chest and throat, salivary secretion in mouth ('Waterbrash'), nausea, palpitation, uneasiness, constipation, anorexia are the symptoms of dyspepsia.

One should do fasting by keeping on water added with lime juice, or on fruit juices. Carrot, orange, tomato, etc. juices are preferable. After that, minimal food intake should be continued till 4-5 days. In morning, ripe apple, or two ripe tomatoes, in lunch boiled vegetables in a little quantity and a little carrot, tomato or pineapple juice, and in dinner a little amount of boiled vegetables or its juice should be taken.

During these days, warm water enema once a day or twice a day should be taken. 'Kunjal' process should be done for a week followed by once or twice in a week for one or two months.

After fasting simple food should be taken according to appetite and digestive power.

Light exercise, dry friction-bath, mental peace in open air helps a lot to remove disease. An ordinary indigestion does not require more than this but in case of chronic indigestion, following therapies should be given according to need

1. Take 'Epsom salt bath' once in a week. Take hot fomentation with a towel soaked in warm water for 15 minutes. In between take fomentation with a towel soaked in cold water every 3-4 minutes for one minute.
2. Keep wet bandage over lower abdomen overnight or apply wet bandage over waist.
3. Take one glass of cold water one hour before meal.

In Yogic therapy, following experiments are desirable-

1. 'Agnisar process', 'Nauli' and 'Vasti'.
2. Aasan-'Soorya-Namaskar', 'Trikonasan', 'Halasan', 'Tadasan', 'Katichakrasan', 'Matsyasan', 'Ardhamatsyendrasan'.
3. 'Bhastrika Pranayam' along with 'Kumbhak'.
4. 'Uddiyan' and 'Mahabandh'.
5. 'Karyotsarg' and 'Deergha-shwas Preksha'.
6. 'Pachan-shuddhi Anupreksha'.

### **6. Hyperacidity**

As a result of unregulated life style and improper food intake, toxic material gets accumulated in the body gradually which by the time gets activated and contaminates blood or increases acidity to make the body diseased. This acidity when attacks digestive organs, it is called 'Acidity'. In this problem burning in throat, reflux, nausea, abdominal heaviness after meals or occasional mild pain, excessive appetite, etc. symptoms are found. When this acidity or toxic material is driven to skin then small pustules are formed over the skin which get infected and do not heal easily. Pus discharge stops but a mixture of blood and serum continue. When the disease is driven to muscles, then gout etc. diseases start.

For treatment, intestine should be cleaned using warm water enema, 'kati-Snan', and use of wet bandage on waist for a few days. After that, steam bath should be taken twice in a month for 10-15 minutes. Linen should be wrapped around twice in a week for an hour. Wet clay bandage should be applied over lower abdomen twice a day. Water added with lime juice and honey should be drunk initially warm for a few days and then cold. 'Kshar Dharmi' food should be taken. Fresh fruits, half cooked vegetables, curd, butter, milk etc. are called 'Kshar Dharmi' food.



In Yogic therapy, following experiments are expected.

1. 'Vastra Dhauti'
2. Aasan- 'Karyotsarg', 'Uttanpadasan', 'Vajrasan'
3. 'Shitali', 'Bhramari', and 'Chandrabhedhi' pranayam.
4. Concentration of white colour over body with 'Sharir-Preksha'.

## 7. Cold-Coryza

Discharge of thin mucus through nose is called cold-coryza. This gives rise to redness of eyes, throat discomfort and headache. Whatever we eat is digested first and then oxidization of blood occurs. On getting inadequate oxygen through nose this process is not completed and excess heat of blood leads to this disease. The food taken comes out in the form of cold-coryza. In this illness, sensation of taste and smell are lost. After three to four days, the discharge becomes thick and it comes out with mild cough or sneeze.

Constipation is also the main reason for this illness. Consumption of 'Kaf' and 'Vayu' producing food items, loss of perspiration, inadequate warmth of body, etc. many other reasons are also there. If this disease is prolonged then vision becomes weak, hearing ability is reduced, hair become gray and start falling.

Cold-coryza is as a result of body efforts to expel accumulated toxic material in body.

If the disease is in its initial stage, then one should perspire in mild sunlight. But then he should immediately take warm sponge for one minute to make the body warm again. But if the patient is weak then he should take rest and take one glass of warm water added with lime juice, or plain water every half an hour. This will result in opening of nasal cannula and running nose will start reducing the intensity of cold.

**Naturopathy** – One can protect himself from cold-coryza by keeping the habit of 'Jalneti-Sutraneti'. 'Bhastrika Pranayam' and use of juice of 'Safed' leaves also helps.

If fasting or consumption of juices does not clean up bowels then it should be done by applying clay bandage over lower abdomen for 20-30 minutes and warm water enema in evening. Once in a day or alternate days foot-bath cleans up chest and Coryza is cured.

Massage over chest and back in sun light, as well as patting over both the sites clears up chest. Take a bath after taking massage.

**Diet** – Fasting helps a lot in cold-coryza. So, complete fasting for one or two days with use of warm water only four times and use of lime juice with honey should be taken. This will cure Coryza. Consumption of oranges, fruits and vegetable juice for one whole week also helps.

Take ginger, cardamom and black pepper added tea twice a day. Take juice, soup and this tea 6 times in a day. This will bring a great change in the body. After this, take simple meal one time and fruit juice and vegetable soup other time with use of ginger added tea twice a day. Continue his regime for one month. Adopting this food habit will protect you for one-two years for every kind of illness. If there is associated cough, then add one or two spoonful of honey to ginger juice and take it twice a day.

### Yoga therapy-

1. Clean-up procedures- 'Kinjal', 'Jal', and 'Sutraneti'.
2. Exercising Yoga of head and chest.
3. Aasan- 'Uttanpadasan', 'Sinhasan', 'Bhujanasan', 'Matsyasan'.
4. 'Nadishodhan' and 'Suryabhedhi' Pranayam.
5. Concentrating yellow colour on face.
6. 'Anupreksha' of determination of cure of Coryza.

## 8. High Blood Pressure

What is blood pressure?- Blood circulates in all the body parts through arteries. This is done by the pumping action of our heart. Heart contracts and expands like a pump and pushes blood forwards through

Arteries. This creates a pressure on the walls of arteries which is called 'Blood pressure'. This is a natural physical process without which no one can live. Following are the conditions in which blood pressure naturally increases in any person which is inevitable.

1. On getting excited.
2. On getting anxious or fearful.
3. Excessive happiness
4. On looking at an interesting site, strong smell, listening to harmonious sound or excessive noise.
5. Mental or emotional aggressiveness.
6. During sexual intercourse.

But those who say, "We have blood pressure", actually mean that their blood pressure is abnormally and persistently high and has taken a serious form. High blood pressure can be dangerous at any time. It makes the heart weak. This illness does not occur suddenly but it takes a serious form gradually.

Till the blood vessels are normal, their elasticity is normal and their canals are open, heart does not get extra load in pushing the blood forwards and blood easily flows through them. But when the vascular lumen becomes narrow because of some reason, heart has to push more to push blood through the lumen. This exerts extra load on heart and it ultimately becomes weak.

The only reason behind high blood pressure and indirectly, narrowing of vascular lumen is our unregulated and unnatural life style, and improper food habits. Excess of toxic material is circulated by blood as an extra load which gradually makes the blood vessels stiff and the lumen gets narrowed because of adherence of this toxic material. The more the toxic material, the more it adheres to the vascular lumen giving rise to narrowing. Severity of the disease is directly proportional to it. High blood pressure can have following possible reasons.

1. Excessive consumption of oily food, sugar, spices, sour things, fried items, cream, coffee, tea, cigarette.
2. Frequent and excessive eating.
3. Addictions like smoking, tobacco chewing etc.
4. Inadequate exercise.
5. Stressful life and unregulated life style.
6. Anxiety, fear, anger etc.
7. Diseases of bladder, irritable bowel syndrome, constipation.

**How much is the blood pressure?** – To know the blood pressure whether it is normal or high, an equipment called 'Sphygmomenometer' is recommended. When this equipment was not invented, doctors use to judge the intensity of blood pressure by taking the pattern of pulse but it was incorrect. A healthy person has 120 mm of mercury systolic and 80 mm of mercury diastolic blood pressure. By experiments, it has been recommended that a systolic blood pressure ranging from 120 to 130 should be considered normal. A blood pressure above 130 is considered high.

Blood pressure is not equal in every portion of our body. It varies according to the part's distance from the heart. So to measure blood pressure the artery of left arm has been selected where blood pressure is higher compared to the other parts of the body because left arm is nearer to heart.

Besides knowing blood pressure with this equipment, many other problems also come to knowledge. Vertigo, headache, lassitude, insomnia, difficulty in breathing, indigestion, irritability, debility, occasional epistaxis, chest pain, etc. symptoms indicate increased blood pressure.

To be protected from the reasons of blood pressure is itself the treatment of high blood pressure. Along with that, one should put in to practice the basic rules of health. Avoiding drinking water during meals, drinking plenty of water two hours after meal, chewing food for a long time, passing urine after meals and walking for at least 50 steps after meal, taking rest after having walk, walking in open air in morning and evening, drinking plenty of water added with lime juice, taking dinner before sunset, avoiding eating if there is no appetite, waking up before sunrise, keeping happy, avoiding over eating, etc. are the basic rules to maintain health.

Following exercises should be performed under Yoga therapy-

1. 'Shuddhi-Kriya', 'Neti'.
2. Yoga exercises of neck and chest.
3. Aasan-Pranayam, 'Pavanmuktasan', 'Vajrasan', 'Shashankasan'.
4. Pranayam- 'Nadishodhan' and 'Ujjayi pranayam'
5. Karyotsarg- Twice a day (30 minutes everytime)
6. Preksha-Meditation- deep breathing preksha, and 'Abhay Anupreksha'.
7. Light meals avoiding oil, ghee, non-vegetarian food, and spices.

#### Questionnaire

##### 1. Assay

1. Highlight the major reasons and types of diseases.
2. Describe high blood pressure.

##### 2. Short questions

1. Mention the treatment of cold-coryza
2. How can we protect ourselves from Physical weakness?

##### 3. Objective questions

1. How much blood pressure is normal for a healthy and aged person?
2. "Alternative adverse condition of health is called disease". Who said this?

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**CHAPTERS: 6 & 7 COMBINED –  
TONSILLITIS, FEVER, BACKACHE, INDIGESTION, EYE DISEASES,  
INSOMNIA, WEAK MEMORY, WEAKNESS OF NERVOUS SYSTEM**

**AIMS –**

- (1) Acquiring knowledge of causes, symptoms and complications of some important diseases.
- (2) Acquiring knowledge of Yoga therapy and Naturotherapy for the treatment of these diseases.

**TOPICS –**

- (1) Tonsillitis
- (2) Fever
- (3) Backache
- (4) Indigestion
- (5) Eye diseases
- (6) Insomnia
- (7) Weak memory
- (8) Weakness of nervous system

**1. Tonsillitis**

Tonsils are formed by the merging of lymph nodes embedded in the mucus membrane between oral cavity and pharynx. It is situated as a barrier between oral cavity and pharynx. At the nasopharyngeal end of pharynx there is one more tonsil which is called 'Pharyngeal Tonsil' or 'Adenoid Tonsil'. At the joining point there are two more tonsils which are respectively known as 'Palatine Tonsil' and 'Lingual Tonsil'. Palatine tonsil hangs downwards whereas lingual tonsil is attached with the base of tongue.

Once upon a time it was believed that tonsils have no role. But modern medicine says that it has a great role in protection from super infection by bacteria and viruses. From observations, it has come to notice that those children, in whom tonsils have been removed, have more chances of super infection. It appears that tonsils must be capturing the bacteria entering through oral route destroying them. These tonsils have profuse lymph in them which is rich in white cells. When microorganisms try to invade through breath or oral route, tonsils entrap them and white cells destroy them.

**Symptoms of Tonsillitis**

Because of accumulation of toxic material in body and due to super infection of microorganisms, tonsils get swollen. This causes throat pain, high grade fever, constipation, concentrated yellow urine, headache, body ache, etc. Sometimes there is hoarseness of voice also. Some times tonsillitis becomes difficult to differentiate from Scarlet fever and Diphtheria because of similarity in symptoms. In tonsillitis, redness and swelling are limited to tonsils. Soft palate is not involved.

In Diphtheria, there is formation of a bluish layer over tonsils and soft palate which is difficult to be removed. There is also bleeding, offensive smell due to infection, cough, discharge mixed with pus, etc. Tonsils are gradually enlarged.

In scarlet fever there is shining redness over throat and soft palate. Tonsils are swollen and covered by discharge, vomiting during high fever. There is no involvement of soft palate. Tongue is white coated. Sometimes Scarlet fever and Tonsillitis are associated.

According to the symptoms, Tonsillitis is classified in to two groups – 1. Acute Tonsillitis, 2. Chronic Tonsillitis.

In case of a severe tonsillitis, all the parts of tonsils become red and are swollen. Also there are many pits on them. There forms a yellow coloured layer over them which are difficult to be removed. This is also called Follicular Tonsillitis.

When acute Tonsillitis is repeatedly suppressed with medicines, then it gets converted in to Chronic Tonsillitis. In this there are symptoms of many other diseases like Nephritis, Neuritis, as well as symptoms of reduced immunity. In children there are running nose, swelling in nasal mucosa, otorrhoea, cold off and on, enlarged tonsils, poor development, uneasiness, difficulty in breathing while asleep, etc.

### **Prevention and Treatment**

#### **Yoga-Meditation therapy**

**Aasan** – Suptavajrasan, Srvangasan, Matsyasan, Sinhasan.

**Pranayam** – Ujjayi, Bhramari, Mahapran Dhvani – for 5 minutes.

**Preksha** – Concentrating blue over Vishuddhi Kendra- form 10 minutes.

**Anupreksha** – Suggestion of healthy Tonsil – “My tonsil is getting better.”- 15 minutes.

#### **Naturotherapy –**

1. Hot fomentation over throat and neck twice in a day for 10-15 minutes. After that add lime in warm water and take gargles.
2. Hot ‘Epsom Salt Bath’ once in a week at evening time.
3. After that apply wet bandage of warm water for 1 – 2 hours.
4. Mix lime juice with honey and massage on tonsils over inner side with pressure. Do not worry if the tonsils bleed or discharge pus.
5. After that massage with fresh butter on neck and throat if possible.
6. The patient should sit before the sun keeping his mouth open at around 8 or 9 o’ clock with a blue glass in front of mouth so that the filtered sunlight directly impacts over tonsils for about 5-7 minutes. Drink water from a blue coloured bottle exposed in sunlight.
7. Eat simple and easily digestible food. Coconut water, fruits, fresh vegetables, curd etc. should be taken. Chilly, condiments, extra salt, oil, tea or coffee, non vegetarian food, etc. should be avoided.

### **2. Fever**

Abnormally raised body temperature is called ‘Fever’. Normally our body temperature is 98.4° Fahrenheit or 37.5° Centigrade. Fever has deep relation with so many diseases. Fever should be considered with a view of some irregularity or some disease because its occurrence has not been established as an independent entity. When body temperature reaches 105° F then it is considered dangerous and even fatal. This situation is known as hyperpyrexia. When temperature reaches 106° - 107° F then chance of death is highest. Fever starts as a low grade temperature and increases gradually. With this rise there are uneasiness, headache, body ache, etc. symptoms also intensify.

Modern medical science attributes bacteria and viruses to be the reason or fever. According to this science intensity and complications of fever depend upon the species of bacteria. Besides there, reasons for fever are tumour, operative procedure, vaccination, etc.

In modern medicine, the process of fever has been described as follows-

The Monocytes and other macrophages found in blood engulf the invading bacteria. During this process their cellular wall partially detaches resulting in production of a chemical called ‘Phagocytes Interleukin-1’. This chemical reaches hypothalamus in brain and stimulates neurons of praepitic area to

create prostaglandins. Because of prostaglandins the thermostat of hypothalamus which regulates body temperature, gets reset and settles at higher temperature. Body temperature rises to accommodate this new setting resulting in fever.

According to naturopathy when the accumulated toxic material does not get outlet, it starts decaying. This process makes blood warm and toxic. This happens as a result of climate change, contagion, mental perversion, etc. These causative factors stimulate toxic material and the temperature of blood rises. This high temperature initiates destruction of toxic substances situated in body cells. If this process is accomplished within an expected time then the body becomes pure, free of toxins, and healthy. This natural reaction is named 'Fever'.

### **Symptoms**

High body temperature causes reduced appetite, increased thirst, weakness, and lassitude. Initially there is chilliness and shivering, headache and body ache. Then there is loss of sleep, nausea, white coated tongue, increased heart rate and pulse rate. Sweat, urine and breath become offensive. Because of raised temperature the voluntary and involuntary functions and metabolism become too much slow. That is the reason for the above mentioned troubles. According to Naturopathy, all these mechanisms are seemingly troublesome but are very much helpful and protective. For example, reduction in appetite indicates that the Vital Energy working for the purification of toxins and that is why digestive process has been paused. In this situation, a forceful attempt to give food to a patient clearly means giving him poison. Same way lassitude and desire to take rest means compelling the body to take rest. In fact, when energy production stops in body cells then no energy is available for voluntary functions of body and the body becomes tired. The toxic material tries to spread through the body. This causes stress on body tissues and skin giving rise to pain. When this toxic material involves head and brain, it gives rise to insomnia and headache. Sometimes fever comes with chills and shivering. This is because of the fact that whenever there is excessive accumulation of toxic materials in the body, this material hampers blood circulation in distal areas. Blood becomes toxic and its majority circulation is directed to liver and spleen where purification takes place up to some extent. This results in reduced blood supply in distal and surface area giving rise to shivering. After sometime when warm blood starts circulating in distal areas temperature starts rising. All these symptoms indicate that purification process inside the body is taking place rapidly in which digestive system, respiratory system, circulatory system are providing their contribution in their ways.

### **Differentiation of Fever-**

Fever is of following types-

1. Common fever
2. Malaria (Occurs due to mosquito bite)
3. Typhoid (This occurs due to the infection of a particular bacteria)
4. Influenza (Occurs with coryza)
5. Dengue (This occurs due to Dengue Viruses)
6. Filariasis
7. Plague

### **Treatment**

#### **1. Yoga, Meditation therapy**

Aasan – Karyotsarg

Pranayam – Svar Parivartan, Exercising Chandra Svar

Preksha – Concentrating over Tejas Kendra for 20-30 minutes followed by concentrating over vishuddhi Kendra for 10 minutes.

Anupreksha – Passing suggestion while in Karyotsarg – “My fever is being relieved”.

#### **2. Naturotherapy**

1. Give enema of neem water as soon as fever starts.
2. Warm feet bath during shivering condition and wrapping wet linen during uneasiness.
3. Provide lime water to the patient in adequate amount.
4. Apply wet cold bandage or a towel soaked in cold water to keep head and abdomen cool.
5. During high fever wash head with cold water and give cold waist bath.
6. In case of a long lasting fever give neem water enema in morning and evening, and wrap linen soaked in neem water.

### 3. Diet therapy

1. Do not provide food to the patient.
2. Not giving any solid food and only lime water is beneficial.
3. Take 3 liters of water per day and at least five limes. After that take honey along with lime juice and lemon juice.
4. After the fever subsides and the patient starts feeling hunger, give fresh seasonal fruits and vegetable soup without spices. Watermelon, apple, or cucumber juice should be given. If the patient is adamant to take food, then give vegetable soup, orange juice, or other fresh juice. Carrot, spinach, tomato, etc. should be boiled and given in a juice form. Every food should be chewed adequately.

### 3. Low Back Pain

Pain in lower part of back troubles about 80 percent of people. There is no specific reason for this problem. It has been observed that systemic diseases like Metastatic Cancer, Disc Prolapse, and degenerative changes in vertebrae are the major reasons. But still if we try to find out the exact reason for backache, we rarely succeed; that is why we name the problem as 'Strain', 'Sprain', or 'Lumbago' and put indirect efforts to prevent it. Some times structural deformity of spines, vertebral column or other bones or deformities created following accidental injuries lead to backache. In Allopathic science they rule out following points in order to reach to the diagnosis-

1. Infection
2. Cancer
3. Beginning of gout
4. Ankylosing Spondylosis

Presence of any of these problems can lead to backache. Considering this as base, they decide the line of treatment.

Usually it is believed that rising up improperly and suddenly, improper postures, lead to dislocation of vertebrae. Prolapse Inver-vertebral Disc, tension in ligaments of vertebrae, sprain, fracture, destruction of supportive cartilages between two vertebrae, formation of osteophytes, Athritis, Osteoporosis, accidental injury, age related degenerative changes, lack of regular exercise, deficiency of vitamin D or Calcium, etc. can lead to the problem.

### Treatment of Backache

#### 1. Yoga, Meditation therapy

1. **Aasan** – Spinal cord exercises, Uttan-Padasan, Makarasan, and Matsyasan.
2. **Pranayam** – Suryabhedhi, Bhastrika while concentrating on site of pain for five minutes.
3. **Preksha** – Preksha of pain occurring in back
4. **Anupreksha** – Suggestion of healthy back – “My backache is relieving”- for 15 minutes.

#### 2. Other necessary treatments – To get relief from backache following suggestions are beneficial.

1. Take rest on a hard bed with a thin mattress.
2. Keeps your back straight while sitting on chair.



3. While sitting and lying take care not to keep your chest inclined forwards and abdomen backwards.
4. When lifting a heavy object take care not to keep the object away from your body. This can damage vertebrae due to unnecessary weight bearing. It is better to kneel down to lift weight.
5. Avoid heavy pillow, high heel shoes, tight jeans etc.
6. Do not sit more than 45 minutes. Take a stroll after an interval so that tissues and muscles can relax.
7. Maintain a proper posture while doing house-hold works. Do not bend your waist improperly and keep it as straight as possible. Do not go to back even if there is a mild backache. In case of a minor back-ache, take hot or cold fomentation, hot for 3 minutes and cold for 2 minutes for 5 times. Take a sponge bath with a towel soaked in warm water for a few days, 90% of the problem gets relieved by such experiments.
8. Mental stress can also be the reason for backache sometimes. Exercise Pranayam, Yoga, and Meditation to relieve stress.

#### **Preksha-Yoga therapy**

1. **Yoga processes** – 10 abdominal processes, processes of back
2. **Aasan** – Uttan-Padasan, Bhujangasan, Makarasan, Matsyasan.
3. **Pranayam** - Suryabhedhi, Bhastrika while concentrating on site of pain for five minutes.
4. **Preksha** – Preksha of pain occurring at and around back – 10 minutes.
5. **Anupreksha** - Suggestion of healthy back “My backache is relieving”- for 15 minutes.
6. **Mudra** – Press thumb and ring finger together for 15 minutes.

**Special** – There is treatment to relieve backache permanently so that it does not reoccur in the future – Regular exercise and Yoga. With exercise and Yoga the tissues of spine and blood vessels become so much strong that they can withstand stress up to a greater extent. Shock absorbing capacity of discs is also increased. Exercises and Yoga are the protection shields for back. On getting tired, performing Yoga instead of taking rest not only relieves tiredness but also revives body tissues and organs. With these one should avoid oily food, tea, coffee, fried food, fast-food for more benefits.

**4. Indigestion (Constipation):** Constipation is the gift of modern life style. It is the result of fancy food, perverted food, suppressed thoughts, and obsession. All these things make intestines weak. One has to strain a lot to void stool, stool comes out with difficulty. This is called constipation.

**Main reasons of constipation** – It is primarily due to lack of fibers in diet. Bread, cake, chocolate, coffee, biscuits, meat, eggs, fish, sugar based products, unpolished rice, fast food, junk food, preserved food, fried food items, strong spices, condiments, excessive carbohydrates, proteins and saturated fatty acids, vegetable ghee, lack of vegetables in diet, inadequate water intake, weakness of intestinal wall muscles in old age, anaemia, habit of restraining stool for long, colitis or endometritis, weakness of bowels, irregularity in passing stool, diabetes, high blood pressure, heart disease, thyroid and pituitary diseases, morphine derivative drugs, antibiotics, habit formation to use purgatives, inadequate chewing of food, dehydration, using hard water, excessive eating, lack of digestive juices and enzymes, deformed intestines, smoking, opium or other addictions, obstruction in large intestine, improper digestion of food, mental stress, anxiety, reduction of peristalsis in intestines due to wall muscle weakness, etc. many reasons can cause constipation.

**Constipation causing many diseases** – Impacted stool due to constipation can stimulate intestinal walls and may cause diarrhoea. Habitual constipation can cause Fissure in anus, or piles due to strain. Large intestine due to over loading by stool can become dilated. Intestines can become further weak. Females are more prone to this situation. In case of want of dietary changes and continuous constipation, the problem becomes chronic. Muscle stimulation can lead to sciatic pain, backache, neuritis, spermatic problems, etc.

Pathogenic organisms created due to constipation can strike proteins, fatty acids, electrolytes, and carbohydrates converting them in to harmful chemicals by chemical reactions. This causes 'Auto-toxication'. Amino acids can convert in to carcinogenic 'Biogenic Amines'. Proteins get changed in to poisonous chemicals like Tryptofan, Tryptamines, Histidine, Histamine, Tyrosine, and Tyromycin etc. These toxic chemicals can reach brain and other organs through liver via blood circulation and create physical illnesses, mental illnesses as well as muscular troubles, depression, anxiety, irritability etc.

### **Treatment**

**Naturopathy** – Take hot fomentation for five minutes on empty stomach and apply clay bandage for half an hour. Massage back and buttocks. Add some salt and lime juice in to warm water and take as enema. Give cold waist bath, hot-cold waist bath, wet linen wrapping, abdomen linen wrapping etc. alternatively according to the patient's situation. Continue this for 10-15 days. Take steam bath and warm feet bath once in a week.

Apply clay bandage over lower abdomen in afternoon after lunch. Give steam or hot-cold compress over lower abdomen and back or cold waist bath on alternate days. In case of a chronic constipation apply clay bandage at night.

Take a brisk walk in morning after taking a cold waist bath or exercise Yoga etc. Dr. Sarah Clamant – A scientist in the Eating Disorders Association, Britain has come to the conclusion after various experiments that use of purgative drugs in constipation harms mucus membrane of digestive system. Peristaltic movements of intestines become weak. Liver becomes weak. Malnutrition results; and constipation becomes persistent. Use of stimulator drugs can cause dehydration, and diseases of kidneys, heart, and intestines. Useful bacteria are also destroyed.

### **Preksha-Yoga Therapy**

**Aasan** – Ten abdominal processes, Agnisar, Udarakarshan.

**Special experiments** - Ardha Shankh Prakshalan, Tadasan, Skandhasan, Tiryag-bhujangasan, Shankhasan.

**Pranayam** – Deergha-Shwas, Anulom-Vilom for five minutes. Walking 100 steps while keeping left nostril closed.

**Preksha** – Concentrating over just bellow chin while pressing it-10 minutes

**Anupreksha** – Suggestions to large intestines "My large intestines are becoming active". – 5 minutes.

**Diet Therapy** - Drink 3-4 glasses of water kept in a copper container. In case of a chronic constipation, drink 2 glasses of warm water with one lime. Keep dry amla in water overnight, crush it in morning and then filter, add two spoons of honey and 15 grams of ginger and then drink. Walk while distending and contracting abdominal muscles. Do not restrain the urge to pass stool; 25% cases are cured by this way. When there is a doubtful urge of passing stool, then one should certainly go for it. Strain a little while passing stool, contract and then relax the anal opening; with that contract and relax abdominal muscles. Indian sifting supports favours muscles to strain.

During initial 3 to 10 days take only boiled vegetables, fruits, lime water, and water. This purifies body and intestine become powerful and healthy. Gradually resume back to normal diet.

In your routine diet take 3-4 fresh fruits in morning and crushed dry amla. In breakfast take seasonal fruits like guava, apple, chickoo, banana, grapes, plum, carrot, tomato, anjeer, dates, sprouted pulses and milk. Do not eat sour and sweet fruits together. Every fruit can be taken with milk.

In lunch take chappati made from flour mixed with spinach, carrot, and radish leaves; and with that green salad 230 grams prepared from boiled vegetables, spinach, radish leaves, tomato, cabbage; 150 grams of curd, garlic, sprouted pulses, and coconut chutney.

Before going to bed take one and half spoonful of powder prepared from methi, and amla in equal proportions with milk.

Take 'Trifala Choornaa' or isabgol husk with milk at night in case of a chronic constipation. Take 25 grams of 'Amaltas' and boil it in 200 ml of water and boil till it becomes half in quantity and then drink. 'Harad', 'Amaltas', 'Isabgol' etc. are medicines and not diet; so do not form habit.

Do not drink water while eating. Drink water 1 hour prior or after eating; drink water on empty stomach in morning. Drink three and a half liters of water per day. Lack of water makes stool dry and causes constipation.

Amla, banana, apple, isabgol etc. contain mucilase and cellulose which facilitate expulsion of stool. Hemicellulose Dextrin and other acids improve peristaltic movements of intestines and control cholesterol. Selenium alile sulfide in garlic, and lactobacilli found in curd and butter milk kill pathogenic bacteria.

Vitamins A, B, C, E, enzymes and minerals found in above described diet and fruits if received in adequate amount, relieve constipation caused due to lack of nutrition.

## 5. Eye diseases

Human eyes function like a mechanical photographic camera because just like a camera an eye contains lens, aperture, and retina working as photo film. Lens of an eye contains following parts-

1. Space between outer surface of cornea and atmosphere
2. Space between posterior surface of cornea and Aqueous Humour.
3. Outer side of Aqueous Humour and outer surface of lens.
4. Watery part between inner surface of lens and Vitreous Humour.

Just as a glass made lens can focus an image on a paper, the lens of an eye can create an image on retina. Here it is to be noted that the image formed on retina is very small compared to the object and is inverted but brain has an ability to correct so that we can see the object in its original form.

Formation of an image on retina takes place in following four stages-

1. Light rays from an object are impacted on lens.
2. Accommodation of lens to focus these rays according to the quality and intensity of light.
3. Accommodation of pupils.
4. Accommodation of eye completely.

Accommodation and shape of pupils depend up on three tissues connected to the iris – Ciliary muscles, Dilator muscles, and Constrictor muscles. These tissues are known as intrinsic muscles because they are situated inside the eye ball. Widening of eyes, constriction of pupils and eyelids together and accommodation depends on the tissues connected to the outer surface of eye balls known as extrinsic muscles.

Following diseases can occur to eyes because of external stimuli, malnutrition, imbalanced diet, and old age.

**I. Presbyopia** – As age progresses, the elasticity of lens reduces. Ultimately the lens which was formerly capable to contract and relax according to situations becomes stiff. This probably occurs due to the deformity of proteins that form the lens. In this condition the normal curvature of lens becomes somewhat distorted and accommodation is much reduced. From birth to young age the accommodation power of eyes in 14 dipters which reduces to 2-3 dipters by the age of 50-55 years. If it is not prevented

then it may be completely lost. In such a situation a person is able to see only at a particular distance and angle or else not at all.

**II. Hypermetropia** - In this problem a person can not see near objects clearly where as he can see distant objects clearly. Human eyes are considered 'Emmetropic' because they have ability to see both near and distant object according to the needs. When there is Presbyopia there is weakness of eye muscles and the eyes are incapable of focusing near objects because there is loss of accommodation power in iris, aperture and intrinsic muscles.

**III. Myopia** - In this problem a person can not see distant objects due to weakness of lens and eye muscles. Light rays coming from a distant object pass through lens and focus to make an image. But this image is created in front of retina and not on retina. So the object looks blurred.

**IV. Cataract** - Lysis of proteins which form the lens, or formation of a layer on lens surface makes the lens opaque and the vision becomes dim. When the light rays coming from an object pass through the lens, they lose their intensity and the image becomes dull instead of bright. Sometimes the image is so much blurred that the person can not see anything. Basically this is an age related problem but other factors like injury, radioactivity, poisonous gases, toxic drugs, etc. can also give rise to this problem.

**V. Glaucoma** - This is the major reason for blindness in aged people. Because of increased concentration of watery part of eyes (Aqueous Humour and Vitreous Humour) this problem is created. These substances are expelled time to time with blood circulation, but when they accumulate in eyes then they create pressure retina giving rise to degeneration of neurons attached to the retina causing blindness.

**VI. Night Blindness** - This problem is created due to deficiency of Vitamin. A. When there is reduction in concentration of Vitamin-A in blood beyond normal limits, then there is reduction in 'Rhods and Cones' in retina which are responsible for the formation of image. This leads to inability to see in inadequate light. The person having this problem is able to see in day light.

#### **Major causes of eye diseases.**

The causes of eye problems can be listed as below.

1. Imbalanced diet (Lack of nutrition).
2. Lack of Vitamin-A in diet.
3. Serious head injury.
4. Consumption of intoxicating drugs.
5. Continuous exposure to intense light.
6. Continuously seeing tiny objects or reading tiny handwritings.
7. Continuous exposure to dust particles or smoke.
8. Reading in intense light.
9. Reading while in moving vehicle.
10. Reading in inadequate light or doing fine work in inadequate light.
11. Watching movies or television from very less distance.
12. Constipation
13. Fear, Anxiety, depression
14. Old age, change in lifestyle with age.

#### **Treatment of eye diseases**

##### **1. Yoga-Meditation therapy**

**Aasan** - Yoga exercises of neck and eyes, Sinhasan, Sarvangasan, Matsyasan.

**Pranayam** - Nadishodhan, Dirghashwas, Shitali - 15 minutes

**Preksha** – Concentrating green and violet colours on eyes.

**Anupreksha** – Suggestion of healthy eyes – “My eyes are getting better” – 15 minutes.

**Special** – Palming, focusing exercises i.e. gazing (gazing candle, soldier gazing, down and up gazing, visual span gazing), waist bath, ‘Mehana snan’, local steam fomentation etc. provide freedom from eye problems.

## II. Diet control

In eye diseases, those food items should be consumed which are rich in Vitamin-A. e.g. milk, butter, carrot, tomato, soya bean etc. Vitamin-B, C and D containing foods are also beneficial for eyes. Always take light and easily digestible vegetable foods. Avoid stimulatory and spicy food items.

## 6. Insomnia

### Why do we sleep?

Sleeping and awaking occur in an order in our life which is called ‘Circadian Rhythm’. When our brain is awake, it is ready to receive all the suggestions and messages of the events of outer world and respond to them. It is noticeable here that brain is made of unit cells called ‘Neurons’. When these neurons get tired of their work then such a situation arises when only respiration and other necessary process are continued and rest of the physical activities are stopped. Eyes are closed and the awoken state of mind is temporarily lost; this is the situation which is known as ‘Sleep’. Once the neurons are revived, they again are activated and the brain awakens, physical processes start again which is known as ‘Awaking state’. If the electrical activities of brain are recorded during waking state then it is observed that the major part of the brain known as ‘Cerebral Cortex’ is more active. It continuously sends out impulses to body parts. During sleep the rate of these impulses is minimal. In fact the activity of cerebral cortex is due to another part in brain known as ‘Reticular Formation’. This part regulates sleeping and awaking of brain. To do this function sends and receives impulses through sensory and motor neurons and makes the brain active accordingly. When the to and fro impulses are stopped, reticular formation becomes inactive and the person feels sleepy. During sleep the body tissues become relaxed and body parts becomes inactive. Reticular formation performs its function rhythmically and in order. As a result the cycle of sleep and rouse continue regularly and rhythmically. This has been given the name of biological clock by scientists.

### Stages of sleep

The whole period of sleep can be divided in to two parts-

**(A) Non-REM sleep (Non Rapid Eye Movement sleep)** – This is also called steady eye sleep. This part of sleep completes in four stages

**1. First stage** – This is the stage of change from awake to asleep. This lasts from one to seven minutes. In this stage the person is lying with closed eyes. Respiratory rate is continuous and pulse rate changes. EEG record shows more theta rays during this stage. The person is encircled by thoughts. If the person is questioned during this stage then he will reply that he is not sleeping.

**2. Second stage** - Real sleep starts from this stage. The person can not be roused by low voice. Eye balls start moving right and left. At this stage beta rays are increased in brain and the stage lasts from five to seven minutes.

**3. Third stage** - A deep sleep starts from this stage. As soon as one reaches this stage, the body becomes relaxed, body temperature and blood pressure falls. This stage starts 15 to 25 minutes after the beginning of sleep. There are more delta rays in brain and the stage lasts for 10 to 12 minutes.

**4. Fourth stage** – This is the stage of sound sleep. The body becomes steady and relaxed. Pulse rate, temperature and blood pressure remain constant. Delta rays are excessive and the stage lasts for 70 to 90 minutes.

**(B) REM sleep (Rapid Eye Movement sleep)** – This is also known as moving eyes sleep. After the end of non REM sleep, there is a stage of REM sleep for sure. In this stage eye ball rapidly moves right and left. Respiratory rate and pulse rate become uncontrolled and increase. Blood pressure falls and rises. The person comes out of sound sleep and passes to third and second stage of non REM sleep. This stage lasts from 10 to 40 minutes.

When we sleep the non-REM and REM sleep come alternatively in order. After about 1 hour and 40 minutes of non-REM sleep there is first sequence of REM sleep which lasts for 10 minutes. Another time when the turn of REM sleep comes then its duration becomes 15 to 20 minutes. During the sleep of 6 hours REM sleep comes at least for three times. But if the duration of sleep increases then the period of non-REM sleep reduces gradually and period of REM sleep increases. This especially if occurs repeatedly then it is not good for health.

### **Reasons, symptoms and results of insomnia**

**Reasons and Symptoms** – With age the sequence of sleep changes. Due to this there are changes in the ratio of durations of non-REM and REM sleeps. But this change takes place in coordination and cooperation with biological clock, so it does not harm much but it may initiate an irregularity in third and fourth stage of non-REM sleep giving rise to inadequate sleep. It is observed that irregularity starts with late night sleeping and delay in rising up. If this situation is improved then the regular cycles of REM and non-REM sleeps can be reestablished. Besides these, stressful life, tea, coffee, depression, obsession, any physical problem, drug addiction, alcoholism, excessive smoking can affect sleep cycle. If these reasons are not rectified then they can give rise to sleeplessness, sleep disturbances, etc. This is called insomnia. In such a case the patient's eyes are constantly red and swollen, heaviness over face, perspiration, tremulousness in extremities, and fatigue. Blood pressure can also rise.

Alcoholism and drug addiction are the direct and indirect reasons for insomnia. Some people under a false belief that alcohol induces good sleep, take alcohol before going to bed. But on the contrary alcohol disturbs the order of sleep cycle. As a result the duration of non-REM sleep goes on reducing where as the duration of REM sleep goes on increasing. Ultimately such a situation arises when there is no sleep even after many efforts. Sleep breaks off and on and dreams also come.

Excessive smoking can also give rise to insomnia. Sleep does not come, and if it at all comes then it comes too late. Sleep is not continuous. The duration of non-REM sleep reduces from 90 minutes to 20-25 minutes. This situation is also caused by consumption of tea and coffee. Neurons become inactive due to the effects of tea and coffee. They even skip their functions. And the person becomes victim of insomnia along with imbalanced physical and mental awaking.

Physical and mental stress is the gift of modern life style. This stress ultimately becomes the reason for damaged health. This starts with insomnia. A person under stress is never able to take adequate sleep.

Besides, illnesses, respiratory problems like asthma, cough etc. can also lead to insomnia. Insomnia itself is such a disease which can invite many other diseases including psychiatric diseases; like depression. A person having depression loses his self confidence. He is not able to concentrate on any work and his routine life is disturbed.

### **Results**

An adult person needs daily sleep of six hours to maintain his health and keep him fresh. Because of insomnia the metabolism gets disturbed. To maintain a healthy physique the chemical and physical environments of body should be equal. This is called 'Homoeostasis'. Homoeostasis is maintained due to

the equalized metabolic rate. Due to metabolic disturbances chemical imbalance is created which gives rise to disturbances in systemic functions. It also affects mechanical processes of body. There is reduction of energy in body, and body always remains tired. Immunity reduces and body becomes vulnerable to many diseases. With this, mental discomfort, discouragement etc. not only affects aptitude but also brings irritability and shot temperedness in the persons nature making him a person of dislike.

### **Yoga therapy of insomnia**

In case of insomnia instead of concentrating on medicines if we concentrate on changing our daily routine then there are hundred percent changes of success. Yoga therapy depends on relations of body and mind as a whole as well as their separate entities. Regarding this principle following line of treatment is adopted.

**1. Shat-Kriya** – ‘Jalneti’ and ‘Kunjal’ processes - once in a day, ‘Laghushanka Prakshalan’ in morning- once in a week.

**2. Yoga therapy** – Processes of head, neck, chest, waist, abdomen, extremities, as well as breathing exercises- each three times in morning.

**3. Surya Namaskar** – All the 12 items two times – in morning everyday.

**5. Mudra** - ‘Vipareet Karani Mudra’ three times.

**6. Pranayam** – Nadishodhan Pranayam for 5 minutes.

**7. Preksha-Meditation** – Breathing Preksha, and ‘Jyoti Kendra Preksha’. – for 10 minutes, once.

**8. Diet control** –

1. Eat only easily digestible foods.
2. Avoid fried food and spicy food.
3. Stop tea and coffee.
4. Vegetables without spices or with minimum amount of spices, fresh seasonal fruits, green salad should be taken with meals.

**9. Life style** -

1. Try to be free from stress. Do not react on trivial matters.
2. Fix your time to sleep and awake. Avoid late night watching.
3. Keep your bedroom healthy, keep as much less luggage as possible. Do not paint the walls of your bed room with intense and dark colours.
4. Avoid alcohol, smoking and drugs.
5. Do not take unnecessary medicines.
6. Do not sleep during day time. Rest can be taken in too much hot climate but do not sleep for long time.
7. Keep the temperature and ventilation of your bedroom according to the climate.
8. Wash your feet with cold water in summer and warm water in winter before going to bed.
9. Take meal one hour before going to bed. Taking cold milk before going to bed is beneficial.
10. A light massage over body with oil before going to bed is also beneficial.
11. If you want then you can play mild calm music at bed time.

### **7. Nervous weakness**

Our century has been said the century of nervous diseases because there is hardly a single person amongst lacs who is free of nervous disease. In spite of lots of efforts in every branch of medicine the freedom from nervous diseases has not been possible. Psychologists also have been making efforts in their own ways with no expected success. Nervous system is the regulatory system of our body which regulates the mechanical and bio-chemical processes of our body. If it becomes weak then there is disturbance in



various physical processes. As a result the body becomes victim of various diseases. There is one more aspect also. Any person's personality is the result of interrelation between his body and mind. Mind still has not been completely understood but one thing is for sure; all the functions of mind are through nervous system. Nervous weakness means brain, spinal cord and nerves have become weak and are not able to function properly. As the activation of mental functions occurs through these organs, it also becomes unable to function properly. As brain, spinal cord, and nerves work together there seems a unity of causative factors in their problems.

### **Symptoms of nervous weakness –**

Nervous weakness is not presented with a single symptom but it brings about so many undesirable changes in various biological processes which represent the seriousness of the problem. Some of the symptoms are as follows-

1. Dislike for food and habituated constipation.
2. Chronic headache and fatigue.
3. Persistent unusual thoughts, discouragement, anger, uneasiness, sadness, fear, jealousy, and feeling of hatred.
4. Loss of will power and persistent illusions.
5. Irregular blood pressure and blood circulation.
6. Tremulousness in body off and on and fasciculation in body tissues.
7. Unnecessary negative changes in all the involuntary functions.

### **Reasons of nervous weakness –**

1. Excessive consumption of non-vegetarian food.
2. Consumption of oil, sour food, condiments.
3. Drug addiction and other addictions.
4. Inability to pass stool properly in proper time.
5. Living so called modern life style.
6. Living under stress.

Because of above mentioned reasons there is formation of a toxic environment in body which adversely affects the nervous functions. This may destroy or reduce their ability. At this point there is obstruction in the process of controlling all the body systems giving rise to many diseases. Practically these reasons include excessive hard work, want of exercise, inadequate rest, inadequate sleep, working while ignoring health, fatigue of genital organs, improper sexual intercourse, residing in a suffocative and stinky atmosphere, and indulging in immoral actions.

### **Therapy and treatment**

**1. Fasting and proper diet -** The first treatment is to make the body free of its toxic environment by fasting. The duration and type of fasting should be decided under surveillance of an expert. One should provide adequate rest to body and mind during the days of fasting; and should take enema everyday at bed time to make the bowels clean. Plain water or water added with lime juice should be taken in plenty.

The diet should be rich in phosphorus, calcium, sodium, potassium, and iron. This revives nervous energy and the dead nervous cells become active. By mere change in diet the majority of problem is solved and the patient is able to regain his lost enthusiasm, confidence and will power.

**2. Exercise –** A light regular exercise helps in making nervous powerful. Daily walk in evening and morning and breathing fresh air in a very good and effective exercise.

**3. Naturotherapy-** Epsom salt bath, cold water fomentation over back, bandage over back, wet bandage over back, waist bath, 'Mehan snan', sun bath, etc. help in eliminating the disease from root.

#### 4. Preksha-Yoga therapy

**Aasan** – Yoga procedures, Supta Vajrasan, Moolbandh in Vajrasan.

**Pranayam** – Sookshma Bhastrika with Moolbandh while concentrating on every organs, Nasamukh pranayam- 5 minutes.

**Preksha** – Preksha of whole body with Karyotsarg while concentrating on yellow.

**Anupreksha** – Suggestion of health of nervous system – 15 minutes.

**Tap** – Practicing ‘Maun’ (Abstinence from speech), avoiding noise.

#### 8. Memory weakness

Memory basically is the result of abilities of nerves of various parts of brain especially cerebral cortex. All the messages brought to brain by nerves are processed in cerebral cortex. After that its reactions are formed. These reactions are then implemented. This is regulated by brain. In one way or another, these reactions are related to physical and mental health. Where the messages to implement these reactions are generated, they are also stored in memory part of brain. When these memories are recalled, they start some sort of agitation in brain which is reflected in body. Sometimes these effects are negative, and sometimes they are desirable also. When due to the weakness of memory these memories are not recalled, then the person has to face unfavourable situations in personal, social and family aspects.

##### Solutions to remove memory weakness

All the solutions explained to get rid of nervous weakness are also applied to remove memory weakness. Besides them, following line of treatment is beneficial.

**Aasan** – Yoga-Mudra, Sarvangasan, Matsyasan, Karyotsarg, Jalandhar Bandh.

**Pranayam** – Anulom-Vilom for 5 minutes.

**Preksha** – Concentrating yellow over Gyan Kendra for 10 minutes.

**Anupreksha** – Passing suggestion while concentrating over brain – “My memory power is developing”.

##### Sample questions for study

1. Describe reasons and symptoms of Tonsillitis.
2. Describe complications of insomnia.
3. How constipation is the generator of many diseases?
4. How nervous weakness is treated in Yoga therapy?
5. Describe major reasons for backache.

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## CHAPTER: 8

### LIVER DISORDER, CERVICAL PAIN, HERNIA, SCIATICA, PILES

#### AIM –

After the study of this chapter students will be familiar with the theory of various physical diseases as well as their treatment with Naturotherapy and Yoga therapy.

#### TOPICS –

1. Liver disorder
2. Cervical pain
3. Hernia
4. Sciatica
5. Piles

#### 1. Liver Disorder

Liver is the main power house of our body. It is the major and the biggest gland of our body. It weighs about 275 grams in an average sized person. It is situated over right side of body just below diaphragm. The major function of Liver is synthesis of bile which is the specialty of its cells. This bile is sent to duodenum through bile duct which has an important role in digestion of food. When digestion is not going on then this bile gets stored in to another organ just below liver known as 'Gall Bladder', and is sent to duodenum when need arises. Besides this, liver plays an important role in the metabolism of carbohydrates, proteins and fatty acids. The majority of cleanliness of body is carried out by liver. Many of the liver cells have an important role in purifying blood as well as excreting toxic substances from body. All the functions of liver can be listed as follows-

1. Serving excretion of majority of toxic elements from body.
2. Formation of bile.
3. Converting excess of blood glucose in to glycogen and its storage, so that it can again be supplied to body when need arises.
4. Destruction of antigens.

When any of the liver functions is hampered, disease is produced. When there is obstruction in the first mentioned function, liver becomes enlarged. On obstruction of the second function there are chances of production of jaundice as well as digestive disturbances. When the third function is obstructed, diabetes occurs, and the obstruction of fourth function gives rise to production of serious systemic illnesses. Hepatitis and liver cancer are fatal illnesses.

#### Treatment

##### I. Naturotherapy-

1. Fasting for two to three days and enema. After that wet clay bandage should be applied to lower abdomen until constipation is reduced followed by enema.
2. Drink water added with lime juice many times in a day. Juice fasting for 2-3 days followed by fruit fasting for one week.
3. Take plenty of fresh fruits, salads, boiled vegetables, curd, and honey and eat solid food in less amount.
4. Taking walk in fresh air every day at least for one hour.
5. Six doses of water kept in sunlight in a yellow bottle.

##### II. Preksha-Yoga therapy

1. **Aasan** – Pashchimottasan, Trikonasan, Shashankasan, Yoga-Mudra, Dakshinparshwashayan.

2. **Pranayam** – Sookshma-Bhastrika, Deerghashwas for 5 minutes.
3. **Preksha** – Concentrating yellow colour on liver for 10 minutes.
4. **Anupreksha** – Suggestion of health of liver – “My liver is getting healthier”- for 15 minutes
5. **Tap** – Avoid menda, and pulpy fruits.

## 2. Cervical pain

Pain in neck, shoulders, and hands with tingling and numbness, vertigo on moving neck backwards, neck pain on movements, pain on pressure on neck region, etc. are the symptoms of cervical pain. Pain can also be unilateral. Pain can also be mild and continuous, as well as sudden and sharp. There is increased sensitivity around the affected area. When pain becomes serious, there is stiffness of spines as well as weakness and wasting of associated muscles. When disease progresses, there are symptoms of paralysis because of pressure effect over cervical and lumbar roots. There is also loss of touch, pain and temperature sensations over the affected area. Besides these, there is pain over neck and back of head.

**Reasons** – Mainly it is due to the spinal swelling as well as infection. There is involvement of one or more spines. Besides this the irritation and stiffness of surrounding muscles and tissues also creates pain. This happens due to improper movements of neck and unnecessary pressure over neck. Sometimes this pain is also due to osteoporosis and osteoarthritis. Sometimes one of the cervical spine gets prolapsed and it over rides another one. This situation can be congenital as well as accidental.

**Treatment** - Cervical pain primarily occurs due to improper postures, sudden jerk to neck, intense cold, sitting over easy chair and bed improperly, sitting in one situation continuously, and long journey. The following therapy can be initiated.

### I. Naturotherapy

1. The patient should take adequate rest.
2. One should use straight backed chair to sit and a thin mattress to sleep.
3. The patient should receive hot and cold fomentations according to the situation.
4. The patient should be given neem water enema, warm ‘Baithak snan’, hot feet bath, steam bath, wet linen wrapping, etc.
5. Add some Magnesium Sulfate and Epsom salt to water or take 50 grams of ginger in a cloth and crush it. Apply this as a fomentation to neck. Sponge with cold water after warm application.

### II. Preksha-Yoga therapy-

1. **Aasan** – Neck exercises, Bhujangasan, Shalabhasan, Pashchimottasan, Ushtrasan.
2. **Pranayam** – Exercising Suryabhedhi and Deergha Rechan.
3. **Preksha** – Preksha of neck and neck pain for 10 minutes.
4. **Anupreksha** – Suggestion of healthy neck – “My neck is getting better”- 15 minutes.
5. **Tap** – Avoiding sugar and oily items.

## 3. Hernia

Some part of intestines comes out of abdominal wall to form a bulge which is known as ‘Hernia’. In simple words, when the skin around lower abdomen is bulged out then it is known as ‘Hernia’. Usually there are two types of hernias ‘Inguinal’ and ‘Femoral’. When bulge is formed around genitalia then it is ‘Femoral Hernia’. When this bulge is formed over lower abdomen then it is ‘Inguinal Hernia’.

Initially this bulge is due to internal or external pressure over intestines but when the bulge is formed repeatedly then such a situation arises when a part of intestine slips down in to this bag. All these situations are painful. If not treated in time then this bulge increases and also the associated pain. Inguinal hernia is more common in males. Some times a loop of intestine slips in to the inguinal canal and comes up to scrotum. In case of femoral hernia which is more common in females, the bulge extends up to the root of thigh.

Hernia basically happens due to the laxity and weakness of abdominal muscles. Human intestines are long and coiled. These coils are strongly held in to place by tissues. During childhood due to malnutrition, due to indigestion and constipation, and due to cough when there is pressure over these tissues, they break and the intestinal loops move from their place and pressurize abdominal wall. This forms a pouch inside the abdominal wall. Sudden or repeated weight lifting beyond capacity also poses risk of hernia.

There is one more type of hernia which is called 'Hiatus Hernia'. Usually stomach is situated below diaphragm and there is a valve at the lower end of food pipe. This valve regulates forward movement of food bolus. Sometimes some part of stomach slips above the diaphragm in the form of a loop. This is called 'Hiatus Hernia'. Because of formation of this loop the valve can not work properly and the forward propulsion of food becomes unregulated. This leads to reflux of gastric juices in to food pipe giving rise to burning in chest and throat and sometimes falsely misleads us to believe it to be a heart attack. Because of hiatus hernia there may be difficulty in swallowing. Risk of hiatus hernia is more in aged women, smokers and obese people. It can increase due to weight lifting, cough and sneeze.

#### **Preksha-Yoga therapy of hernia-**

1. **Aasan** – Uttanpadasan, Sarvangasan, Vajrasan, Pashchimottasan
2. **Pranayam** – Anulom-Vilom without Kumbhak for 5 minutes
3. **Preksha** – Preksha of intestines for 10 minutes.
4. **Anupreksha** – Suggestion of hernia to heal – “My intestine is resuming back to its position”- for 15 minutes
5. **Diet control** – Avoiding heavy and oily food.

#### **4. Sciatica**

The sciatic nerve emerges from lower end of spinal cord and passes to lower limbs. Any disturbance in this normal situation or pressure can initiate pain in both buttocks which radiates down to thighs and posterior aspect of lower limbs. Sometimes this pain is too much severe. This pain may be due to swelling in this nerve. This pain is called 'Sciatica'. This is more common in males. It starts suddenly and with severely. It is more common between the ages of 30 to 50 years. Usually it occurs in one leg at a time and is associated with fever.

The reason for sciatica is mainly slip disc. But it may occur due to injury, tumour, diabetes and alcoholism.

**1. Naturotherapy-** The patient should receive steam bath. This should be repeated 2-3 times in a week. Routine bath should be taken twice daily. When pain increases then warm water bath and when pain reduces then cold water bath should be taken. At bed time 'Sahan Snan' should be taken. In morning waist bath should be taken after sitting in sunlight for some time, occasionally Epsom salt bath should also be taken.

**5. Piles (Haemorrhoids) :** Unusual dilatation of veins situated in anal canal is called 'Piles'. Because unusual dilatation of veins there is accumulation blood near anus and they hang down in the form of a polyp which at times are also visible externally.

Initially there is itching or burning around anal opening. Sometimes burning can also occur in external as well as internal veins. There are small polyps which can gradually grow and then rupture also. This is called bleeding piles. Piles without bleeding are called blind piles.

'Piles' is not a disease but a disease symptom. It is a disease of high society. Consumption of breads, menda, persevered food etc. causes constipation. When constipation is persisted then its decay and warmth increase in intestines. There is difficulty in passing stool. Because of that the mucus membrane of intestines becomes weak and there is accumulation of impure blood at the end of veins situated in anal

canal and formation of growth. This is the pile. The veins of anal canal are the lower ends of long veins on which the tissues of anal opening apply unusual pressure and hamper their blood circulation. This creates swelling of veins. Sometimes this happens in pregnant women because of the pressure of foetus in womb which is relieved automatically after delivery. When there is some problem in spinal cord, then of excessive stress created by impure matter can also produce this problem. These piles indicate that the body is filled with toxic material and also there is impaction of old stool. This clears that the reason for piles is deeper than reasons for constipation and constipation is just one of the reasons. Other reasons include liver disorders, abdominal problems and other blood diseases.

#### **Naturopathy-**

To eliminate the problem of piles from its root, it is necessary to cure constipation. We have already discussed the treatment of constipation. Chronic piles heal only once all the problems of body are cured. Piles patients have very weak intestines. So initially such food should be provided which not only relieves constipation but also makes stool soft enough to be expelled without difficulty. Food should contain plenty of salads, juicy fruits, vegetable soup etc. so that there is no need to drink water. The extra benefit of such food is that it provides water in its pure form. If this diet is continued for a few days then disease creating situation is removed up to a great extent and if the problem is in its primary stage then it will be cured. If stool does not become soft even after continuation of this dietary regime then enema should be taken 2-3 times in a day; first with warm water and then with cold water. 8-10 drops of lime juice should be added to enema water. At bed time 1100 grams of water or 50 grams of coconut oil should be taken as enema with 25 grams of lime juice. This provides soothing to the intestinal membrane and softens stool. In evening fomentation should be given by keeping woolen pack to lower abdomen, thighs, and back. If there is still difficulty in passing stool then cold and warm waist bath should be taken. Sitting in warm water for 3 minutes followed by sitting in cold water for 1 minute should be continued. While sitting in warm water, feet should be dipped in warm water. After these baths, a cold bath should be taken and then body should be dried with a dry towel followed by rest.

Once stool becomes soft after above mentioned therapies following diet can be added.

Crushed wheat, spinach, other vegetables, ripe banana, apple, etc. fruits, milk, anjeer, coconut, etc.

#### **Preksha-Yoga therapy-**

1. **Aasan** – Sarvangasan, Ishavadan, Ashvani-Mudra, Moolbandh, Matsyasan.
2. **Pranayam** – Nadishodhan, Bhastrika for 15 minutes.
3. **Preksha** – Preksha of intestines for 10 minutes.
4. **Anupreksha** – Suggestion to large intestine – “My large intestine is becoming active” – for 15 minutes.
5. **Diet control** – Avoiding pulpy food, spices and oily food.

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- (iii) Rogo ki sahi Chikitsa – Nagendra Niraj and Manju Niraj
- (iv) Preksha Yoga for Common Ailments – J.P.N. Mishra
- (v) Total Health – David Petus
- (vi) Amrut Pitak – Acharya Mahapragya
- (vii) Prakritik Ayurvedigyan – Rakesh Jindal

## **CHAPTER 9 AND 10 COMBINED: CANCER, HEART DISEASE, ARTHRITIS, AIDS, EPILEPSY, DIABETES AND PEPTIC ULCER**

### **AIM –**

After the study of this chapter students will –

1. Acquire knowledge of fatal illnesses like cancer and AIDS with their causes, symptoms and treatment.
2. Be familiar with Naturotherapy and Yoga therapy of the most serious diseases.

### **TOPICS –**

- |             |                  |                 |         |
|-------------|------------------|-----------------|---------|
| 1. Cancer   | 2. Heart disease | 3. Arthritis    | 4. AIDS |
| 5. Epilepsy | 6. Diabetes      | 7. Peptic Ulcer |         |

### **1. Cancer**

When the tissue cells of any particular organ start dividing and growing uncontrolled then it is called a 'Tumour'. Some of the tumours are life threatening where as some of them are not much harmful. The fatal tumours are known as 'Cancer', and in medical term they are known as 'Malignant Tumours'. It grows in three stages. When growth starts then it is known as 'Primary tumour'. When this tumour grows further and spreads to other tissues then it is known as 'Secondary tumour. After certain period this tumour ruptures and the malignant cells spread to whole body through blood circulation and the whole body becomes cancerous. This is the end stage of life.

#### **Types of Cancers –**

Cancer is technically called 'Carcinome'. Cancer of glands is known as 'Adenocarcinoma'. Cancer of connective tissues is known as 'Osteogenic Sarcoma', and cancer of blood in aged people is known as 'Myeloma'. Cancer of white blood cells is known as 'Leukemia'.

**“Cancer is the gift of modern civilization” - Dr. Limning Stone**

A striking fact regarding this disease is that up to 100 years back it was not this much prevalent, but today because of the facilities like X-ray, radium, and operative procedures it is increasing day by day instead of reducing.

Cancer stands at number two in fatality after heart disease. According to the statistics provided by the Cancer Society of America, one person out of three is the victim of cancer at the age of about 50 to 70. In India also, the number of cancer patients are increasing day by day. According to a presentation by Tata Cancer institute there will be one patient of cancer out of 10 persons in future. Cancer is one of the major challenges to medical science.

#### **Possible reasons of cancer.**

1. Food items having artificial colours.
2. Use of strong spices in food items to make them tasty.
3. Use of flavours in food items.
4. Excessively hot food.
5. Excessive eating.
6. Excessive consumption of non-vegetarian food.
7. Unnatural food and improper life style.
8. Drinking less water.



9. Consumption of tea, tobacco, alcohol etc.
10. Consumption of saccharine.
11. Preserved food.
12. coal-tar, charcoal, benzenes, paraffin, carbolic acid, aniline etc. substances when come in contact with skin or if enter body via oral route then they create metabolic disturbances giving rise to production of harmful toxins. These toxins are the root causes of cancer. Labours who clean chimneys, industry workers, those who work with tar while constructing road pitch, etc. are more prone to cancer.
13. Constipation.
14. Use of strong medicines in acute diseases.
15. Delayed healing of surgical injuries.
16. Use of plastic.
17. Use of contraceptive medicines.

Atmospheric pollution, stress, fear, anxiety, suppression of emotions, lack of exercise, etc. are also some of the reasons of cancer. Prolonged constipation can invite intestinal cancer. Besides this, lack of vegetables in diet causes deficiency of vitamins and minerals. Excessive use of cereals, excessive eating, excessive use of sugar and salt, etc. can also invite cancer. Use of chlorine in water can also cause the disease.

#### **Supportive diet in production of cancer**

According to global statistics non-vegetarian people are more vulnerable compared to vegetarian people because nitrogen containing food is more responsible to contaminate our body which facilitates cancer production.

#### **Main reason for cancer – ‘Irritation’**

If a particular part of body is irritated constantly then there may arise cancer. Usually neck of womb, lips, tongue, throat, stomach, and intestines is more vulnerable. In India, oral cancer in males and uterine cancer in females is more common.

**Symptoms** – In males, major sites of cancer are lips, throat, tongue, liver, and intestines. Tongue, throat and lungs are affected in those who smoke excessively. Oral ulcers do not heal easily. The patient becomes debilitated. There is pain around growth. In females mostly breast, cervix, stomach, and intestines are affected.

**Special signs of cancer-** Skin cancer is hard and takes form of a wound when ruptures. Internal cancer grows in many ways. Pain is the major symptom in both the cases.

1. Oral cancer is more easily diagnosed compared to others. Mouth does not fully open.
2. Repeated bleeding in women.
3. Difficulty in swallowing.
4. Change in urine and stool habits or constipation.
5. Hoarseness of voice or cough.
6. Appearance of a growth over any part of body especially throat and breast.
7. Change in moles or warts (may suppurate and discharge pus).

#### **Treatment**

Fasting or juice fasting should be continued until the disease comes under control with use of enema once or twice a day according to the need. The affected part should be given sunbath daily followed by waist bath, steam bath twice in a month, bandage application over affected part, wet linen wrapping, wet bandage application over lower abdomen every night, steam application over affected part for 5-10 minutes

every 3 hours and warm clay bandage during rest of the time. If there is no pain or if there is bleeding from the affected part then linen soaked in chilled water should be applied.

#### **Other preventive measures-**

1. Relaxed and easy going life style.
2. Light exercises.
3. Walking for 3-5 kms.
4. Perform light Yoga and relaxation exercises.
5. Avoid constipation.
6. Avoid processed food.
7. Avoid foods that are prepared by direct contact with fire until the disease is controlled. Take foods that are rich in vitamins A, C, E, Beta carotene, selenium etc. viz. as follows-
8. Wheat or barley water.
9. Carrot juice.
10. Mixed vegetables' juice, spinach etc. leafy vegetables' juice.
11. Black currant juice or water melon juice.
12. Grape juice or apple juice.
13. Sprouted pulses, tulsi leaves, coconut water, lemon, salads, etc.

## **II. Heart Disease**

### **Heart and its function**

Heart is an important organ weighing around 350-400 grams and of the shape of a clenched fist situated on the left side of chest. The major function of heart is to pump blood in to arteries and supply oxygen, nutrition etc. to all the parts of body. Another function is to send blood to lungs for purification and fetch oxygenated blood back.

Heart is such a miraculous pump which circulates billions of liters of blood during life time (for about 70 to 80 years) without stopping for even a minute. Heart beats for 72 times in a minute and circulates about 5 liters of blood. Pulse is directly related to heart which also beats 72 times in a minute. Ayurvedic therapists diagnose disease through pulse.

Heart is divided in to four chambers. Two chambers are situated over left and the remaining two over right. Both the left chambers are responsible for pure blood and the right ones are responsible for impure blood.

### **What is a heart disease?**

A healthy heart is the foundation of healthy life because heart is directly connected to life and death. Heart disease is a psycho-physical illness. There has been a great deal of increment in heart patients during last 4-5 decades. Heart disease attacks surreptitiously with its companion diseases-high blood pressure, diabetes, gastritis, obesity, asthma, depression, insomnia etc.

According to the famous cardiologist Dr. Din Arnish of California, the major reason for heart disease is high Cholesterol. Because of increased fat in blood, blood vessels are hampered and gives rise to heart attack. If a person can reduce cholesterol level then the risk of heart disease is minimal.

Treatment of heart disease has been dependent on medicines for years. Ayurveda, Yunani, Homoeopathy, Allopathy all have got medicines that can reduce cholesterol and diminish blockage. But there has been increased prevalence of Angioplasty and By-pass surgery these days. Blood circulation in arteries is improved through these procedures.

By-pass surgery reestablishes blood circulation of blocked artery at once, but the old impurity remains in blood. So there are chances of recurrence of the same problem. Dr. Din has suggested Yoga to be a successful alternative for it.

**Symptoms of heart disease :** High blood pressure, headache, breathlessness on exertion, stress, irritability, and heaviness in chest.

#### **Causes of heart disease**

1. Improper life style
2. Lack of exercise
3. Excess of cholesterol
4. High blood pressure
5. Diabetes
6. Obesity
7. Irregularities in diet
8. Stress and anxiety
9. Sedentary life
10. Smoking and alcoholism
11. Occupational stress
12. Family problems, loneliness
13. Anger, fear
14. Feeling of insecurity
15. Negative thinking
16. Depression
17. Excessive work load
18. Imbalance between income and expenses.

**Angina :** Because of exertion pain in heart just like pain in other muscles of body is called angina. This pain starts in heart and spreads to chest, neck left arm, and sometimes jaw. The patient feels suffocation along with pain; and the pain subsides by 2-3 minutes. Sometimes muscular pain, gastric pain, and cervical pains are mistaken as anginal pain. If this pain is relieved by 'Nitroglycerine (Sorbitrate)' then it is surely anginal pain.

**Heart attack :** Due to blockage in one of the 3 major coronary arteries blood circulation is hampered. The part of the wall of heart which is supplied by these arteries, stops working and gives rise to heart attack. This can be compared with blockage of petrol pipe in car and obstruction in petrol supply.

**Procedures for investigating and treating heart attack :** Following procedures are currently prevalent in investigating heart diseases.

1. E.C.G (Electrocardiogram)
2. Echo
3. Treadmill Test (Stress Test)
4. Blood tests
5. Angiography

By these procedures the ability of heart and any obstruction or other problem can be diagnosed.

After this, various expensive medicines, angioplasty, and open heart surgery come in to play for the treatment of the disease. Even after going for such expensive measures it is not sure that the disease will be cured. Blockage can create again and the situation can become again as it was before.

**Preksha Yoga life style :** People of ancient India used to live a natural life style. Early to rise, aasans, pranayam, bathing with water of well, praying God, keeping mild nature, etc. But by the time all vanished.

Believe in 'Early to bed and early to rise, makes a man healthy wealthy and wise'. One should rise early from bed, perform yoga, pranayam, mudra. Go to walk, perform meditation and Karyotsarg. Try to finish your work in time. Try to solve your problems tactfully. If work load is more, then distribute the work. Develop understanding in your family. Give respect, gain respect. Stop thinking about past and future, live in today and try to make today a beautiful day.

Have faith in God. Keep a habit to go to religious places. Live a stress free and happy life.

**Heart disease and Preksha Meditation therapy :** (Absolutely possible to avoid by-pass surgery)

Whatever therapeutic system you adopt e.g. Ayurveda, Homoeopathy, Yunani, etc. if you do the wonderful experiment of Preksha Yoga under surveillance of your doctor then it can be surely said that you will not need angioplasty or by-pass provided if you do it with faith and dedication.

**Wonderful experiment :** This experiment can be divided in to four parts-

1. Yoga therapy, Aasan, Pranayam, Mudra
2. Meditation and Karyotsarg
3. Preksha-Yoga life style
4. Diet control (Cholesterol free diet)
5. Stress free life

**Diet control :** Diet and our health as well as heart disease go hand in hand. Aim is to establish an equilibrium between the amount of calories we intake and the amount of calories we spend. Usually we take more calories than what we spend. Excess of calorie adheres to arteries in the form of cholesterol and forms the reason for heart disease. So we should take more of green vegetable, salads, fruits, and vitamins and less cholesterol in our diet.

25 percent of total calorie requirement per day should be taken in breakfast, 35 percent in lunch, 15 percent in evening breakfast, and 25 percent in dinner. Dinner especially should be light. In marriages and other ceremonies and parties, take more of salads, juices, and plain chapattis. Do not take mutton, fish, ghee, butter, oily food, sweets etc. 200-300 ml of milk is necessary for friendly cholesterol (HDL-High Dilution Lipoprotein). If appetite is more then take salads, etc. Quit alcohol, smoking and tobacco if you are addicted to them.

**Stress control :** Stress is such a curse of modern age which has disrupted our life to a great extent. Science has gifted us numerous facilities and on the other hand it has punished us by providing a sedentary life.

Stress has got bad effects on our health and heart. Stress is the major reason of heart disease. If our needs increase than our facilities or if we do not find expected result then we feel stressed. Scientifically there is imbalance in secretion of Adrenaline and Nor-Adrenaline hormones.

High blood pressure, angina, heart attack, headache, insomnia, asthma, backache, depression, ulcer etc. are all the psycho-physical diseases resulting from stress.

The major reason for stress is 'Overload'. Today we do not have enough time to earn our living. Disrupted schedule, lack of exercise, problematic life, etc. do not allow us to enjoy our life or even to smile.

Excessive work, lack of time, too many desires and requirements, newspapers, television, radio, etc are also major reasons for stress. But they are important in life. We have to deal with them tactfully and set equilibrium. For that we have to create balance in income and expense, health consciousness, family understanding, spirit of love and dedication, balance with society and praying to God.

We should discuss about each others' problems and complains in our family; some what dedication and understanding are required. We should find out solutions for mutual problems. Generation gap problems are also to be dealt with patience. A polite speech also solves many of the problems.

Avoid negative thinking and put in to practice positive ness of thoughts. Develop human qualities. A simple and ideal life style should be adopted.

**Sapta Swarg Niyamavali :** Heart disease is surely the result of improper life style, lack of exercise, obesity, stress and excessive cholesterol. The information of following aspects will be helpful in getting freedom from heart disease.

1. Education of functions of heart and consciousness towards reasons for heart disease.
2. Consciousness towards obesity and high blood pressure and their reasons.
3. Knowledge of freedom from stress, consciousness towards reasons for stress, habit of humour for entertainment, polite speech, positive thinking, love, friendship, art of setting coordination between work and time.
4. Diet control, cholesterol-free diet, balanced calorie intake, abstinence from smoking and tobacco.
5. Consciousness towards common health, regulated schedule.
6. Aasan, Pranayam, Yoga, Mudra.
7. Information of meditation and Karyotsarg as well as performing them with faith.

**III Arthritis :** Pain in joint between bones and swelling in them is a common problem which directly affects a person's schedule. Some people get along with the problem somehow but some have very painful life because of the disease. In India, one person out of six is suffering from any of the joint problems This disease is called 'Arthritis' in medical term. Arthritis is actually a common name for many joint problems; it has got varieties in the form of 'Rheumatoid arthritis', 'Osteoarthritis', 'Gout' etc. In all these problems there is swelling and pain in joints. Not only that but also there are spasms in the surrounding tissues.

**Osteoarthritis :** This type of arthritis is found in majority of people suffering from the patients of arthritis. This situation arises due to age, wear and tear, and friction of joints. There is a layer of cartilage over joining surfaces of every bone which serves as a cushion during the movements of the joint. When there is tearing in these cartilages due to some reason then the heads of bones are swollen and the adjoining ligaments also swell up. The joint shape gets changed and it terribly pains during movements. This can occur in any of the joints, but is more common in those joints which are subject to weight bear e.g. knee joints, ankle joints, hip joints, and inter-vertebral joints. The problem can be divided in to primary and secondary arthritis. Primary osteoarthritis arises without any known reason and is more common among women. It can be hereditary. Secondary osteoarthritis arises due to strain, sprain, unusual pressure or injury e.g. football players are more prone to develop joint swelling because they have to use their knee joints more and the joints are more subject to pressure. When the disease progresses, there is severe pain in joint as well as surrounding tissues on movement.

**Rheumatoid arthritis :** This problem develops gradually, but at times it may arise suddenly. The symptoms increase and then subside, and come again after certain period. Joints of extremities are more affected. If the disease persists for a certain period then it also affects connective tissues of body. This disease is bilateral i.e. when left wrist is involved then right wrist is also involved.

Many of the body joins are known as 'Synovial joints' because in these joints there is a synovial membrane between the joining surfaces of two bones containing a fluid called 'Synovial fluid'. The disease starts with synovial joints. If the disease is not treated initially then the synovial swelling increases and synovial fluid goes on drying. With this there is formation of a coarse tissue known as 'Pannus' which destroys cartilage. The internal soft tissue gets converted in to connective tissue and the joint function is stopped. Movements of joint are almost stopped. Slightest effort creates terrible pain. If finger joints are affected then they are deformed and it becomes difficult to work with them. Gradually the disease progresses to involve connective tissues of body and symptoms like fever, reduced appetite, weight loss, weakness, etc. are developed.

Rheumatoid arthritis can occur at any age but is more common between 25 to 40 years of age. According to scientists body's immune system attacks synovial joints of the same body and destroy them gradually giving rise to the problem. Besides heredity, viral infection can also be the reason.

**Gout :** This arthritis occurs due to imbalanced chemical reactions inside the body. There is formation of uric acid in body as a result of metabolism which gets excreted via urination. If this uric acid synthesis increases due to some reason, then its blood level increases and forms Sodium Urate by reacting with Sodium in the body. This sodium urate gets accumulated in joints and creates swelling, stiffness and pain in the joints. If the disease is not treated in time then the joints get fused and stop functioning. This disease occurs usually after the age of 45 years. According to scientists it occurs due to stressful life, atmospheric pollution, and defective jeans.

**Ankylosing Spondylosis :** This is a different kind of joint problem. Initially there is pain in lower end of spinal cord and legs which gradually spreads to both buttocks and both shoulders. After a certain period, movements of back become restricted and create pain while sitting or standing. The patient can not keep his back straight and as a result he becomes stooped permanently.

### **Treatment**

Besides surgery there are many simple ways which are effective. They are useful if taken under an expert's surveillance. Some of them are as follows-

**1. Hot therapy -** This includes Karma-Snan, warm bandage, hot fomentation and paraffin wax smear which relieve pain and reduce swelling.

**2. Cold therapy –** The affected joint should be tied with a cotton bag filled with ice. Alternative use of hot and cold fomentations and hot and cold bandages relieve pain and swelling.

**3. Massage –** Massaging circularly with light pressure relieves pain and stiffness of joints.

**4. Electric stimulation –** A newly developed equipment known as 'Transcutaneous Electrical Nerve Stimulator (TENS)' is used to give mild current to joints for a few minutes to few hours. This creates relaxation of joint tissues and reduces their stiffness. Many equipments are available in the market for TENS therapy.

**5. Medical treatment –** For the treatment of arthritis there are many pain relieving medicines in Allopathy known as Non Steroid Anti-inflammatory Drugs. Ayurveda and Homoeopathy also have treatments for the disease.

**6. Surgery –** Under this, extra bone is cut and removed. Sometimes the complete joint is removed and is replaced with an artificial joint made of metal. Orthoplasty, Orthotomy, Ostiotomy, Synovectomy are some of the procedures which can relieve the problem.

**7. Yoga therapy –** In Yoga therapy, following experiments are effective and useful for relief from the disease.

**8. Exercise of shoulders and neck –** Move neck left and then right, then forwards and backwards, after that rotate it circularly. This should be repeated five times twice a day.

**9. Wrist exercise –** Clench fist and then pull it up and down, take support of some solid object and then move wrist up and down. Keep both palms together and move both wrists right and left.

**10 . Exercise of heel and ankle –** Lie down on back and pull both feet up and down.

**11. Exercise of knees and elbows –** Sit on a chair and support both thighs with hands. Now bend your knees and then relax them. This should be repeated five times. Same way bend your forearms and touch your shoulders with fingers, now move your elbow up and down. This also should be repeated five times.

## **12. Aasan -**

1. Exercise all the twelve stages of 'Suryanamaskar' for at least three times.
2. Exercise Pavanmuktasan, Shashankasan, Bhujangasan, and Dhanurasan for at least three times

## **13. Pranayam - Nadishodhan and Bhastrika.**

**14. Meditation** – Performing Deergha shwas Preksha every day for 30 minutes. Sit in 'Sukhasan' after performing all the aasans and Yoga procedures, and then while concentrating on your breath take deep and slow breaths.

- 15. Diet control** –
1. Do not instill any spices or condiments in Dals. Avoid oily and spice food.
  2. Use seasonal fruits and vegetables in plenty.

## **AIDS**

World Health Organization (WHO) says that the world has a new challenge to fight with a fatal disease 'AIDS'. At present there is no treatment for it

AIDS was first detected in 1980 in America. Today AIDS has taken a dangerous form in western countries; but India is also not intact. On testing 0.86 percent of people are found to be positive. If steps are not taken, then it will engulf millions of people in India. The number of AIDS patients is increasing day by day.

AIDS means – 'Acquired Immunodeficiency Syndrome' which occurs due to a virus called 'HIV' virus. This virus can remain latent in body. This is an atypical disease which destroys body's immune mechanism. Because of reduced immunity, body becomes victim of various diseases and ultimately the patient dies. Initially when HIV virus attacks, it controls T-Lymphocytes white cells in such a way that instead of killing the virus, these white cells start promoting the growth of virus. Viral load goes on increasing and T-cells go on reducing and the disease becomes serious.

**Symptoms of AIDS** - Fever off and on which does not go off easily with treatment, perspiration at night, fatigue, watery diarrhoea, debility, weight loss, loss of appetite etc. Initial signs include swollen lymph nodes, ulcers in oral cavity and food pipe.

**Reasons of AIDS** – AIDS spreads from contact with blood or other secretions of an infected person. Mainly it spreads through sexual intercourse, from taking blood transfusion of an infected person, infected needles, infected instruments, through skin cuts and wounds, from a pregnant lady to her child. It does not spread through social contacts or routine homely contacts. Touch, kiss, embrace, changing clothes, eating in same utensil do not spread AIDS. Not it has been proved that homosexuality and extra marital relations are the major causes of spread of AIDS. A person coming in to contact with many women or men is more vulnerable compared to others. A woman having AIDS can spread the disease to about 20 men through sexual intercourse.

**Special precautions** –

1. Be cautious while taking blood transfusion as to whether the blood belongs to an AIDS person. If needed, take blood from a near friend or other reliable acquaintant. Before taking blood, be sure that a new disposable needle is used for the purpose.

2. Men and women should not be careless in making sexual relations. Do not perform the act with an unknown person.

3. Use things after applying antiseptic. The object should be known to you. (shaving blades, needles etc.)

**Preventive measures** – AIDS is such a disease which destroys immunity. No treatment has been invented that can cure it so far. Its prevention is its cure. A person near to nature is always healthy. The one



who takes balanced diet and lives with hygiene never falls ill. Stress, anxiety, addictions etc. reduce immunity, so stay away of such things.

### **Epilepsy**

**Symptoms** – It comes in episodes. The patient predicts before the attack comes; but sometimes it comes suddenly. During attack the patient becomes unconscious, body parts start shivering, frothing comes out of mouth, eyes are turned upwards and urine or stool passes involuntarily. This situation lasts from a few seconds to a few minutes. After that, the patient gradually comes to consciousness, and then sleeps because of tiredness. During attack if a towel is thrust in his mouth then tongue bite can be prevented.

**Causes** – Unusual electric activities and impulse generation from neurons gives rise to rapid contractions in skeletal muscles. This leads to spasms in body which are involuntary and it is difficult to come out of the situation. The sufferer gets delusions of light, sound and smell. The impulses generated from neurons disturb many brain centers which makes the person unconscious.

**Major reasons for Epilepsy** – The reasons can be divided in to symptomatic and idiopathic groups. Symptomatic group includes –

1. Metabolic disorder (reduced blood sugar, calcium deficiency, excessive uric acid, lack of oxygen (etc.)
2. Infection
3. Toxicity (alcohol, drugs etc.)
4. Disorders of blood
5. Head injury, tumour.

In idiopathic group there is no specific reason for epilepsy.

**Naturopathy** – Bromide etc. toxic medicines are used to make the sensory nerves of brain blunt and the disease is temporarily suppressed; but the disease is not eliminated. To eliminate the disease from its root fasting, juice fasting, and fruit fasting should be followed by addition of waist bath in morning, dry sponge bath, mehan snan in evening, spinal bath, and application of clay bandage on lower abdomen. Epsom salt bath twice in a week is also necessary. Take body massage in sunlight using oil everyday, followed by wiping the body using a dry towel. After this a normal bath should be taken. Hot fomentation and cold fomentation should be applied to vertebral column for 10-20 minutes using a towel soaked in hot and cold water.

Eight doses of 50 grams of water kept in blue bottle in sunlight should be taken. In case of unconsciousness, this water should be sprinkled over face and a wet cloth should be kept on forehead.

### **Preksha Yoga therapy**

**Aasan** – Pawan-muktasan, sarvangasan, shashankasan, sputa-vajrasan.

**Pranayam** – Sookshma Bhastrika with Moolbandh.

**Perksha** – Concentrating white colour on forehead.

**Anupreksha** – Suggestion of health of brain.

### **Diabetes**

**Forewords** – Over left side of upper abdomen, just below stomach there is a gland called 'Pancreas' which is 15-23 cms. long, 5-8 cms. wide. On dissecting this gland a white coloured wide tube is visible which along with bile duct opens in duodenum. The secretions of pancreas are brought to this wide tube through various small tubes. This wide tube is known as 'Pancreatic duct' which forms pancreatic ampulla. The juice of the gland containing Trypsin (digests proteins), Amylase (digests undigested carbohydrates), Lipase (digests fat), and Renin (digests milk) along with bile enters duodenum. These are the excretions but the gland also has secretary function. The secretions do not come out but they directly mix with blood. German pathologis Paul Langerhanns (1947-1988) invented island shaped structures in the gland. These

are known as Island of Langerhans which contains 20% of alpha cells, 70% of beta cells and 5% of gamma cells. There are also some percentages of D-cells which are secretory. When beta cells are reduced or they become inactive then insulin production reduces. As a result sugar is not utilized in our body and the body can not derive energy and heat. Insulin converts excess glucose of liver and other tissues in to glycogen. As and when required, the stored glycogen is again converted in to glucose by the process of glycogenation by glycogen.

Carbohydrates are first digested in mouth by Ptyline and then by other enzymes in stomach. All kinds of carbohydrates are ultimately converted in to glucose and are utilized by body to create energy. Glucose reaches to all the tissues of body through blood and provides energy and nutrition to the tissues. Glucose catalyzes oxygenation in body cells as result energy is created. By the oxygenation of glucose in cells, water and carbohydrate are created which are then excreted by kidneys and lungs. Nervous tissues and cardiac tissues can not store glucose but they immediately use it, whereas liver and other tissues store it in the form of glycogen.

In adipose tissues, glucose is stored as fat with the help of insulin. This stored fat provides energy when there is emergency need. When glucose reaches liver, it gets converted in to acids with the help of special enzymes, these acids are known as 'Triglycerides'. Triglycerides get stored in the form of fat over abdomen thighs, buttocks, and below skin. This is the reason why those who eat too much sweet, become fat.

In case of fasting, these fats are brought in to use. The metabolic cycle of glucose becomes reverse i.e. fat gets converted in to acids and blood ketone (acetone) level rises. Liver converts this ketone again in to glucose and supplies it to body tissues. This is the reason of weight reduction during fasting. If food is not provided in time then the level of blood ketones increases up to a level that it comes out through urine in the form of acetone. Presence of acetone in a pregnant woman's urine indicates that all the body energy is working up on birth of child.

### **What happens in Diabetes?**

Increased level of blood sugar is known as 'Diabetes'. As the blood sugar rises, it starts coming out through urine. There are three major symptoms of this disease.

1. Excessive urination (Polyuria)
2. Excessive thirst (Polydipsia)
3. Excessive hunger (Polyphagia)

#### **Diabetes has been divided in to two categories**

**Type-I Diabetes** – This suddenly comes to knowledge and the reason is deficiency of insulin. If beta cells of pancreas are destroyed due to some reason or, if they produce less insulin, then this situation is created. This is also known as 'Insulin Dependent Diabetes Mellitus' (IDDM). Also it can be known as 'Juvenile onset Diabetes because it is usually detected in juvenile age group. If the patients of this disease receive insulin time to time then the disease can be controlled.

**Type-II Diabetes** – This is more common category and 90 percent patients of diabetes are of this problem. It is found after the age of 40 years especially those who are overweight. This is also known as 'Maturity onset Diabetes Mellitus'. In the patients of this disease, increased blood sugar level can be controlled by diet control, exercise and Yoga. These patients do not have insulin deficiency but the process of sugar control by insulin becomes defective. These patients may not need insulin, and that is why it is also called 'Non Insulin Dependent Diabetes Mellitus' (NIDDM).

In diabetic patients because of lack of insulin, conversion of glucose in to fatty acids and lipids becomes almost stopped, and body cells do not get enough energy. The whole metabolism becomes disturbed. By the experiments carried out in diabetic animals it was found that oxidation of fatty acids

increases in them producing excessive ketone bodies. This is the reason for increased level of ketone bodies in urine and blood of diabetic patients and a particular 'Varnish' like smell from their breath.

Because of reduced energy production from glucose, body uses stored body fats to produce energy, as a result production of ketone bodies increases, weight reduces and because of increased sugar and ketone bodies in blood a serious condition called 'Ketosis' (Diabetic Ketoacidosis) arises. There is presence of Acetone-B, and Hydroxy-Butyric Acid in urine. There is increased level of carbon dioxide in blood giving rise to lack of oxygen, as a result the patient breaths heavily. Sometimes there is also unconsciousness or syncope. If oxygen is not supplied for long time then the patient may die.

Out of the food taken, 100% of carbohydrates, 58% of proteins, and 10% of fats get converted in to glucose. 15% of total glucose remains in blood and 85% remains stored in tissues.

#### **Major reasons of Diabetes –**

1. **Hereditary** – Any of the parents, grand parents (paternal as well as maternal) if is a diabetic patient then there are chances of diabetes in their children.
2. **Occupation** – Sedentary work, clerk, professionals, teachers, officers etc. are more prone to get the problem.
3. Fatty diet.
4. Obesity
5. Stress
6. Smoking

#### **Treatment –**

##### **Naturotherapy –**

1. Take fresh water enema every morning after passing stool. After that apply wet clay bandage over lower abdomen for half an hour, or take a brisk walk in fresh air for 20 minutes. This will relieve constipation.
2. Take 'Mehar Snan' in evening. After that, take a short distance walk. This will improve vital energy.
3. Apply wet bandage over back overnight.
4. Take 50 grams of water kept in sunlight in orange coloured bottle, and mix it with 50 grams of water kept in blue coloured bottle. Drink it four times daily.

##### **Diet therapy –**

In morning, one lime, 200 ml. of water of 'Methi' should be taken. Sprouted methi should be consumed.

Perform Yoga exercises in morning after passing stool and then take walk. 15 leaves of lime tree, 'Sadabahar chandani' flower, 6 leaves of vicorosa, 10-12 leaves of 'billi' or 15-20 leaves of 'tulasi' should be crushed and then chewed. After that one glass of lassi should be taken by debilitated patients, or a glass of butter milk by obese ones.

After two and a half hours, half glass of 'Karela' juice should be taken followed by sprouted mung, moth, masoor, channa, mutter etc. crushed with onion, lime juice, coconut, spinach, grapes, etc. and added with curd should be taken. Along with that take 5garlic. In breakfast one can take popcorns, groundnuts etc.

Three hour after breakfast take half glass of 'Karela' juice or tulasi, or white chandani, neem, 'Tej-pat' 50 grams each in dry powdered form and mix with methi, amla 100 grams each. This is 'Sugar-Nil Choorna'. After taking 10 grams of this powder take 2-3 chapattis (each weighing approximately 25 grams) made of mixture of flours of wheat, bajra, jowar, rajma, kulthi, soyabean, udad, chowla mixed in equal proportion. With that, take boiled green vegetables 250 grams, salad 250 grams, curd 150 grams, and sprouted methi 15 grams.

**Noon** – Take one and a half teaspoonful of powder of seeds of 'Jamun' and one glass of butter milk.

**Afternoon** - one and a half teaspoonful of powder of seeds of 'Jamun' with one glass of butter milk, or take fresh fruits like orange, lime, tomato, pomegranate, etc. Do not initially take sweet fruits like anjeer, black currant, banana etc. Once the disease is controlled, these fruits can also be taken.

**Evening** – Green vegetables like spinach, tomato, cucumber, etc. should be taken as juice form.

**Dinner** – Take food as per in noon time. Sometimes sprouted pulses, fruits, vegetables, etc. can be taken as dishes.

#### **Preksha Yoga therapy –**

**Shat processes** – Neti and Kunjal

**Aasan** – 10 processes of breath and abdomen, Uttanpadasan, Suryanamaskar, Pawanuktasan, Ardhamatsyendrasan, Bhujangasan, and Matsyasan.

**Pranayam** – Bhramari and Nadishodhan for five minutes.

**Preksha** – Preksha of pancreas for 10 minutes.

**Anupreksha** – Suggestion of health of pancreas – “My pancreas is becoming healthy”- for 15 minutes.

#### **VIII. Peptic Ulcer**

A wound on a mucous membrane or tissue layer forming a gap is called an ulcer. When this ulcer occurs in stomach mucosa because of the adverse effect of hydrochloric acid in stomach juice, it is called 'Peptic Ulcer'. Peptic ulcer is sometimes even found in the lower end of food pipe, but usually it occurs over curved lower end of stomach which is known as 'Gastric Ulcer'. When the same thing happens with proximal part of duodenum then it is called 'Duodenal Ulcer'. Most of the ulcers are found in duodenum.

#### **Causes –**

The common and major cause of formation of an ulcer is excessive secretion of gastric juice. In case of gastric ulcer which occurs in stomach wall, the reason is not the same but it is due to reduced mucous secretion in stomach wall. The mucous secretion protects stomach mucosa from hydrochloric acid, but when mucous is reduced, then gastric juice starts making a wound in stomach mucosa which gradually takes the form of an ulcer. The reasons for reduction of mucous or excess of gastric juice are – smoking, alcohol, anger, drugs, and medicines (Aspirin, NSAIDs etc.). Usually mucous secretion which protects stomach mucosa from gastric juice, also limits gastric juice secretion. When this mechanism gets disturbed, ulcer is resulted. After scientific results, evidences are found that bacteria named 'Campylobacter Pylorides' also causes gastric ulcer.

#### **Symptoms and complications –**

Initially there is pain and burning in upper abdomen. The pain is continuous and its intensity and location are constant. It gets relieved after taking meal or using antacids. In some cases there is no pain at all and it comes to the knowledge after it takes a serious form.

The complication of ulcer is bleeding from it. Blood comes through vomit and diarrhoea. This is an extremely dangerous and emergency situation. Somewhat less dangerous situation is its perforation and whatever the patient eats, leaks through the whole in to abdominal cavity. This gives rise to abdominal infection and peritonitis. Intestinal perforation leads to severe pain. If the ulcer is situated at the lower or upper end of duodenum then the food taken leaks on to liver and pancreas which leads to terrible pain.

#### **Treatment –**

An ulcer patient should stop eating spicy food and avoid such food items or drinks that can cause acidity. Alcohol should be stopped. Cold milk, butter, fresh fruits, and boiled vegetables should be taken. Among fruits banana, mango and water-melon are beneficial.

The patient should drink adequate water; take bath with cold water two times a day. Kati-snan twice a day for 15-20 minutes, cold bath over lower abdomen for half an hour, and wet clay bandage over lower abdomen on empty stomach should be taken. After this the patient should take a walk for sometime. If there is constipation then take enema. Light abdominal massage and deep breathing exercises are very much helpful. The patient should always remain happy and stress free. Ulcer is created gradually, so as it heals gradually too.

#### Sample questions for study

1. What is 'Cancer', how many types it has?
2. What should be the diet of a diabetic patient?
3. Why does an epileptic attack occur?
4. What are the reasons for AIDS?
5. Describe Arthritis.
6. What is the Preksha-Yoga therapy of a diabetic patient?

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## CHAPTER: 11 – ANAEMIA, ASTHMA

### AIMS –

- (1) Understanding symptoms and causes of Anaemia and Asthma.
- (2) Understanding Naturopathy and Yoga therapy for these diseases.

### Topics –

1. **Anaemia:** 1. Introduction 2. Types 3. Symptoms 4. Naturopathic and Yoga therapy
2. **Asthma :** 1. Introduction 2. Causes 3. Naturopathic and Yoga therapy

1. **Anaemia :** It is a condition in which the oxygen carrying capacity of human blood is drastically reduced, which is named 'Anaemia'. Red Blood Cells contain an Iron containing Compound Pigment which is called 'Haemoglobin'. During respiration, Haemoglobin inside the blood flowing through fine capillaries in the walls of lungs combines with oxygen and forms 'Oxyhaemoglobin'. This oxygenated blood when circulates through the cells of our body, the oxihemoglobin releases oxygen into these cells which is then required for the process of metabolism into these cells. Lack of Haemoglobin or deformity in the chemical structure of haemoglobin due to some reason leads to Anaemia. Basically anaemia is the symptom of some underlying pathology.

2. **Types :** Anaemia is classified on the basis of number of Red Blood Cells and amount and chemical structure of Haemoglobin

**2.1 Nutritional Anaemia :** Haemoglobin is the chief component of Red Blood Cells (RBCs) and Haemoglobin is synthesized by combination of Iron and 'Haem' protein. Protein and Iron are derived from the nutritious elements from food. If Iron, essential Amino Acids (which synthesize protein) and Vitamin B-12 are not assimilated adequately from food, their deficiency leads to lack of Haemoglobin and this deficiency is called Nutritional Anaemia.

**2.2 Pernicious Anaemia :** Due to deficiency of Intrinsic Factors if Red Blood Cells are not formed adequately in the bone marrow, it hampers assimilation of Vitamin B-12 in the intestines. Gastric juice and major part of Hydrochloric acid are formed in stomach. As a consequence assimilation of Iron and Vitamin B-12 is hampered and leads to anaemia. This situation is called Pernicious Anaemia.

**2.3 Haemorrhagic Anaemia :** In case of bleeding due to any reason when plenty of Red Blood Cells are lost with blood, it leads to deficiency of blood which is called 'Haemorrhagic Anaemia'. This type of Anaemia is due to wounds, ulcers or profuse menstruation (Menorrhagia). In this situations if blood loss is excessive, then it is called Acute Anaemia which is at times fatal. But if the blood loss is gradual and long lasting then it is called Chronic Anaemia. One of its major symptoms is fatigueability.

**2.4 Haemolytic Anaemia :** Sometimes it so happens that Red Blood Cells wall get destructed before time and haemoglobin gets released into plasma, which ultimately leads to deficiency of blood. This situation is called Haemolytic Anaemia. Before the destruction of Red Blood Cells takes place, they get changed into odd shapes. This happens due to many reasons in which, synthesis of deformed Haemoglobin, presence of deformed enzymes in the formation of Red Blood Cells, splenic deformity are the chief reasons. Besides these, some parasites, toxic chemicals, antibodies can be other reasons for the same. This disease is more commonly found in infants. Thalassaemia is the well known example of this disease. In this disease, which is basically hereditary, due to deformed haemoglobin and deformity of Red Cell wall, such type of Red Cells are formed which get destructed soon after it's formation and consequently leads to lack of blood.

**2.5 Aplastic Anaemia :** Bone marrow depletion or destruction leads to Aplastic Anaemia. In this situation, bone marrow which is basically found as an opaque thick substance, becomes dry and gets converted into a hard compound or becomes knotted. Usually this happens due to adverse effects of toxic chemicals, radioactive chemicals or drugs. It leads to drastic reduction in the formation of Red Blood Cells.

**2.6 Sickle Cell Anaemia :** In a person suffering from this type of anaemia, formation of bizarre Red Cells occurs. When Red Cells release oxygen into body cells out of their oxyhaemoglobin, the remaining deoxygenated haemo-globin gives rise to loss of normal shape of Red Cells. These Red Cells take form of a Sickle (J). Consequently haemoglobin breaks the Red Cell wall and finally it gets destructed itself. This process when occurs with large number of Red Cells, their depletion outnumbers their formation and finally leads to anaemia. As a result of this condition, body organs do not get adequate amount of blood and their functions become compromised. Besides there is also a risk of other diseases' attacks. Organs start failing. Sometimes the Sickle shaped red cells get entangled in capillaries (Rouleaux formation) and hampers blood circulation. At times it even leads to complete obstruction and leads to failure of that particular organ.

**3 Symptoms of Anaemia :** Victims of anaemia present with pale, lusterless skin over lips and skin underneath eyelashes, breathlessness, puffiness over face and legs, yellowness of body skin. Besides, tiredness, reduced appetite, giddiness, severe headache on waking from sleep, palpitation, red and sore tongue, skin lesions over corners of mouth, sensitivity to heat and cold, pricking sensations over legs, mood changes, forgetfulness, occasionally syncope etc. are observed.

**4. Naturopathy and Yoga therapy for Anaemia :** Naturopathy : Anaemic patients should take rest while taking deep breaths in open air. Take dry sponge while sitting naked in early morning which should be followed by taking wet sponge with a towel dipped in cold water. Take massage in pleasant sunlight and bath. To enrich and activate body cells, a warm bath, steam bath, getting wrapped into a wet linen or sunbath should be followed by a cold rub and bath for 20 minutes. Get bowels cleaned up by taking enema daily for 10-15 days. In afternoon, take hot fomentation or steam over waist, back or abdomen and take cold 'Kati snan' or cold 'Ridh snan'. To activate liver and spleen, take warm and cold fomentation one after another. To activate bone marrow, take hot and cold fomentations over chest and back. Regular cold water bath followed by dry sponge activates Red Cells and increases oxygen carrying capacity of haemoglobin. Hot and cold fomentation of abdomen or hot-cold waist bath (Kati snan) or wrapping increases gastric juice secretion inside stomach which ultimately aids iron absorption.

**Yoga Therapy:** Regarding 'Prekshayog Chikitsa' following experimentations are helpful.

1. Karyotsarg – 20 minutes in morning and evening
2. Meditation (Dhyan) – 20 minutes twice in a day at health centre.
3. Anupreksha – 20 minutes once
4. Yoga procedures – Chest and abdomen related, once in morning 5 times each.
5. Aasan – JANUSHIRSHASAN, ARDHAMATSYENDRASAN, VAJRASAN, YOGAMUDRA once a day 3 times each.
6. Diet control – An anaemic patient should receive plenty of protein, iron, amino acids, Vit. B-12 containing food. Minerals are chief components in our blood so a patient should take plenty of mineral containing food which rejuvenes blood. Among fruits and vegetables apple, banana, tomato, carrot, cucumber, black current, reddish, beat, spinach are beneficial. Besides, sprouted pulses, grams, wheat, soyabean etc are also helpful. Protein containing foods such as butter milk, milk, curd, rice etc. are beneficial. Remember, sprouted pulses is a blessing for anaemic patients.

## II Asthma

**1. Introduction :** Asthma is a disease of respiration about which it is said that "Finally it takes life".

Before proceeding to understand asthma, it is necessary to know about Respiratory System. Among the parts of Respiratory System Nose, Pharynx, Trachea, Bronchi, Bronchioles, and Lungs are the major ones. Passing through nose and nasopharynx, air enters pharynx. Thereafter crossing larynx and trachea it enters lungs through bronchi and bronchioles. Trachea gets bifurcated into two divisions which ventually get divided into small bronchi and finally bronchioles. Lungs have innumerable Alveoli. Each alveoli receives fresh air through bronchioles. The inner walls of alveoli contain blood capillaries in which blood



circulates with enormous pressure. This is the blood which is brought into the lungs for purification and contains more Carbon-Dioxide. Oxygen and Carbon-Dioxide get interchanged through the walls of alveoli. From the breathed air oxygen enters into the blood alveoli. Whereas Carbon-Dioxide from the deoxygenated blood present in capillaries enters into the alveoli and is breathed out with expiration. This way blood continues meeting its oxygen requirement and distributes this oxygen among blood cells which is utilized in energy production and metabolism. Whenever because of pollution or due to smoking dust particles or carbon particles, bacteria, viruses or other unwanted elements enter inside bronchi or bronchioles, a catalyst is produced inside the walls of these bronchioles. The mucus membrane (internal soft skin) of these bronchioles gets irritated and gives rise to cough reflex through which all these unwanted elements are coughed out. Secretion of mucus though the mucus cells does not let these elements enter the lungs. But whenever this hostile situation is crossed, the internal soft tissues get swollen, secretion of mucus is exaggerated which collects inside the bronchioles. The swollen wall becomes stiff and gets constricted. The internal wall due to swelling and constriction obstructs air and gives rise to difficulty in breathing. Thus, expiration is prolonged with heaviness over chest, cough and suffocation. This condition is called Asthma. Asthma mainly has three stages. In first stage, swelling in the walls of bronchi and bronchioles occur. In second stage, constriction in the bronchiolar wall occurs. In third stage, excessive mucus secretion from bronchi and bronchioles occur. Due to all these situations airway becomes narrow and airway obstruction occurs. Wheezing sound from chest becomes audible. The bronchiolar wall constriction and dilatation is involuntary because they are under direct control of neurotransmitter. These neurotransmitters are released by the synaptic end bulbs situated at nerve endings. Due to external stimulations, neurones of sympathetic part of autonomic nervous system release neurotransmitters which create bronchiolar wall constriction. This gives rise to an asthmatic attack.

## 2. Causes of Asthma

**2.1 Hereditary :** Off springs of one generation having blood relation are having more probability of having asthma. However it is not necessary that all of them will have asthma. A generation or two or a few members of same generation may be free of the problem. But it is quite obvious for the oncoming generations or other contemporary members to have asthma.

**2.2 Allergic Asthma :** This category of patient comprise of 70 – 80 percent of total patients suffering from asthma. A large number of organisms and allergens enter into our nose through respiration. Many people's immunity system is sensitive to these particles. Due to this, Hypersensitive T cells in our respiratory system starts creating antibodies. These antibodies when not needed, stick themselves with mast cells which are filled with a chemical called 'Histamine'. During an allergen attack these antibodies are stimulated to destroy allergens which lead to rupture of mast cells and release of histamine. This histamine accumulates in bronchioles and causes bronchiolar constriction and spasm. Asthmatic attack is thus initiated. In allergic asthma running nose, redness of eyes, dyspnoea, fever, sneezing etc symptoms are noted. Pollens of flowers, epithelium of certain animals, perfumes, fumes, dust particles, rainy weather, suspending articles etc may cause allergic asthma. Many types of preserved food, drinks, some drugs, chemicals used in paints etc may also cause allergic asthma.

**2.3 Infective Asthma :** Throat infection or entrance of bacteria or viruses into our respiratory tract may cause an asthmatic attack. It is often seen that intestinal parasites can also lead to allergic asthma.

**2.4 Chronic Asthmatic Bronchitis :** Cough is due to many reasons but if it is prolonged then bronchioles related to cough reflex become weak, bronchiolar constriction and spasms start and ultimately takes form of asthma.

**2.5 Cardiac Asthma :** People who have a particular cardiac disease like Mitral Stenoses, Ventricular or Atrial Septal defect, Cardiomyopathy or High Blood Pressure have poorly functioning lungs and gradually develop asthma.

**2.6 Asthma due to Tension and fatigue :** Fear, exam, legal cases, sorrow, anger or severe anxiety may lead to asthma. In all these situations breathing becomes abnormal. Respiratory rate increases and becomes

shallow and rapid. All these adverse situations give rise to chemical imbalance and induce bronchiolar constriction and spasm. Thus asthma starts.

### 3. Naturopathy and Yoga therapy in Asthma

**Naturopathy:** An asthmatic patient should receive hot and cold fomentation one by one over back, chest, shoulders and abdomen. This should be followed by massage with hands and enema using a warm neem water. After this a hot feet bath and hot hand bath should be given simultaneously. If an asthmatic attack is severe then 2 spoonfuls of tea should be boiled in one liter of water till it is reduced to  $\frac{1}{4}$ . This should be given as enema. In this liquid, a chemical called 'Theophylline' is present which causes bronchial wall dilatation. To remove toxic impurities in case of asthma sunbath, thermalium, complete tub bath, steam bath, and wrapping of warm wet linen should be done one by one. Sudden cold bath should be avoided. Warm bath should be taken. After taking bath, dry towel should be rubbed over body. Rub bath should be taken after hot treatment according to season. These hot treatments cause Febrile Reaction, bronchia dilate and the secretions collected in them are liquefied and brought out. Besides these, 3 minutes hot and 2 minutes cold fomentations over chest and back for five times followed by 15 minutes massage are beneficial. Keep chest and back wrapped for 2-3 hours.

#### **Yoga Therapy:**

1. Purification processes – 'JALNETI' and 'KUNJAL' according to requirements.
2. Yoga procedures – related to chest and respiration 5 times each daily and 'SHANKH PRAKSHALAN' once in 3 weeks.
3. Aasan– JAANUSHIRASAN, ARDHAMATSYENDRASAN, PASHCHIMOTTASAN, BHUJANGASAN, MATSYASAN, HRADAYASTAMBHASAN and NAUKASAN once each in early morning.
4. Pranayam – 'SOORYABHEDI, ANULOMBA-VILOMBA and UJJAYI Pranayam (without KUMBHAK)- 15 minutes in morning and 15 minutes in evening.
5. Karyotsarga – 20 minutes twice in a day.
6. Meditation (Prekshadhyan) – 'Deerghapreksha' exercises 20 minutes in a day.
7. Anupreksha – Controlled breathing and balanced breathing 15 minutes in a day.
8. Diet control –
  - (1) Dinner should be light and should be taken before sunset.
  - (2) Deep breathing exercises should be performed as possible, During fasting lime water along with honey should be taken.
  - (3) Fried, roasted and rich food should be avoided.
  - (4) Carrot juice, spinach, sprouted wheat, hand crushed rice, orange, sapota (chikoo), apple and mango should be consumed in plenty
  - (5) Control your diet. Do not over eat even if there is excessive hunger.
  - (6) Changes in life style – Be conscious for seasonal changes. Do not go in dusty and polluted atmospheres and if must, use a face mask. Make timetable for your daily routines and follow it strictly.

#### **Sample questions for study**

1. Describe causes and symptoms of anaemia.
2. Describe types and reasons of asthma
3. What is aplastic anaemia?
4. How does allergic asthma develop?
5. Describe Naturopathic treatment of anaemia.
6. How asthma is treated with 'Prekshayog'?

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## CHAPTER : 12 – ALCOHOLISM, SMOKING AND DRUG ADDICTION

### AIMS

- (1) Understanding different aspects of drug addictions.
- (2) Discussing dangers of alcoholism.
- (3) Introducing bad effects of smoking.
- (4) Defining different types and bad effects of drugs.
- (5) Acquiring knowledge of Preksha-Yog therapy for abstaining alcoholism, smoking and drug addictions.

### TOPICS –

- (1) Smoking habit.
- (2) Alcoholism
- (3) Getting rid of drug addictions.

### 1. Smoking Habit

Every cigarette pack and advertisements display a statutory warning that cigarette smoking is injurious to health. Smoking can lead to many diseases e.g. Emphysema, heart diseases, chronic cough etc. These days the most noticeable complication of smoking is lung cancer. This is a fatal and incurable disease. It is 20 times more common amongst smokers than non-smokers. Cancerous cells destruct non cancerous healthy tissues and ultimately body organs. In Emphysema there is pathological dilatation of alveoli. A number of bronchioles get obstructed together. Alveolar walls get thin and weak. Due to this the effective area of respiratory system is drastically reduced. This situation is irreversible. Ultimately lack of oxygen and excess of carbon-dioxide in body continues and may lead to death.

Now, smoking is considered responsible not only for cancer of lungs but also that of larynx, oral cavity, throat and food pipe. Besides it plays major role in cancer of urinary bladder, kidneys etc. Cigarette smoke injures hair cells inside the mucus membranes of bronchi and reduces their sensitivity. Thus these cells become incapable of bringing up the secretions and dust particles. If a smoker stops smoking then these hair cells again become normal gradually over a few months.

Time Journal, March 1985 published a report on this subject by an American Surgeon General C. Averete Coupe. In this report he says that – The most important health related problem of our generation is ‘Smoking’. It can be prevented but still it comprises of major cause of illness in our society.

In later discussions in this report, non-smokers have also been warned that they should avoid entering into rooms filled with cigarette smoke. Because, cancerous agents are more present the smoke coming out of a cigarette than the smoke inhaled by the smoker.

Getting rid of smoking habit is very difficult because of the fact that our body becomes dependent on the chemicals which are present in tobacco. Secondly, the person becomes attached to tobacco physically as well as spiritually. Whenever the habit is forcefully stopped, one has to face ‘Withdrawal Symptoms’. For example, when a single puff of cigarette smoke is inhaled, it supplies some amount of ‘Nicotin’ to our body and brain. Abrupt withdrawal of this supply gives rise to strong reaction from the body and brain. This does not mean that smoking should be continued. For a person to reach to this situation it takes long time habit. People think that smoking alleviates anxiety, uneasiness and stress but the reality is quite contrary. In twentieth century, adverse effects of smoking and tobacco have been discovered and discussed. Amongst different types of consumption of tobacco (e.g., Hukka, Pipe, Cigarette), smoking is found most dangerous.

Despite of presense of many toxic elements in tobacco, Nicotin, Tar and Carbon-Monoxide are most dangerous. Nicotin is a sensory depressant. It induces secretion of a chemical called ‘Adrenaline’ due to which there is a risk of high blood pressure and blockage of arteries of lower limbs. Tar conti-nuously

stimulates bronchi and causes 'Bronchitis' and 'Emphysema' which give rise to inadequate oxygen supply to our body tissues. Tar imposes a risk of cancer of lungs or mouth to 8 out of 9 males or females.

Carbon-Monoxide releasing from tobacco gets absorbed in blood and combines with haemoglobin in the RBCs of our blood. This reduces oxygen supply to our body organs. Especially in pregnancy lack of oxygen may cause malformation of foetus. Carbon-Monoxide may also cause diseases of blood vessels.

Due to smoking, lung tissues are also injured due to the chemicals inside tobacco. These injuries occur in three stages – (1) Firstly, oxygen transfer is disturbed due to carbon-monoxide. (2) Secondly, Bronchi are also hurt due to the heat of smoke. (3) Lastly, Acidic compounds and aldehydes found in tobacco smoke harms soft tissues of lungs. As above, body tissues can not get enough oxygen due to carbon-monoxide and cyanide. This also disturbs metabolism. Adverse effects include delusions, uneasiness, coma, lack of decision power, heart attack etc. Bronchial obstruction causes swelling of bronchial walls and elasticity of lungs is damaged. Lungs become collapsed. This causes severe dyspnoea and uneasiness. Acids and aldehydes in tobacco smoke causes unusual constriction of bronchi, collapse of lungs, damage to lungs and difficulty in breathing.

### **Jarda-Smoking- Some of the naked facts**

In this world, different reasons have been responsible for human mortalities. In the former decades of this century, epidemics like small pox, plague, tuberculosis, malaria and pneumonia have been reasons for mortalities. During second and fifth decades, world wars had been reasons for massacre. From sixth decade till now, early deaths have been attributed to 'Jarda' and 'smoking'. During last four decades, diseases caused by smoking and tobacco chewing have been responsible for pushing humans into the jaws of death. The biggest reasons for early death 'Jarda' and 'Smoking' have been compared to angels of death.

1. People dying from tobacco over a span of 1.5 years due to tobacco, are as much as people died during four years of first world war.
2. People dying due to diseases caused by tobacco over only one month are as much as those died during last decade due to AIDS.
3. In India, daily 3000 people die due to jarda and smoking. This means that they are 20 times more than those dying due to road accidents and 21 times more than those dying due to murders. The News related to those who die due to road accidents and murders are printed on front page in our Newspapers, whereas those who die due to the many folds bigger reason smoking are unnoticed. In spite of criticizing, they give enticing advertisements and publicities of smoking and tobacco.
4. Many types of cancer causing elements which are called 'Carcinogens' are present in smoke of cigarette or biri. Nine out of ten people suffering from cancer of throat, mouth or lungs are addicted to jarda or smoking. Cancers of kidneys, bladder, pancreas, womb and other organs are also more common in smokers. In cases of cancers of mouth, throat and food pipe, alcohol accentuates the effect of smoking.
5. Risk of developing heart disease is 15 times more in smokers.
6. Ten out of nine patients of diseases like bronchitis and emphysema are the ones who are smokers.
7. 30% of smokers in India suffer from a disease called chronic bronchitis.
8. Risk of brain haemorrhage and paralysis is many folds higher in smokers.
9. Jarda and smoking increases risk of developing diabetes.
10. Smoking causes deformity of back bone.
11. Creases on the face of smokers increase in equal proportion to the frequency of their smoking.

12. If a person smokes 40 cigarettes than a person near to him even if a non-smoker, receives amount of smoke equivalent to 3 cigarettes.
13. For those who are facing stress and strain are more prone to heart attack if they smoke.
14. Jarda and smoking causes high blood pressure.
15. Taste of food reduces in a chain smoker
16. Smoking during pregnancy causes adverse effects for the foetus. If the foetus is a male than this possibility increases
17. Smoke of cigarette or biri contains 5 % of carbon-monoxide which in combination with haemoglobin of blood, forms a toxic substance called 'carbodyhaemoglobin'. This compromises body immunity and causes an illness called 'Polycythaemia'. It also affects functions of Cantral Nervous System. Smoking also reduces physical stamina. These people feel easy fatigue.
18. Smoking one cigarette reduces life span by 5 minutes. This means if a person smokes 12 cigarettes per day then he loses 1 hour of his life daily.
19. If a person smoking one pack of cigarette, instead of smoking starts saving the amount continuously in a bank for a period of 25 years, then he saves Rs. 3.5 lacs at the end. On the other hand besides spending for a cigarette pack he will have to spend Rs 500 – 1000 per month for his treatment.

## 1. Alcoholism

Even if we stop looking to logics and results for a moment and forget about morality and society, alcohol is very dangerous for human health. Among health related problems, alcoholism stands third after heart disease and cancer.

To understand the amount of dangerous effects of alcohol over body and mind, opinions of those who are related to medical field, scientists, psychologists, psychiatrists, surgeons is nece-ssary. In this aspect, the preface of a national conference of Psychiatrists and Neurologists arra-nge-d in America is very important. They say - With the concensus taken in this conference it is proved that alcohol taken up in the body is poisonous to brain and nerves. It invites Schizoph-renia, epilepsy, depression and other psychiatric illnesses.

In international congress of Physiology in Stranceburg Dr. Otto Schmeiderverg said that – “Alcohol is an anaesthetic like ether and chloroform. Its consumption reduces capacity of every nerve in body.”

In England a report of a mission formed for schizophrenia says that, “Alcohol is a chief substance in the list of causes of schizophrenia.”

It is written in the book 'Alcohol and Alcoholism' on its 14<sup>th</sup> page that, “Millions of dollars are spend behind excessive alcoholism. Human pains are priceless.”

Whisky, brandy etc. fermented products when enter stomach, rapidly spreads to all the parts of the body through liver, small intestines and blood vessels. Hardly any amount of alcohol reaches large intestines. In an empty stomach, spread of alcohol is very rapid. Its level reaches to highest within 10 to 30 minutes. Strong alcohol when comes in contact with stomach, it causes swelling of stomach wall and harms digestive organs. It is a liquid poison which harms liver, heart and kidneys. It also causes chronic gastritis and liver problems.

Alcohol's direct stimulating effect is mainly on blood clotting power. Sometimes it leads to ulcers in abdomen. It's daily consumption leads to swelling of digestive organs. Chronic alcoholics become victims of pulmonary hypertension, encephalopathy, dermatoses of skin and anaemia.

Scientific investigations prove that chronic alcoholism damages blood vessels of heart (Coronary Arteries). This gives rise to multiple problems. It also imposes indirect risk to kidneys. It reduces blood pH and also causes Magnesium deficiency.

Alcohol is also responsible for cancers. In those countries where alcohol is more consumed, spread of cancers is more.

Liver helps in removing metabolic end products from body. Over intoxication leads to accumulation of these toxic substances (metabolic end products) in body cells. Liver has to work more to remove these substances. This way, excessive alcoholism causes irreversible damage to liver and brain. This can lead to early death.

The question is, "If alcohol is that much dangerous then why people consume it?" The answer is that a layman thinks that alcohol will help him alleviating his anxieties and stress. Not only a sick person thinks so but every person working hard through out the day thinks so. But one should keep in mind that intoxication is neither energizer nor it alleviates anxiety. On the contrary following intoxication anxieties and stress increase and stamina reduces.

Regular consumption of alcohol invites many diseases into the body. Burning in eyes, vomiting sensation, reduction in appetite, perspiration, easy fatigueability and tremors in body start. The person starts drinking more alcohol to get rid of these symptoms. As a result, problems increase and the person get himself into a vicious cycle.

Famous British Surgeon Dr. Louder Brouten said that, "Alcohol gradually paralysis decision power. This starts with the first peg he takes."

Dr. Quensel opines that, "Even a little quantity of alcohol brings major changes in the functions of urinary bladder, paralyses thinking, reduces in sensations and reduces decision powers"

### **Consumption of alcohol and lifespan**

According to the Italian Professor Limboje alcohol is one of the factors which reduces human life span. A 20 years old alcoholic will approximately live for 15 more years whereas a non alcoholic can live 44 more years.

Many of insurance companies have presented with alcohol and death related statistics. It is a fact that non alcoholics compared to alcoholics live for 50 more years. Connecticut Mutual's Chief Jakob Greene says that, "I protest the common belief that beer is harmless". If death toll of non alcoholics is 100 then occasional drinkers' death toll is 122, controlled drinkers' death toll is 142 and regular drinkers' death toll is 212. Not only that, death rate is also high in those related to alcohol business.

In spite of these facts, consumption of alcohol is increasing day by day.

Wherever alcohol prohibition was there by law, has been withdrawn. Mass advertising campaigns carried out by alcohol publishers play major role behind this. This has created a psychological effect on people's minds and has broken the feeling of immorality. Today alcoholism is considered a parameter of high profile life style in civilized people. Hospitality is considered insufficient without alcohol. People are compelled to drink alcohol in social festivals. Most of the people though not willing for consuming alcohol, agree because of fear of being humiliated among others. But many people drink voluntarily. They are not aware that consumption of alcohol is driving them to a mental disability and a dangerously bad addiction.

Advertising agencies invest millions of rupees in publishing that a little quantity of alcohol does not harm. But a big disaster starts smaller. Occasional consumption gradually becomes a habit. Drunkards of today had been occasional drinkers in the beginning. These people would have been under an impression

that they will drink alcohol occasionally and in small quantity. But gradually their body constitution changes in such a way that today they can't keep themselves from drinking regularly.

Scientific observations support that alcohol is the reason for the majority of car accidents. 51 % of traffic accidents are because of driving under alcohol intoxication. A driver after drinking alcohol is under berserk and his brain becomes incapable of maintaining coordination, decision power and reflex action.

It is the effect of alcohol that a person's decision power becomes blunt and he is incapable of discriminating good and bad. Alcohol when enters in brain through blood circulation, takes control over brain's self control and decision abilities. Thus the idea of limited consumption is deceitful. Limited consumption of alcohol initiates a never ending habit. With this view, drinking milder forms of alcohol is also habit forming. Therefore it is necessary to be cautious about this aspect.

According to medical science alcohol causes CNS (Central Nervous System) depression. It is used to bring about anaesthesia and sleep. As per non medical beliefs it is used to alleviate anxiety, induce sleep and for fun. Repeated use leads to rise in alcohol threshold and encourages direct physical and psychological dependence.

Excessive use of alcohol leads to CNS disturbances and complications e.g. improper coordination, reduction in decision power, short temperedness and mood changes in an otherwise nonviolent calm person. An intoxicated person loses orientations and is not aware of his own for others.

Adverse effects of alcohol depend upon the quantity of consumption, quality of alcohol, duration of consumption, tolerance, and whether it was consumed on empty stomach or after meals. That is why it's bad effects vary from person to person. Still some of the scientific parameters are considered. If blood concentration of alcohol is minimum 2000 ml/liter then it's adverse effects are inevitable. When it is 4000 ml/liter then it leads to unconsciousness and if it reaches 5000 ml/liter then death is sure. Blood level of alcohol gradually brings about uncon-sciousness before reaching to death. But excessive consumption at one time brings death because in such condition CNS stops its functions or during uncon-sciousness, due to aspiration of vomited substance breathing gets obstructed.

Toxic effects of alcohol continue for 8-10 hours even after stopping it. 95 % of consumed alcohol gets converted into Acetyl Aldehyde and Coenzyme-A in liver. This process is very slow so the adverse effects continue for long. In case of a regular alcoholic, liver has to carry out this process repeatedly therefore liver cells gradually destruct.

Scientifically it is established that alcohol reacts with neurons. This process instead of taking place with ordinary receptors occurs directly. With this process, Chloride ion enters neurons with the help of GABA receptors. As a result neuronal functions are depleted and brain's higher controls are affected. Benzodiazepines found in alcohol (Librium and Valium) react with GABA receptors and increase cellular threshold towards them. Due to these processes the victim becomes an addict. When he doesn't get alcohol he starts resorting upon such medicines to meet his requirements.

#### **Abstinence with Preksha-Yog**

- 1 Yoga procedures – Procedures of abdomen and brain
- 2 Aasan – ARDHAMATSYENDRASAN, SHANSHAKASAN, YOGAMUDRA, KARYOTSARG.
- 3 Pranayaam – CHANDRABHEDI
- 4 Preksha - Concentrating upon blue on 'Vishuddhi Kendra'
- 5 Anupreksha – Mulling over the consequences of addictions.
- 6 Diet control - Keeping away from rich food and non vegetarian food



### **Drug addictions.**

Because of drug addiction, national security, health, culture and characters are jeopardized. Within a few years countries like India, America, Japan, China, England and Pakistan i.e. all the developed as well as third world countries have been in vices of drug business and are writhing to get rid of it. International Narcotic Drug Control Board of UN has warned that because of increasing consumption of drugs, some of the countries are under danger as far as their national security is concerned. Some powerful Mafia groups are being supported by various political parties and government officers of top levels. Not only this, board also says that the border security forces and police officers of various countries are under control of them. Mafia groups of drug dealers are so much powerful that they are capable of toppling government. Japan's drug mafia 'Yakuna', Taiwan's 'Peg' and China's 'Fourteen' have been famous.

In America itself about more than 11 crores of people are victims of drugs. According to a report by 'National Institute of Drug Abuse' of America, about 30 to 40 percent of children have started drugs. During 1981-1983 about 1.4 billion dollars were spent for the protection from drug abuse. In America about 50 lacs of people use cocaine, 2 crores of people use marijuana and 50 lacs of people use heroine. Speculatively about 10 to 15 crores of people in India are addicted to bhang, ganja, charas, heroine and L.S.D etc. 50 to 60 percent of those who are addicted to biri, cigarette and tobacco are also addicted to drugs.

Even after so called control heroine, smack etc. drugs are liberally sold in schools, colleges, hostels and slum areas by drug mafia dealers. Poor people of cities who earn their daily wages with great difficulties spend the major percent of their income after drugs and deprive their children of their needs. During last few years, drug addiction has spread from universities to high schools and primary schools.

According to Ayurvedic world dictionary these narcotic agents produce anaesthesia, Unconsciousness, numbness and sensory loss. It produces a delusion of freedom from pains and problems.

Basic use of drugs is related to morphine and morphine derivatives. These drugs affect brain, nerves and tissues. Drugs in the form of morphine, heroine, maxin, cactus, bhang, ganja, charas, L.S.D., cocaine are the major ones which are relished by drug addicts. Opium group of drugs like cocaine, pethidine, barbiturates, psychosomatic and sedative drugs Calmpose, Larpose, Librium, Valium etc are also liberally used by drug addicts.

Sixteen drugs prepared from opium viz. Morphine, Heroine, Narcotin, Codinethimen, Pipevarine, Lordinine and Nasine are the major ones are used as medicines. According to Ayurveda Opium and Morphine are warm, strong, sedative, suppressant, intoxicating, coagulative and sterilizer. Bhang, ganja and charas contain an extremely intoxicating chemical 'Cannabinol'. These drug also contain an intoxicating narcotic oil. Cannabinol is very much dangerous. Bhang is a stimulator, depressant, uterine contractions inducer, antidiuretic, aphrodisiac and appetizer. Ganja is an aphrodisiac. It causes redness of eyes, puffiness of face, amnesia, sleeplessness, delirium, headache and sometimes bradycardia(reduction in pulse rate).

Morphine is basically a purified opium. It's 'Thimen' is a strong poison which affects back muscles and stimulates them. It's use produces spasms in muscles and feeling of restlessness. Narcotine and Pipevarine directly affect respiratory system. Respiration is stimulated and suffocation starts. It relaxes intestinal muscles and leads to constipation. Narcotine and Pipevarine together form Morphine. Codeine and Narcotine together induce excessively poisonous and intoxicating action. 3 milligrams of Narcotine or 3 milligrams of Morphine together is equivalent to 60 milligrams of Morphine. Drug addicts usually take them as tablets or drink them after dissolving in water. Morphine is taken as injection form. Morphine is also available as a white powder, whereas Heroine is in solution form.

### **Adverse effects of drugs**

Drugs adversely affect vagus nerve, sweat glands, kidneys, digestive system and smooth muscles. It reduces sensations for joy, sorrow, pains and also reduces immunity. Unconsciousness, headache, suffocation, severe perspiration, throat congestion and facial flushings, heat in ears and constipations etc symptoms are noted.

No drug is tasteful. On the contrary they are very much bitter. Initially it causes nausea and vomiting as if nature's warning against it. But still we do not listen to these silent warnings given by nature. In every kind of intoxication, vertigo, heaviness of head, semiconsciousness cause relief from pains. Pulse rate becomes slow. Pupils of eye constrict. Face starts perspiring. Lips become bluish (cyanosis). On waking, appetite reduces, nausea and vomiting occur. During semiconsciousness in case of Morphine intoxication, sighing respiration and strong morphine smell in breath etc. symptoms are noted. Body becomes hypothermic like ice. If not given treatment in time, the person dies like.

Adverse effects of drug create many physical, psychiatric and muscular diseases. If taken by a pregnant woman, infant born with heart disease. These babies are called 'Cocaine babies'. Due to drug addiction, physical and muscular resistance is reduced up to the extent that bacteria and viruses can easily infect body and cause illness. Drug addicts share syringes. As a result they suffer from the diseases like AIDS.

#### **Naturopathic Treatment of adverse effects of drugs**

To treat drug addiction, it is necessary to know the person's complete history, family, social and atmospheric background. Digestive and Central Nervous Systems of the drug addict are specially victimized by the toxic effects. During treatment these systems should receive special attention along with other physical organs. Toxic and harmful elements are loaded in a drug addict's body up to such an extent that his perspiration, urine and breath smell of drug. Efforts should be directed to clean up the affected systems and provide strength and health. Drug addicts' intestinal peristalsis are disturbed. Initially they should be given warm and cold fomentation one after another over abdomen. After that a linen dipped in clay should be applied over abdomen. As a substitute one can also use a linen dipped in cold water. Back and abdomen should be massaged. Enema should be given using a lime added to 1½ liters of boiled water, or neem leaves boiled in water. Once bowels are cleaned, buttermilk or wheat leaf water should be given as enema continuously for 10 days. Give 3 minutes of warm and 2 minutes of cold fomentations one by one according to the patient's condition. Cold back bath, warm-cold, waist bath, wet linen wrap, complete tub emersion bath, underwater massage, sponging with wet towel, smear of clay all over body, soft sunbath, and airbath are given one by one according to the patient's vital status, age and intensity of symptoms. These procedures eliminate toxic substances from body through perspiration and urination. Immunity increases. Liver, heart, lungs kidney, skin and eyes are revitalized.

#### **Diet therapy**

The patient should gradually taper off cereal food and take fruits for 5 days, juices for 5 days and butter milk for 1½ months in diet. Soyabean whey is also beneficial. It contains 'Lessithin' which is an antidote for toxins. Among juices, orange, lemon, grapes, pomegranate, pineapples, watermelons, etc. juices reduce adverse effects of drugs. They revitalize body cells by removing toxins out of them. Among vegetable juices, carrot, spinach, tomato, pumpkin etc. juices are beneficial. 'Carotin' present in carrots and 'Lycopin' of tomatoes are carotinoid pigments which remove bad effects of drugs. These foods also remove desire to take drugs.

Usually, drug addicts' diet should be arranged as follows.

Drink 3-4 glasses of water in morning soon after waking. This washes out poisonous substances out of body. After one hour, a glass of drink prepared from wheat immersed in water for 24 hours with one lime or 10 grams of Amla water mixed with 3 spoonfuls of honey. Rejuvenating drinks are rich with Dextrins, Lactobacilli, Saccarines, Aspergillus, Amylases, Proteins and Carbohydrates which are energizers and also help to abstain from alcohol.

In breakfast take sprouted pulses and a glass of soyabean whey and vegetable juices. In lunch, take 2-3 chapattis prepared from coarse flour and spinach juice along with vegetables, salads, sprouted pulses and curd. In evening seasonal fruit juices should be taken.

Dinner should be same as lunch.

With these foods, drug addicts start improving. At bed time surely eat 8-10 dates, 3-4 bananas, 20-25 black currents, or any sweet fruit. Sweet fruits induce secretion of Serotonin in brain which reduces drug habit. What we find in drugs, is provided to us as Serotonin secretion. Drug addicts suffer from lack of Serotonin, Beta endorphin, Phenyl, Ethylamine, Dopamine, Acetylcholine etc. neurotransmitters. This deficiency is replenished by above described foods.

### **Yoga Therapy**

Yoga therapy is important in making adverse effects of drugs weak and ineffective. Soon as a person is known to have taken drugs, he should be given salt added warm water to induce emesis. This should be done 3-4 times so that all the drug substance is vomited out. First salt water and then plain warm water should be used to induce emesis. Controlled drug addicts should have 'Vastra Dhoti', 'Danda Dhoti', 'Jalneti' and 'Shankha Prakshalan'. Among simple Yoga procedures, PATAHASTASAN, JANU SHIRSHASAN, ARDHAMATSYANDRASAN, VAJRASAN, UTTANPADASAN, PAVANMUKTASAN, SHALABHASAN, YOGAMUDRA, SUPTAVAJRASAN, PADMASAN, GYANMUDRA, GOMUKHASAN, PAKSHI AASAN, SHAVASAN BHUJANGASAN, NAUKASAN, MATSYASAN, SARVANGASAN, HAL-ASAN, PASHCHIMOTTASAN and SWAKALP BHAVANA are especially important for improving intellectual, memory and digestive powers. Among Pranayams, Deep breathing, UJJAYI, SITKARI, SHITALI, BHRAMARI and ANULOMBA-VILOMBA should be performed according to the patient's condition.

Concentrate on inhaled and exhaled breathings and exercise 'ANAPAN SATI DHYAN' 20 minutes in morning and evening. Breath neither lies in memories of past nor in dreams of future. It is not bound to vengeance or attraction, happiness or sorrow, celibacy or sacrifice, jealousy or enticement. Breath is the truth of present. Concentration upon natural and spontaneous breath brings freedom from drugs. 'Mangal Maitri KAAMNA' is also an effective way for freedom from drugs. Morning and evening walk is also helpful.

Performing various experiments of 'ASHTANG YOGA CHIKITSA' and walking induces secretion of Beta Endorphin, Dopamine etc from neurons along with other biochemical processes. Their increased level in blood gives incredible freshness, complete excitement and hilarious feeling of joy. Beta Endorphin which is induced by meditation, aasans, Naturotherapy and diets is as effective as Morphine in its pain relieving and hilarious actions. But this natural chemical is non habit forming and it does not have adverse effects like Morphine. This biochemical gives a feeling of calmness and power. With Yoga and Naturopathic treatment a shine of sacredness, maturity, performance, forgiveness, foresight, health and beauty begin to glitter in our life like the fascinating colors of a lovely fine dusk.

### **Psychosocial therapy for drug addiction**

Every new born child is as lovely and sacred as God. If this child gets immersed into the mud of drug addiction in future then it's a sign of perverted and paralyzed culture and it is a stigma to our society. It reflects fall of human society and not progress.

Many teenagers become victim of drug addiction in pursuance of curiosity, perplexities, failure, inability to accept challenges, hostility to real life situations, wish to do something new, proving themselves, stress, inferiority complex, insecurity, guilty feeling, depression, introvert mind and mental disturbances. Whereas some people start drugs after parties, while giving company to others in festivals or due sedentary life style just as a hobby. This beginning puts the end to their life making them drug addicts.

Do not be under impression that your kids are disciplined, wise and they do not take drugs. These kids when out of homes meet their colleagues and in the process of proving their beliefs in their groups or to satisfy their ego, are trapped in the racket of drug addiction. Out of ignorance to rub shoulders with the fast moving world, they get themselves lost. They start feeling that there is nothing in taking it just once and no one is going to see them doing it. This way, some of them even quit after taking drugs once or twice. But some of them become addicted to this level that they put in to stack their lives, Self respect and everything. These people later on suffer from inferiority complex and a feeling of indignity. They find these spirits in drugs. In efforts to become loved ones and respectful in eyes of their own and others, they fall up to the level that it becomes impossible afterwards to bring them up.

The first treatment of these drug addicts is to create self confidence in them. They start recognizing the depth of their own conscience. Children should be inspired to be self confident from the beginning so that they do not move out of track. They should be given profuse love so that they are compelled to think that they are our beloved ones, our intimates and close to us. Their requirements should be fulfilled in psychological ways.

Sometimes we are unable to differentiate people and their character and behavior. Swami Ramateerth has properly said that it is the sins and crimes of a person that should be hated and not the person itself. Basically no one is a criminal or rude. Scattering toys or clothes here and there is a childish and innocent misbehavior. Children should be made to notice these small things and not to be punished. Punishment creates an impression in their mind that they are bad and they start losing their self respect. Soon as a drug addict person's self respect is reestablished, an incredible energy, confidence, will power and self control start appearing in them.

According to the Naturotherapy just like the Vital energy when takes an enormous form protects our body from disease producing organisms, soon as self respect and confidence rise, they protect our society from possibility of bad habits and drug addiction. The spirit of self respect gives freedom from attraction to drugs. An acceptance towards truth should be aroused in drug addicts. They should accept that drug addiction has spoiled their lives. It is wrong to blame others to prove their behavior or to attribute their drug addiction to others. Whatever problems they have created are due to themselves. They themselves are responsible. They are not the blamed ones or tortured by others but the fact is that they have become slaves of drugs, and are the writhing victims of drugs. Soon as this is accepted by them, a rational thought of being free of drugs starts arising in their minds. A revolutionary change is observed in their thinking.

During the process of reestablishment of health, friendship with those who have already stopped taking drugs should be made. An intimacy should be created with them, keep in touch with them, play with them. Keep busy with works like creative art, writing, reading, painting, drawing, gardenary etc. Do not stay inactive. An inactive mind will start demanding for drugs. Activities create self confidence in mind and removes addiction.

Do not take resort to addictions in case of failures, unfaithfulness or indignity. Instead, take resort to those who are great resources of energy, happiness and love. Add your wishes to divine powers and find a new direction. In helpless moments pray God. One definitely gets help. Create faith, it will give a great deal of satisfaction. The Almighty God is universal and not away from us. He is bright and full of light. Whenever we call Him during helpless moments, the Light gets brightened and gives us a proper direction. Life becomes full of happiness, health and beauty. Expression of love gives freedom of addiction. When a person becomes addicted, instead of reprimanding, cursing and blaming him, it is necessary to treat him properly. Instead of giving him a lecture, he should be aroused with a true will power, devotion, honesty and decision. An addict should realize that he is being given enough time, love and support. Because he is broken from within. Love is the treatment. If he is taking drugs inspired from the feeling of aggressiveness and to punish his relatives and thereby punishing himself in the process, he should be realized that

whatever he is doing is wrong. Love does not mean being autonomous. A person and a person's behavior both are different from each other. He should be realized that he is receiving enormous love but we are unhappy and anxious about his character. Always be conscious about teenagers' wishes. Do not let his wishes flare beyond certain limits so that even his immodest behavior is stamped as his fame.

**Sample questions for study**

1. Describe adverse effects of alcoholism.
2. What is a drug (narcotic)? What are the types of drugs? Discuss the disastrous effects of drugs.
3. Which system of our body is the most affected by cigarette smoking? Describe harmful effects of smoking.
4. What are the reasons of 'Emphysema'?

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## **CHAPTER: 13**

### **PHYSIOLOGICAL PSYCHOLOGY – DEFINITION, TERRITORIES AND IMPORTANT FUNCTIONS**

#### **AIMS –**

After studying this chapter students will –

1. Understand the functional relations between body and mind.
2. Acquire applicable knowledge of provinces of body and mind.
3. Evaluate the importance of study of Physiological Psychology and learn about its importance.

#### **TOPICS –**

1. Introduction.
2. Historical background.
3. Meaning and definitions of Physiological Psychology.
4. Faculties of study of Physiological Psychology.
5. Benefits of study of Physiological Psychology.

#### **1. Introduction**

Those who study Anatomy are studying structures and functions of various body organs. Their major interest revolves around problems related to different parts. How a living organism digests food, how energy is utilized in body, how body keeps active through blood circulation, how chemical reactions take place in the different organs of body, and how body tissues provide activity etc. are their territories. Whereas in Psychology they study various behaviours originating from different activities. Major study materials of study of Psychology include personality, inspiration, and learning. But there is a very thin line differentiation between these two subjects. Psychologists study physical functions in parts, e.g. structures and functions of different parts of an eye. Whereas Physiologists study all the functions of living organisms undividedly. This way the discrimination between Physiology and Psychology is just theoretical. A physiologist can record electronic activities of heart functions and effects of various enzymes in the process of digestion. Just like that a psychologist can evaluate study related activities, evaluate effects of physical activities on animals, study cerebral cortex, etc. All in all both Psychologist and Physiologist have a similar aim. Both take interest in functional study. A Physiologist studies organ structures and functions in order to understand body functions. Similarly a Psychologist studies body organs and functions in order to carry out study on human behaviour.

Body and mind are the inseparable parts of our body. With respect to study a person, study of these two components does not only lead us to completion but also proves helpful in evaluating a person's actual condition. Usually mind does not have any structure. It is studied through behavior and activities. Thus the detailed study and analysis of Physiological Psychology seems important for health and personality development.

#### **2.0 Historical Background**

Prof. R.K.Ojha has mentioned in his book 'Sharirik Manovigyan' that Renee Deccorte (1649) meticulously presented physical evaluations of first. He scripted mechanical functions of nerves of animals but he could not discover anything related to psychological activities of humans. Muscular contractions related observations made by Jane Schwamerdom (1674) and researches related to degenerations of different areas of brain made by Thomas Willis (1707) have helped people to understand experimentations related to muscles. John Ennjer (1771) and George Procusca (1784) studied 'Reflex action' and functions of different areas of brain. These two presented definition of know-ledge in a very proper and clear way.

Charles Bell (1811) clearly differentiated sensory and motor nerves. Parry Florence (1824) made researches on muscular actions.

Regarding mental shocks, Paul Broca (1861) showed that speech disturbances lead to stress in frontal area of brain which leads to mental shock. G. Fritsch and E. Hitgeing (1870) refused the theory of unanimity of brain and described behavior to be dependant upon muscular actions. With this, he also explained that due to voluntary movements, Motor Cortex may get harm. Due to these scientific inventions, muscular system study started taking big leaps of progress. Thereafter Wilhem Wunt (1874) wrote first book related to Physiological Psychology and established a laboratory to carry out experiments. Majority of Wunt's work is related to Physiology and human therapy. Charles M. Sharrington worked up on 'Intricate relations of reinforcement and inhibition in reflexes' and analysed them. Famous Physiological Psychologist of Russia Pavlov and W. Vonbactrev explained the process of learning on reflex theory and coordination of cortical functions.

This way study of mental activities and together with physiology started taking new shape gradually. In eighteenth century, physicists challenged Decarte's analysis of brain-body. They were to say that muscular structures and actions of humans and animals have similarities, that are why on the basis of studies on animals, it can be said that mental and physical activities are not different from each other. A time also came when first theory of Psycho-Physical Parallelism presented by Gottfeid Libnitz (1765) became very much famous and it began to be accepted that mind and body are only partially free from each other. Thus both have got influence on each other's but it can not be established that mental activities are having major influence.

With physiological analysis, the roots of this strange principle rapidly began to be removed by the changing streams of time and thoughts. Wunt and his disciples tried to bring changes in feelings and sensations. Oswald Coupe should that integration of thoughts and effects of activities are completely senseless, which can be called only a non-psychological process. The gist of this sort of physiological study is that mental conditions and activities are dependant upon physical parts including brain. And this type of a organism can not be kept alive by routine activities of brain. After few days arrival of Physics in the field of Psychology deducted some problems of physiology. In the territory of Psycho-Physics, Psychologists made a successful effort in measuring the intensity of stimulation and sensation. From this study they come to a decision that intensity of sensation is directly proportional to stimulus, which certainly has a constant ratio. Gartov Falconer who developed the measurement system was sure that stimulus and action have also got proportionate relationship. Thus, Falconer's work was considered important in the field of Psycho-Physics. It still can not be said that this principle was beyond criticisms.

Psycho-Physiology was initially related to muscular centre. But still there were examples of influence of physical actions on behaviour. No information could be found in the dictionary of muscular system till half of 20<sup>th</sup> century. Some of the examples of objects and processes which have influence on behaviour are oxygen deficiency, stress, concentration of internal secretions, vital deficiencies and toxic drugs etc. It can be studied to day as to what kind of effects these things have on psychological and physical. The results can be put in to action with-out knowing muscular centers. Now Physiological Psychology is mainly related to these kind of instruments, whose effects could be seen but could not be defined in terms of its detail meanings. At the end it can be said that Psycho-Physiology is a combination of various resources and instruments e.g. Anatomy, Physiology, Clinical neurology, Psychology and Psy-chiatry. These are sup-posed to find out reasons for al problems and treat them.

Thus, it is clear from above discussion that Psycho-Physiology evolved before a century from Physiology because some of the physiologists were interested in studying functions of brain and for which they needed to study human behaviour and the aim is to study changes in behaviours arising from functional disturbances in various areas of brain. Eventually Physiological Psychology evolved. Works done by Weber Falconer, Helm Hodge were also included within this faculty. In 1874 Wunt's book



'Principles of Physiological Psychology' was published in which, sensations, functions of brain and other faculties were included. Harthway writes about its historical development, "Physiological Psychology is not a different science but as per the name itself suggests, it is a link between two basic tangible sciences 'Physiology' and 'Psychology'. In James Daver's words, "Physiological Psychology and Psycho-Physiology are historically the objectives of experimental Psychology. Today, this subject is considered as the borderland between psychology and neurology.

### **3.0 Meaning and definitions of Psycho-Physiology**

Psycho-Physiology is a science which studies psychological processes related to and physical organs. There are two main things which are found in this form, which make the definition of this science more complicated because of their different nature. These two things are – (A) Behaviour and (B) Psychological reactions related to various body parts. Every kind of arises from muscular activities. Even speech and transmission of thoughts is also dependant upon tissue activities. On other side study of inter relation of mental condition and physiological process have put forwards many problems before researchers. Today, the problem or brain-body interrelationship has become a subject of visualization of inner conscience, which has definitely created an impact upon discoveries being made in the field of Psychology. The word Psycho-Physiology is synonymous to Physiological Psychology, both have similar opinion. Thereby, it is easy and accepted to study it under the name of Physiological Psychology. Before giving definition, it is mandatory to learn the meaning of these two words. Physiology is a branch of Biology through which, structures and functions various organs of human body are studied. Through Psychology, human and animal is studied. Definition of Physiological Psychology gets embodied by the combination of the definition of these two sciences. Therefore if to define Psychology, let's combine these two subjects (Physiology and Psychology) and see how human actions are related to its physiological and al system.

#### **Chief specialties of Physiological Psychology**

It has been explained that a science related to study of physical processes is 'Physiology' and the one dealing with behaviour is 'Psychology'. Combining them with each other, Margon and Steller (1950) understood Physiology as a science of physical processes which concerned with the study of reactions of body organs and Psychology, a science of human behaviour in which it is studied as to how animals and humans establish adjustment with their atmosphere. With the combination of two sciences, these two erudite defined Physiological Psychology as this – "In Physiological Psychology, two subjects Physiology and Psychology put together and see how physiological processes are related to al adjustments. That according to Margon and Steller means that this al adjustment is studied through Physiological Psychology.

Wagnor and Johns presented physical definition in detail. According to them Physiological Psychology is a study of relationship between bodily processes and behaviours. That means according to Wagnor and Johns is that in Physiological Psychology relation between bodily processes and are studied but human is considered as a whole. That's why it is necessary to study complete human.

With this concern the definition given by Freeman (1940) seems to be more appropriate. According to him, "Physiological Psychology is the study of relationship between integrated behaviour and the bodily processes of the intact organism". Here some important things are that this science studies bodily processes of the intact organism and correlates them with higher centre of these behaviours i.e. nervous system. As the extreme level of which is called integrated behaviour depends only upon nerve centre. That is why this science does not study other systems e.g. Digestive System etc. Precisely, this definition can be taken in the form of Structure-functional relationship. Means this science also studies Anatomy and Physiology.

According to Encyclopedia Britannica, "Physiological Psychology is a science which establishes a relationship of mental activities and behaviour with physiological processes of various parts of body."

Through Physiological Psychology, functions of Nervous Systems are studied which governs human, sensitivities and endocrine glands. Speaking, presenting thoughts are the types of only. With these many bodily processes are also involved such as, gestures of hands and facial expressions while speaking. This way every mental status and reactions are related with bodily processes. Studying many problems related to these is the aim of Physiological Psychology.

To conclude, it can be said that Physiological Psychology is a science in which such problems are studied which arise out of the relation between human and physiological processes.

#### **4.0 Faculties of study of Physiological Psychology.**

Physiological-Psychological problems are similar to those arising from combination and coordination of Physiology and Psychology. Through the study of problems, a complete knowledge in the faculty of Physiological Psychology is achieved. So under this topic, some of the important problems of Physiological Psychology are discussed.

It is a fact that those who study Psychology are less interested in Physiological Psychology and that is why their knowledge is limited. The knowledge of Physiological Psychology can not be said complete until Anatomy, Physiology, and Biochemistry are also studied.

Before studying Physiological Psychology, it is necessary that a brief knowledge of Anatomy and Physiology is also acquired as to how internal changes affect physiological processes and how response mechanism is important. In response mechanism, sense organs, nerves, nervous system and muscles and glands are studied.

**4.1 Sensory functions :** Under this section, functions and problems related to sensory organs are studied. With that it becomes necessary for a comparative study that how humans and animals discriminate various sensory stimuli and in what form they are experienced. With these studies the knowledge of facts of sensory centers is acquired. As to how sensory organs function and what is their structure, which sensory nerves arise from these sensory organs and in which centre they end, how brain centers are influenced by changing conditions of internal senses. After this knowledge with experiments it should be observed that if the visual centre in an animal is destroyed then why it becomes unable to see and why is it not tangible from outside? Thus with the study of sensory functions it is understood how sensory functions are related to sensory centers and forms the source for the behaviour of an organism.

There are four components of distinctiveness of sensation – Intensity, Quality, Space, and Time. Let's take an example to understand these specialties of stimulus. Light, sometimes is bright and sometimes dim. Radio sound is loud sometimes whereas very low sometimes. Just like that, sometimes pain in some part of body is sometimes intensely experienced and sometimes very mildly. This difference of sensation is called 'Intensity of sensation'. Just like intensity stimuli have qualities also. Light can be blue, red, yellow, green etc. If a needle is pricked in any of the fingers, then sometimes it gives a sensation of pressure and sometimes pain. The difference of pressure and pain in a stimulus is called 'Quality'. Every object has its own shape and situation which gives an estimate of its space. Lastly, stimulus's time is considered i.e. up to what duration a stimulus was given.

It is mentioned above that every kind of sensation is experienced through sense organs. E.g. visualization through eyes, hearing through ears, taste through tongue, smell through nose and touch through skin. Thus it is necessary to study every sense organ in details.

Along with study of sense organs, study of nervous system, brain etc. is also a problem of Physiological Psychology. What are the causative factors behind a particular process, in what conditions the process becomes distinctive and how the internal conditions affect it are also studied in this problem.

**4.2 Motor functions :** Unlike sensory functions having been classified according to sense organs, it is difficult to classify motor functions according to effectors. There by classification of conduction and response of motor functions is also a difficult problem. Because response mechanism is closely related and very near to sensory and motor nerve centers, sensory and motor pathways and afferent and efferent neurons making it difficult to study their functions individually.

According to Anatomists and muscle experts in this problem, different functions are studied. For example Reflexes which is a completely autonomic function. There are other reflexes also which are partially autonomic and they have similarities in their types. For example, running, swimming, hand-shake etc. Reasons for emotional reactions and their relation with brain and other physical organs are studied in this problem. To acquire knowledge about reflex and common principles, motor functions are studied in which there are striated muscle centers and spinal cord tracts. Precisely, in this problem we have to study following things a. Neuromuscular relations. b. Spinal mechanism c. Motor centers of brain. d. The pyramidal motor system. e. The extra-pyramidal system. f. Other cortical motor system.

**4.3 Physiology of emotion and motivation :** In emotional situation, initially we see external changes. Usually there are changes in pulse rate and respiratory rate, flushes over skin, changes in blood pressure and stiffness in muscles. Willium James said about emotions that emotional situation arises from physiological changes. Regarding that, particular emotions have been studied in which James's statement is proved up to some extent. Others have also made researches in this subject. Expressions like smile, cry which are the most common and complex expressions have also been researched. With these researches it is found that in these expressions also the activities of a particular type of muscle tissues is involved. This observation clarifies the criticism against James. From the extracts collected from various experiments it is found that emotion is the outward manifestation of muscular centre conditions. Volter B. Canon presented a new principle. He was to say that in case of an extreme emotion the induced physiological changes lead to mechanical action which the primary form of Energy mobilization is. Functions of hypothalamus and of other nerves have been explained under the title of related topics. Sensory expressions are important in developing al expressions. That is why sensations, its re-lated problems, interests and inspirations are studied in this problem. Till now sensory problems have not been problems related to physiology. Till today, appetite, thirst, desire and other other incentives are studied as important matters of Physiological Psychology. With this type of study many behavioural processes are understood like particular chemical influence, desire, evidence of hormone generated in lower animals, various processes arising due to diminished level of blood sugar which affect muscle centre. This way in this problem we observe and study inspirational and sensory behaviour of humans as to up to what extent these processes are related to Anatomy and various Physiological processes.

**4.4 Learning and memory :** Changes occurring in muscle-centers in learning process have created many problems and doubts which have also been studied by Physiological Psychology. One of these doubts is related to a principle which says that learning process is related to development of group of muscles. Groups of muscles separate chemicals collected by other groups and this process occurs secretly. But no evidence could be found in favor or in against of this principle. There have been a lot of researches on impacts created by age, sex, ability to inspire, hormonal deficiencies, stress and muscle-centers. However their results have been turned out more complicated and have not led to a common or final conclusion. Besides one thing that whenever a resource which helps in developmental process, becomes an obstacle in chemical reactions of learning processes in brain which gives rise to weak memory.

**4.5 Intelligence :** Physiological study is limited mainly to imbalance of aggressive thoughts and behaviours arising from uncommon conditions of thoughts. Some sources create obstacle or sluggishness in development e.g. exposure to X-rays during some adverse conditions and lack of development of thyroid gland in childhood are proved to be hurdles in mental development. Drug addiction produces some mental symptoms, just like secretion of a chemical which induces tendency to kill by poisoning, craving for drugs all the time etc. Besides these there can be aggression of thoughts, debility etc. can also be there. In case of

mental trauma, intellectual defects are created. Some of which may take serious form e.g. missing words while speaking in case of a trivial mistake, restless due to that, drop in mental level or reduction capacity of judgment before work or lack of decision power. Some trivial but bitter offenses can also lead to some particular defects such as active behaviour changing in to a complicated one. Physiology has made less progress in analyzing and finding out the reasons behind such things than expectations. So, more efforts are needed in this direction. Because of this reason it is necessary to learn intellectual fields with a physiological.

**4.6 The basis of sleep and activity :** The pleasant hours of sleep, rest and activity are the common qualities of higher animals. because of changes in some particular parts of brain, somnambulism(sleeplessness) arises due to which a person has to face a lot of difficulties. This suggests that recurrence of these lower centers can lead to steadiness of normal working condition. In this case even if the circumstances are favourable, in the situation of normal sleep, recurrences should be removed. Exhaustion is considered to be the reason for sleep. But its influence has not been studied so far. Reduction in sensory stimuli and a good habit of activity have been considered important reasons for sleep. Many physiological changes are helpful in normalizing functional levels of various endocrine glands. Their function is to create changes in the intracellular fluid of nerve cells, but still a complete knowledge about it is lacking. That is why in Physiological Psychology it is necessary to study problems like sleep, dependencies of various physiological activities etc.

### **5. Importance and benefits of study of Physiological Psychology**

The field of study of Physiological Psychology is so much important that body and mind both can be combined and programmed with it. Physiological processes are classified in to four parts viz. Cellular, Enzymatic, Organic, and Systemic. All these levels have their own importance. Besides this, physiological activities can also be classified into cerebral and biochemical. Now, the situation is that disturbance in anyone among these can directly affect our behaviour and personality. Physiologically, brain and hormones control all these activities. In spite of the form of mind being vague, its impact and interference in biochemical reactions, mechanical actions and physiological actions is clearly visible. Thus, it can be said that if one wants to acquire knowledge about types of personalities, changes taking place in it, its development and its importance then one has to study processes and relations of body and mind. Study of Physiological Psychology is proved to be an imposing step in this direction. This is the major advantage of its study.

### **Questionnaire**

#### **I. Assays**

1. Describe the principles of Physiological Psychology.
2. Which are the major faculties of study of Physiological Psychology?

#### **II. Short questions.**

1. Give two important definitions of Physiological Psychology.
2. Which is the purpose of Motor functions?

#### **III. Objective questions – Answer in one sentence.**

1. Give the name of an important person who defined Physiological Psychology.
2. Name the two branches of Biology which are mainly studied in Physiological Psychology.

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## CHAPTER: 14 – PHYSIOLOGY OF EMOTIONAL AND MOTIVATIONAL

**AIMS:** After studying this chapter the students will be-

- (1). able to understand emotion.
- (2). able to understand the process of motivation.
- (3). able to understand the physiological changes taking place during the situation of emotion and motivation.

**TOPICS –**

1. Physiology of emotions.
2. Theory of Emotion.
3. Physiological and Muscular basis of emotional
4. Emotion and 'Preksha Meditation'.
5. Motivational.
6. Basic genetic motivational conditions.
7. Motivation and Homeostasis.
8. Psychological Motives.

### **1.0 Physiology of motivational.**

Emotion is a situation in which a person (or animal) gets excited very intensely. During this excited mental condition, the person's (animal's) behaviour and personality becomes dispersed and different part of the body function in a particular manner. It means, in case of emotion brain and various body parts are affected and they function in a particular way. Not only this, the person himself feels the excitation of his mental condition. Emotion is a motivated behaviour in which (in humans) a higher conscious comes in to play and with that magnetic and repulsive behaviour is resulted, independent and ordered functions take place in the muscle centers. For example, in case of emotions of fear, anger, and joy a higher level motivation is set off and is expressed in magnetism (joy), repulsion (fear) and anger behaviour. Commonly, emotion can be defined in three forms –

**1.1 Emotion as a conscious :** According to different observers and scientists, as a response to materialize external events various awareness take place due to various conscious states. These conscious states are called emotions which are the reasons for different emotions since birth. This reveals that conscious events are necessary for emotional behaviours.

**1.2 Emotion as a behaviour :** Other erudite people consider emotion as one or another type of behaviour. According to them in different emotional situations, a person's behaviour is also different. There are many types of behaviours in emotions like smile, laugh, shout, run due to fear, facial expressions during emotion etc. In animals wadding tail, snarl, breath etc. are seen which suggests that many other behaviours like these are included in expression of emotion. Besides this some autonomic behaviour are also reasons for emotions e.g. rush of blood during fear, changes in consciousness and blood pressure during syncope, reduction in gland secretions in case of emotion etc. are the examples of autonomic reactions of emotions. Aggressive behaviour, running due to fear, laughing etc. are the examples of some emotional reactions.

**1.3 Emotion experience :** Persons give literal definitions of emotional experiences like feeling of fear, calm, excitement etc. These experiences are so much complicated and mixed that it is difficult to understand them scientifically on bodily basis.

**1.4 Emotion as a mental and physiological event :** Modern Physiologists and Psychologists define emotion a mental and physiological event. According to them, emotional consciousness and emotional behaviour are as results of physiological and mental events. Emotional behaviour is controlled by

Autonomic Nervous System and endocrine glands. When a person feels emotion, his heart-rate increases, Blood pressure increases, abdominal discomfort starts, scalp hair, and body hair strut up. So, an essential and adequate situation for emotion is that an emotion stores some particular autonomic processes in brain centers. These stored processes control autonomic actions and behaviour. Now in this denotation we will note some definitions of emotion because in this chapter we will study emotion only as a mental and physiological event.

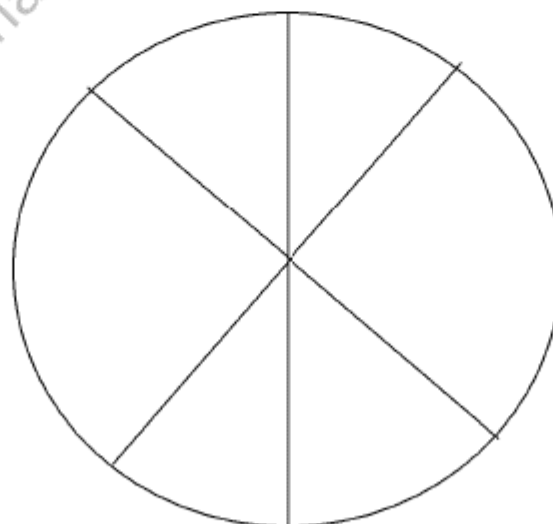
- (i). According to some psychologists, "Emotion is a pattern that occur in the viscera and other bodily parts."
- (ii). According to other learned people, "Emotion is a cortical event which depends upon response patterns that have occurred elsewhere in the viscera, in the hypothalamus or in some combination of three."
- (iii). According to some people, "Emotion is a bodily pattern which is preceded either by psychological event or subsequent mental events."
- (iv). William James has said defining emotion, "Emotion is a mental event. It is the feeling of change occurring in the viscera and the skeletal muscles. Which changes have been initiated directly by perception of an appropriate stimulus."
- (v). According to Lange, "Emotion is a vasomotor disturbance."
- (vi). According to Canon and Ward, "Emotion is a mental event. It depends upon change in the hypothalamus which have been initiated by an appropriate stimulation."

**1.5 Why are we full of emotions? :** A question arises that whether there is anyone who has had to suffer from emotions? The clear answer for this question is that no one, Emotion actually is the one of many physiological and mental processes. People of every age and class feel emotions. With these situations we can say that emotions are neither beneficial nor harmful for the body and mind. Emotional condition is the negative feedback of physiological balance. It arises only when there is difficulty somewhere in establishing adjustment with situations e.g. fear arises when the ability of 'Flight or fight' becomes weak.

In emotional situations, we are compatible to react in a special way instead of routine reactions occurring as a result of stimulus because these reactions are dependent upon contemporary situations. It is secondary that this reaction not being positive, is primarily a negative one. Physiological changes take place according to the severity and predisposition of emotions and depending upon them its results have been analyzed.

**Facets of Emotions**

**Dimensions of Emotion**



## 2.0 Theory of Emotion

The theory of emotions has been in vogue since ancient time. Its principles have been adequately discussed beginning from an ancient Unani observer to latest generation. Theories of emotion emphasized its bodily facet mainly. In other words, all theories have considered bodily facts to be of more important in expression of emotions. There are many modern theories of emotion are in vogue but all are different from each other in considering bodily facts to be the chief ones. Where Canon and Bard believe hypothalamus to be the major part of emotions, psychologists like James Lange are attributing 'Peripheral factors' as the reasons of emotions. In other words it can be said that due to emotions, physiological and mental changes start. But here, a question is that which one is of more importance. To conclude, many of the physiologists and psychologists came up with many theories of emotion which had bodily basis. Now, we will define some important modern theories of emotion.

### Common sense theory :

According to this theory, commonly people believe that emotions initially affect mental processes and thereafter physiological changes start. Before the manifestation of emotional condition, mental changes start, then bodily changes start. Thus emotion is experienced before it is manifested but as this theory is not scientifically supported it is not an authenticated theory. On the contrary, it is the belief of various people which they themselves have decided on the basis of their experiences. As modern psychology has experimental form, it is impossible to accept the simple explanations of events.

### 2.2 James Lange's Peripheral theory of emotion :

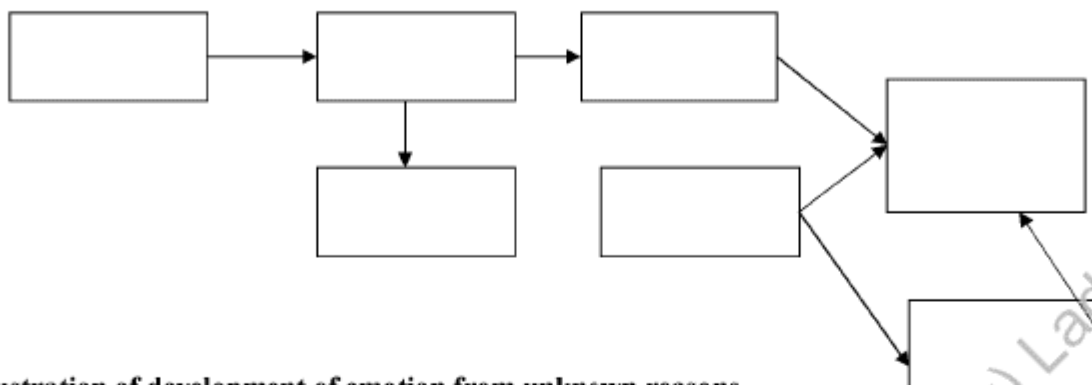
Amongst many theories of emotion, James Lange's theory of emotion has been considered as an important one. Even today, its status and importance in psychology is not less. According to this theory, emotion is a conscious state which is the reason of emotional behaviour. He believed conscious state to be the reason for body reaction towards anger, fear, and joy. His theory tries to explain how emotional behaviour and emotional experience are related to body. The major motto of this theory was that emotional response occurs first and the emotional experience is the result of this emotional response.

This theory was established in around 1880 with the help of the American psychologists James and the physiologist of Denmark Lange. This theory was opposite to common sense theory. James published an article in a magazine in 1884 in which he tried to explain the relation between emotions and their manifestations. He was firm to believe that emotions arise mainly as a result of obstacles and intense reactions of body tissues. Lange published the similar kind of thinking independently in 1885. He proved on the basis of his studies that emotions are entirely due to physical changes. Combination of these two thinkings was named as James Lange's theory.

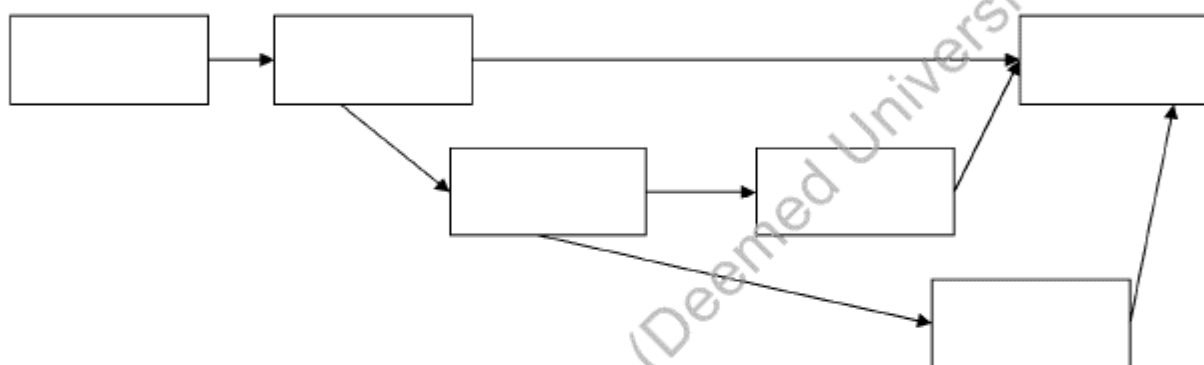
Any excitation or event which we call as emotion, takes place. Because of that, muscular and endocrinal reactions occur on bodily basis. As a result, this reaction activates some mechanisms under the control of Nervous System, reaches the cortex, manifests emotional reactions visibly and offers conscious feeling to the emotion. The main point of this theory is where the emotional experience come from, from the stimulation of endocrinal glands, or from internal viscera.



### Illustration of development of emotion in routine life



### Illustration of development of emotion from unknown reasons



According to Freeman, "This theory signifies that visceral processes create emotional consciousness and simply activates physiological processes and as a result of these changes we feel emotions. precisely, the spirit of physiological changes is emotion.

Thus, after the study of this theory we come to the conclusion that out of manifestations of emotional condition, direct physical and behavioural changes are generated and their feelings come to surface. Therefore, the main reason for emotion is physical and al processes and not mental processes. James says that we fear because we run and get angry. We become sad because we fear; we get angry because we fear. For example, when we see a snake or a lion in a forest then first we respond emotionally and then we feel the emotion. After seeing a lion we run and do other bodily processes. During emotion, increment in blood pressure, changes in respiratory rate, digestive disturbances, pupillary changes are followed by feeling of fear from lion.

This way, according to Lange, emotion can not be thought of before physiological and behavioural changes. If these changes are excluded from emotions, then there will be only a delusion of emotion and not the actual emotion. At this point, James says, "Then we will aptly decide to run after seeing a bear, being beaten will be a privilege for us on being insulted, but actually we won't be frightful nor will be angry.

This way fear, anger etc. emotions an not arise without physiological and psychological changes. Unless and until these changes take place, emotional feelings will not be there. So, according to James, "Origination of emotions is not out of processes of brain but out of visceral processes."

According to the theory of James Lange emotion can be explained as follows.

### **2.3 Central theory by Canon and Ward.**

Central theory of emotion was set up by Canon and Bard together. It is also called 'Thalamic theory'. According to this theory, through the manifestation of emotional transmission emotional experience and changes in internal viscera occur independently and at a time. Stimulation in receptors reaches thalamus and via here it reaches cortex in one direction and effectors in other. We can see this. Stimulation reaching this way to cortex gives rise to feeling of physiological and behavioural processes. In producing these two processes independent from each other, thalamus plays a supportive role. Thus, this theory firmly believes that emotion is created by stimulation of hypothalamus. Interoceptive processes and experiments suggest that hypothalamus is playing an important part in expressions and feelings of emotions. Still it can not be believed in-debatably to that this theory is a fact. Its major fault is its overstated simplicity. Secondly, it does not satisfactorily relate emotional experience and emotional behaviour.

That way, both the theories of emotion are in contradiction to each other. Where according to the theory of emotion, emotional reaction is followed by emotional feeling, central theory denotes emotional feeling being followed by emotional reaction.

### **2.4 Watson's behaviouristic theory of emotion**

Watson rejected consciousness in emotional behaviour. On the contrary, according to him, "Behaviour is due to manifestation of transmissions which occurs through senses and Nervous system." For Watson fear, joy, anger, violence etc. are behaviours. In his work on emotions he felt in those or other emotional responses, which are hereditary, in which form they are manifested and by which transmitters they are controlled.

Watson established from his experiments that in children three hereditary emotional behaviours are present viz. fear, anger and desire, respectively pattern: X, Y, Z. According to him a complicated emotional behaviour is due to affection. According to education in fear and anger, natural processes are controlled by brain centers. Same thing happens in quarrel and violence as well as in passionate moments.

### **2.5 Autonomic response theory of emotion**

Many learned people have considered autonomic responses to be related with emotions. Majority of these people have studied that the reactions of parasympathetic nervous system are essential for positive or pleasurable emotions whereas, reactions of sympathetic nervous system are essential for the emotions of fear and anger. Other learned people believe in other autonomic pattern through learning for each steady emotion. Some of the psychologists have an opinion that various autonomic patterns are hereditary. In other words, it can be said according to this theory that autonomic reactions themselves are emotions and they are always essential for emotions. Some of the authors believe that autonomic reactions are essential only initially but when learning process occurs, it becomes necessary for the reactions to occur in brain centre which normally controls autonomic nervous system.

### **2.6 Papaz Mc Lean theory of emotion**

According to this theory, nervous system controls centers which regularize emotional behaviour and feelings. In the control of these emotional behaviours various centers and pathways are there viz. Septal area of the cortex, the cortical cingulate and entorhinal areas, the hippocampus, and most of the amygdaloid nuclei. Papaz mentioned a circuit formed by these centers and pathways – the entorhinal cortex to the hippocampus, thence to the hippocampus, thence to the hypothalamus via the fornix, from here to the anterior thalamus and finally to the cingulate gyrus. However, majority of these structures are involved with the sense of smell but according to the studies of Papaz, they are also involved in emotional experience. There after Papaz thoughts were reinforced by Mc Lean who also said that composition of emotional behaviour takes place in the hypothalamic part of diencephalons and edifices of brain.

### 3.0 Bodily and tissue basis of emotional behavior.

Now we will define some bodily basis of emotional behavior.

1. Endocrine glands
2. Autonomic nervous system.
3. Somatic and visceral system
4. Limbic system
5. Medulla
6. Mid-brain
7. Hypothalamus
8. Thalamus
9. Cerebral cortex
10. Hippocampus
11. Amygdala

Here we will only talk of important basis.

**1.0 Endocrine glands :** The main basis of emotional behavior in humans is considered endocrine glands. Because different types of endocrine glands affect emotional processes in different ways. It has been proved by experiments that thyroid function is disturbed in fear, anger etc. emotional situations which adversely affect health. On the contrary, in happiness and pleasure it is activated beneficially and imposes a good impact on health. Parathyroid gland calms down the emotional behaviour. Adrenal medulla secretes adrenalin hormone which like sympathetic actions affects emotions and emotional behaviour. In other words it can be said that this gland is closely related to emotions. Malfunctioning of these glands brings about a kind of sluggishness in a person's behavior and the person's emotional behaviour becomes imbalanced. This gland is active in almost all emotional conditions especially fear, anger and happiness. When during fear anger or happiness our body needs more energy, it mixes up adrenalin with the blood circulation due to which heart rate increases, tiredness is reduced, digestion stops, respiration and blood circulation become fast and thereby balance is maintained even in abnormal situation. Pituitary gland also supports emotional behaviour by maintaining control over other glands. If it does not stimulate adrenal gland then a person gets weakness, anger and irritability. Same way sexual glands also have an important effect on emotions. These express happiness and cheerfulness when two persons of opposite sex meet. So it is clear that, hormonal secretions of various glands are helpful in emotional behavior.

**2. Autonomic nervous system :** Both the parts of autonomic nervous system – Sympathetic and parasympathetic system play important role in emotional processes. When emotions arise in emergency situations, sympathetic system is affected. In the conditions of anger, fear it increases heart rate, blood pressure and blood circulation. Creates disturbances in digestive process and stimulates adrenalin gland. Thus it controls emergency processes occurring during emotional behavior. In emotional reactions, this system also maintains hormonal balance and enzymatic balance in digestion. The other part parasympathetic system controls secretory tissues and stimulated organs of the body. It reduces heart rate during emotion. It controls emotional behavior in a peaceful way. Thus autonomic nervous system plays major role in emotional behaviour.

**3. Medulla :** Medulla functions in controlling heart rate, hypertensive response, grinding of teeth etc. autonomic reactions in case of emotional behaviour. To control autonomic responses it has many afferent nerve centers which act on functions of many higher centers of brain especially hypothalamus. The afferent controls of medulla are helpful in homeostasis so that the internal condition is maintained. Besides this, visceral changes occurring due to emotional arousal in stress condition are made by medulla. With this process medulla can bring changes in internal conditions also.

**4. Mid-brain :** From midbrain to cortex and to local transmitter the inactive part of body brings about changes in emotional behavior. Local transmitter stimulates pathways traversing to the higher centers of a part of midbrain. Here behavior is adjusted whereas on other end it only obstructs pathways traversing to higher centers where behaviour is proper. For example, in midbrain transmitters stimulate pathways of pain sensation and initiates emotional behaviour. Among various parts of midbrain stimulation of central gray matter creates behaviours like anger, fear and running. Based on a study it has been known that midbrain regulates some safety emotional reactions.

**5. Hypothalamus :** Hypothalamus is considered main centre of emotions. Some psychologists and physiologists like Canon and Bard consider hypothalamus as a centre of emotions. This somatic aspect of emotion functions in three ways – firstly, though it impulses reach from receptors to cerebral cortex and generate emotional behaviour. Secondly, it brings cerebral cortical impulses. Thirdly, it is through hypothalamus that impulses are sent to viscera and tissues. This way, regarding emotions, this higher centre of brain is very important. Hypothalamus compiles emotions of fear, anger, safety, honour etc. very meticulously. Anterior hypothalamus initiates fear and lateral and posterior hypothalamus initiate running. According to Canon and Bard all the emotional processes are generated in this part.

**6. Cerebral cortex :** In an emotional behaviour cerebral cortex has a very important and a particular part. In this direction, many psychologists after lots of experiments have cleared as to what importance cerebral cortex has in emotional behaviour.

#### **4.0 Emotion and Preksha meditation**

Nervous system and endocrine system are the two major systems of body which together, control and regulate all the bodily processes. Between these two systems there is such an extraordinary regularity of functions that scientists have named it 'Neuro-endocrine system'. In emotional situations there are changes in the various body parts also which are regulated by this system. Nervous system increases bioelectric current in neurons and nerves as necessity arises and creates stimulation in related parts. Because of this metabolism rises many folds in our body. With this through hypothalamus, pituitary gland's activity also increases. Then other endocrines secrete their hormones and thereby support to increase the metabolic rate. With the combine efforts of these two, emotions also mount.

In Preksha meditation in 'Chaitanya Kendra preksha' when we concentrate on energy sources of neuro-endocrine system, we acquire three advantages – First, bioelectric current in nerves and the magnetic field related to it become purified. It brings necessary refinement in quantity and quality of neurotransmitters and thereby their resultant effects are also purified. The second outcome is awakening of the centre of happiness which brings reduction in the rate of responses and spirits like unity, cooperation, wellbeing and kindness arise. The third effect of preksha meditation is augmentation of energy. Reason for excitation is unnecessary increment in metabolic rate and thereby wastage of energy. As a result of augmentation of energy, all the centers which act as antidotes are triggered and prevent unnecessary energy loss. This results in reduction in intensity and frequency of emotions.

Breathing Preksha and 'Karyotsarg' exercises also control energy centers of brain. By improvement in concentration and reduction in wavering of mind, frequency of emotions is controlled.

#### **5.0 Motivational behavior**

The word 'motivation' is so universal that learned people have used it for various meanings. According to the commonest and most practical definition it is the hereditary tendency of a person in which he becomes active for the achievement of a goal and is satisfied only on achieving the goal. Study of motivation means studying the motive energy of an organism due to which, some exclusive feelings provoke him to behave. Woodworth defines motive like this, "Motive is a condition of a person which induces him to do some particular work or to achieve some goals." This way motivation is a tendency to work which is governed by instincts and finishes with achievement." In other words, it can be said that

motivation generates a particular process in a person to achieve a particular target. The process which influences in a particular direction and continues until the target is achieved. To continue process till achievement of goal is the distinctiveness of motivation. Thus, the condition of a person in which these qualities are found is called motivation.

Energy sources of stimuli of a procedure are studied in motivation. The reactions leading these energy sources to a particular direction are also studied through motivation. This motivation energy and related physical processes arise together like, hunger and activity to get food are found together. For this condition the word 'motive' is used. Motivational energies are the inner circumstances of an organism through which the nerves of glands and tissues meet their requirements. With psychological attitude James Drever defines motivation like, "The word 'motivation' is used in regard with encouragement and intuition. It is the condition of energy system which encourages a person to behave and fulfill his requirements and pushes him to his target."

Motive is defined according to needs. Hunger is a motive and food is the need. Thirst is a motive and water is need. This way to accomplish every motive need is there as a medium. Specially for physical motives there are biological needs.

### **5.1 Biological motive**

Biological motives are related to internal needs. They are natural and inborn. Mc Duogel has considered them to be related to inborn instincts. These motives are necessary for safety of life and normal living. In our body some processes are autonomic like, digestion, circulatory process, etc. These are automatic processes and maintain physical balance. These processes are also called 'Homeostasis'. Through homeostasis hormones of body maintain their ratio. When body does not get necessary elements then homeostasis is affected. To reestablish the balance body is given food, water, air, etc. These are the things which are called biological needs. The related motives are described almost in the same way as needs. For more information of human motives it is useful to study motives in relation with important basic needs. A person struggles for the whole life to fulfill these needs and with the objective to achieve the goal he reaches old age. Caulman has divided these needs in four parts –

**5.1.1 Visceral needs** - Motives of hunger and thirst fall under this group. In these needs there are food, water, oxygen, excretion of stool-urine, and other things which are necessary for life.

**5.1.2 Safety needs** – All the things which are needed to prevent body from getting harm and injury are called safety needs.

**5.1.3 Sexual needs** – This includes sexual desire and sexual gratification.

**5.1.4 Sensory and Motor needs** – The needs falling under this group are related to the processes of physical growth and functions of sensory organs, glands and tissues. Diminution of sensory processes and activities in old age is due to its natural and internal needs. That is why one should keep busy under any kind of activity in old age.

### **6.0 Inborn basic motivational situations**

In the study of psychosomatology of motivation firstly basic conditions of those body tissues are studied which provide energy for behaviour. According to Freeman external stimulations help this energy to stream. Major motivational is derived from the activities of these tissues and stimulates neuromuscular activities. Here various basic motivational conditions – hunger, thirst, desire etc. will be annotated which motivates complete animal behavior for accomplishment.

**(i) Hunger** – Hunger is a condition through which a person's complete physical and mental balance is disturbed. Hunger is a physiological condition which immediately affects mental condition of an organism. This is the reason why a hungry person becomes violent and irritable. This mental condition is emotional also due to which physical capacity increases. This way the physical changes of hunger impose

their effects on mental processes. These mental processes give rise to emotions which again stimulates weak physiological processes. In the condition of hunger stomach activates in a particular way. Scientists invented a special equipment to measure these activities and carries out experiments. By the experiments they came to conclude that activities occurring in hunger situation continue for ten to twenty five minutes. By other experiments psychologists extracted many other inferences through which they studied effects of hunger in various aspects. In hunger condition there is a particular effect upon the chemical changes of blood. For example if food is not consumed then decrease in blood sugar level leads to feeling of hunger. If sugar is supplied through injection in blood then hunger is relieved. If there is decrease of fat, proteins, carbohydrates and vitamins in our body, then an excessive hunger is felt.

**(ii) Thirst** – Among the internal stimulations taking place due to lack of water, those related to thirst are very important. With lack of water in body there is increment in electrolytes of blood leading to increment in blood density. With increment in density of blood, salivation reduces. Especially in mucus layer over posterior part of throat, lack of water and want of salivary moisture creates dryness of receptors. In these receptors, sensory impulse reaches central nerve and makes the animal uneasy for the fulfillment of this requirement. This uneasiness is continued until the person's thirst is quenched.

**(iii) Oxygen** – Third important need is oxygen. This need compels animals for circulatory and tissue functions. Deficiency of required amount of oxygen in lungs creates uneasiness and breathlessness. How emotions work in situations is still not known. But still in this situation two things can be defined – They work due to increment or decrease in trachea. Increase in respiratory rate is regulated by those centers in medulla oblongata which are sensitive to chemical changes. The speed of impulses for respiratory tissues is decided by changes occurring in acidic pH of blood and also this speed tends to accommodate average external air pressure. In higher altitudes alkalinity of blood reduces. To compensate this situation respiration becomes deep and fast. Increase in respiration leads to increment in exhalation of oxygen. Increment in blood acidity increases blood circulation through neural stimulation and thus the target tissues get more oxygen. With the lack of oxygen particularly gray matter of brain is more affected. For this reason on higher altitudes mental processes are almost ceased.

**(iv) Pressure and tension conditions** – Strong stimuli which stimulate central nervous system are generated from continuous pressure in some of the viscerae of our body. Among these stimuli those arising from bladder and colon are the mains. When bladder gets distended with its contents, the tension created in its walls create impulses in the receptors which are present in the walls. This situation is maintained until the contents are emptied. Same way substances in colon create urge to pass stool because of the tension in the walls. In childhood these viscera are uncontrolled and the child is unaware of the atmosphere, but with training gradually he learns to get rid of these pressure situations. And until the proper atmosphere is not available he remains restless and his internal physical process remains unbalanced. Other tension situations are also noticeable here which stimulate nervous system for relief. Presence of gas in stomach or intestines or other painful condition makes a person restless until he becomes free of the situation.

**(v) Temperature** – To keep body temperature normal is also an important balancing mechanism. Normal body temperature is 98.4° F which is necessary for oxygen transfer as well as for metabolism. Temperature is maintained by heat transfer through skin which is called 'Heat regulation' mechanism. It includes both heat generation and heat loss. When atmospheric temperature exceeds body temperature then heat generation is reduced and heat loss is increased. Due to the changes in temperature of body or atmosphere heat regulation becomes imbalanced due to which, an animal becomes uneasy and restless. This continues till heat regulation is maintained in body.

**(iv) Sex** - While describing motive stimulation only those conditions have been annotated so far which are related to mucus tissues. These motives create imbalanced situations which are manifested outwardly in some form. Except sex urge all the other tissue related stimulations are expressed in



behaviour in various ways. This initiates a motive condition which is not expressed in the form of reestablishment reaction but is expressed in many other ways.

The centers regulation or controlling sex functions are found in medulla and brain. These centers store various stimuli and stay calm until the central excitatory state reaches a proper threshold. Ordinary stimuli received from various conditions can not stimulate these centers. When stimuli received from a particular object reach beyond a limit then they react with those stimuli which are received from various other objects. Sexual behaviour is affected by various hormonal agencies. Along with stimulating spinal, these sexual stimulators also control various processes and behaviours. These processes are irregular initially and regularized thereafter which finally lead stimulations of spinal cord to its critical point. In humans, these external stimuli are completely learned. Spread of homosexuality and masturbation proves that social effect is the main reason for unnatural sex.

**7. Motivation and Homeostasis :** To maintain physiological changes there are constant physiological and chemical changes inside a living organism. If these changes become rapid or sluggish then it leads to imbalanced and all the processes get affected. For example if level of oxygen or water is reduced beyond the normally required and adequate level then some particular processes become active to reestablish this imbalance. If these visceral processes fail to reestablish the balance then the whole neuromuscular system becomes active to reestablish the balance. This balancing mechanism is called homeostasis. This is also a unique balance condition in humans.

Another example is when level of salt is reduced in body then adrenal cortex fulfills this requirement through its salt reserve. But when salt reserve gets emptied then the whole neuromuscular system becomes active. Then the motive of his behavior is to achieve salt. Regarding salt balance there have been many experiments. In Richter's experiments when adrenal glands were removed from mice, they preferred to drink salt added water instead of plain water. From other experiments it is found that animals prefer those food elements which they lack. In another experiment it was found that Psychological motives. With another experiment it was found that people working in High temperature zones drink three to six times more water compared to normal situations so that the amount of water that is lost through perspiration can be replenished. This way other essential elements in body - water, heat, calcium, oxygen, proteins, fat, carbohydrates, when reduce in our body than physical balance is disturbed. Thus it is clear that motivational behaviour is mainly homeostasis activated. Due to this reason the problem of motive can be divided into three parts - (i) those basic situations which disturb is a physiological balance or a steady condition. (ii) Those procedure or functions through which this balance is a re-established. (iii) Effect of complete or partial success on re-establishment.

**8. Psychological motives :** Just like biological motives control necessary energy for the growth of only, similarly psychological motives unnecessary for mental growth and balance. Where physical needs are the basics of human life at the same time every person has a mental condition. If they are not fulfilled then the person gradually becomes away from normal behaviour. Because of physical needs being fulfilled the body remains healthy but because of want of secession of mental needs, mental perversions are created. Psychologically it is necessary to fulfill mental needs. However both the types of motives are complementary to each other.

**(i) Love** - from the beginning of existence of humans till now this is such a requirement without which no one can be he normally including Children and olds. Among all the inborn activities of humans the most important and powerful is love. Each person from birth to death wants to love others and wants others to love him. Fried has considered love to be the instinct of life. He says that it is such a basic activity through which we take interest in creative activities. This is such a motive which inspires us to live. When this love comes slowly then person's mental condition becomes imbalanced. Gradually he becomes disappointed. He becomes intrigued by stress.



**(ii) Self-esteem** -while living in society humans wish that people evaluate him. He does everything for his self respect. He believes that he is also important like those who govern the society. He compares his personality with social values and social parameters. For example, it tries to relate his financial condition, physical condition, and gains with the feeling of his self-esteem. Based on other feelings of this type he expects others to respect him. To maintain his respect, status, and pride he can do everything. He doesn't want to come in front of lower standard people and unsuccessful people. His aim of life is to always live with self esteem.

**(iii) Social approval** – A child feels since birth that he should help people for his own safety. During the initial years of its life it depends upon its mother. Gradually this dependence extends to father and other family members. This feeling of dependence gradually takes form of social approval. Everyone wishes to get social approval and reward for whatever philanthropic activities he is doing. This way, he cannot proceed without social approval and support. At least in society he does not get respect. Those who accomplish their personal activities without caring for society, never succeed. Disregard to the society means self rejection in future. It is another thing that the society does not boycott you directly. But indirectly it creates hurdles in your way. That is why you have to face lots of troubles in reaching your target.

**(iv) Adequacy and Competency** – It is a motive related to that ability of humans through which they maintain their adjustment and balance their behaviour in favourable or adverse situations. For example, if there is a sudden fire and it seems dangerous for your house then without getting panicked and maintaining patience how you tackle the situation depends upon your adequacy and competence. This way when a person is confident that he is able to conquer any difficult situation then he has this feeling that he is a competent person. With this feeling he thinks himself to be a competent, intelligent and valuable. This thought is a motive for life which leads you nearer to success.

**(vi) Security** – It is an important motive. A person, who has got a job, can accept low salary if there is a guarantee that his job is secured, means he won't be dismissed without any reason. But if he is paid double salary but there is no guarantee of job security, then he will constantly be under a feeling of insecurity. Security feeling is such a motive through which a person balances himself. Living in a society he wishes that he is completely secure in every level – financial, social, religious, and political. He does not wish any one to create any kind of disturbance in his liberty. For the security of this liberty he makes social relationships, saves money, and wants to become a religious or political leader. This way for the security of every aspect he tries his best.

#### Sample questions for study

##### 1. Assays

1. Define theories of emotion.
2. Describe inborn conditions of motivation.

##### 2. Short questions (Answer in 100 words)

1. Enumerate properties and facets of emotions.
2. How motivation is related to homeostasis?

##### 3. Answer in single word

1. What happens with heart rate during feeling of emotion?
2. How many names there are for autonomic nervous system?
3. In how many parts the problem of inspiration can be divided?

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## CHAPTER-15: REGULATION OF AUTONOMIC NERVOUS SYSTEM BY THROUGH MIND AND EFFECT OF PREKSHA MEDITATION

**Aims** - Through the study of this chapter students will -

- (1) Understand the functions of autonomic nervous system.
- (2) Understand the relation between mind and autonomic nervous system
- (3) Learn to prove the relation between mind and nervous system through Preksha meditation.

**Topics - the**

- (1) Structure and functions of autonomic nervous system.
  - 1.1 Sympathetic part.
  - 1.2 Parasympathetic part.
- (2) Regulation of functions of autonomic nervous system through mind.

### 1. Structure and functions of autonomic nervous system

In our body there are nerves whose functions are not related to brain. These nerves directly arise from Central nervous system. Due to difference in functions it becomes a separate part. Nerves of this part neither send impulses to our brain nor they receive any impulses from brain. Heart rate, functions of lungs, contractions in stomach, uterine functions, bladder functions, etc. are not regulated by will. These functions are automatic. The nerves controlling these functions have no connection with brain centres. The nerves regulating internal viscera have an independent group. In this system there are 'Ganglions' and fibres. The system works independently while staying in connection with central nervous system. That is why it is called autonomic nervous system.

Depending upon structure and functions it is divided into two parts - 1. Sympathetic 2. Parasympathetic

**1.1 Sympathetic part :** Sympathetic system is also called 'Thoraco-lumbar part', because of its fibres traverse from thoracic and lumbar parts of spinal cord. If chest and abdomen are opened then it seems that over both the sides of posterior aspect there are small white series of ganglia. These ganglia hang like chains. These series are called 'Sympathetic chains'. They are connected to each other through nerve fibres and from each ganglion a fibre reaches vertebra. These fibres are called 'Preganglionic fibres'. This way there is a series of 22 ganglia on left and right side over the lateral aspect of vertebrae. These are called 'Lateral Vertebral Ganglion'. From these ganglia a posterior ganglion fibre arises which along with blood vessels traverses to various parts of body. These ganglia and their fibres together are called 'Sympathetic system'.

A fibre arising from spinal cord passes from lateral horns of gray matter of spinal cord and comes out in the form of axonal fibres with anterior root. After that they separate from anterior root and pass to posterior ganglion. They appear white and shiny and are called 'White rami communicantes'. Some of the fibres after coming out of ganglion go to vertebral nerves. They are gray in colour and are called 'Gray rami communicantes'.

In fact, sympathetic system has a trunk of two ganglionic cords which comes from base of skull and passes through anterior aspect of vertebral column to end on opposite surface of pelvic bone as a single ganglion. Ganglions are in pairs viz.

- Cervical region : Cervical ganglia  
Thorax : Thoracic ganglia

Lumbar region : Lumbar ganglia

Sacral region : Sacral ganglia

Anterior of pelvis :

In above mentioned forms 22 pairs of ganglions are in a meticulous pattern, which are connected to central nervous system through spinal cord. Other sympathetic ganglions are connected to these two trunks and make sympathetic plexuses.

1. Cardiac Plexus: This lies near the base of heart and sends its branches to heart and lungs.
2. Coeliac Plexus: This stays over the posterior aspect of stomach and is spread in gastric cavity.
3. Hypogastric Plexus: It is spread in anterior of pelvic bone in pelvis

#### **Function –**

Sympathetic system controls and regulates many visceral processes. It has many functions. Joining with dermal nerve fibres it controls autonomic tissues of skin. Contractions of subcutaneous vessels are due to it so that heart, brain, and tissues get more blood, as a result blood pressure rises. It induces production of sweat in sweat glands. In abdomen its fibres join with splanchnic nerve and regulate intestinal peristalsis. It also induces production of glycogen in liver which then is converted in glucose. Digestive process and juices of digestion are also regulated by sympathetic impulses. Increase in heart rate is due to sympathetic activation. It also increases respiratory rate. Relaxation of bladder opening and wall contractions of bladder are induced by sympathetic system.

Secretion of adrenalin from suprarenal glands is due to the function of sympathetic system due to which body heat is regulated and controlled. Other nerve along with it control liver functions leading to increased blood sugar level. It also regulates fluid levels in blood vessels as well as in surrounding tissues. When fluid level is reduced in tissues then fluid comes out of blood in to tissues. When tissue fluid increases then fluid enters in to the blood vessels from tissues. When necessary, body is provided energy according to the needs. This energy is derived from this chemical (adrenalin) and sympathetic function. It is seen that when someone attacks us, we prepare ourselves for our defense. In such a condition, our body tissues become tense, blood circulation increases, face becomes red, nostrils dilate etc. This happens as a result of sympathetic activity.

#### **1.2 Parasympathetic part**

This system is also called 'Cranio-sacral division', because its ganglionic fibres are found in sacral part of vertebrae, brain and spinal cord. It has two parts – 1.Cranial 2.Sacral. The fibres of cranial outflow arise from special centers of midbrain, pons, and medulla. Fibres of sacral outflow arise from spinal cord at the level of third, fourth and fifth cervical vertebrae. Those fibres which arise from brain are not as separate nerve fibres but they arise with third, seventh and tenth cranial nerves.

These fibres end in a ganglion or plexus. But fibres of tenth cranial nerve or vagus nerve pass though up to long distance. Fibres coming from midbrain arise from the centre of optic nerve or third cranial nerve and end in iris. Through this nerve impulses reach to iris and lead to tissue contraction and finally relaxation or contraction of pupils of eyes. Same way neurons of pons are related to facial nerve centre. Ganglionic fibres arising from these pass through chordatympanic nerves of facial nerve and reach to ganglions near submental and submaxillary salivary glands and finally enter salivary glands. They increase secretion of saliva in salivary glands.

Vagus nerve is spread up to far in our body. They mainly have parasympathetic nerve fibres. Its preganglionic fibres arising from medulla pass along arteries and veins through neck and reach up to thorax where they spread in pulmonary plexus. From this they go to internal parts of respiratory system. This way we see that preganglionic fibres reach to heart through cardiac plexus. Then this nerve enters abdomen where its fibres spread to stomach, small intestines, large intestines, liver, gall bladder, bile ducts

and pylorus. Their plexuses stay inside the inner walls of these parts. Preganglionic fibres reach to plexus. Postganglionic fibres after entering internal walls of viscera get ended up and control visceral functions.

Sacral nerve controls splenic flexure of large intestine and pelvic viscera. This nerve comes from anterior roots of spinal cord at the level of second, third and fourth lumbar vertebrae. After arising from roots they combine to form pelvic nerve. Pelvic nerve supplies distal two third of large intestine and efferent fibres of bladder. Its fibres control contractions of bladder and anus.

**Functions:** As a result of stimulations of cranial outlet of parasympathetic system, pupils of eyes are contracted. Submandibular submental glands' secretions are increased. It reduces heart rate and induces contractions of bronchioles. Secretions increase in stomach, intestines, and gall bladder. The stimulations of the fibers arising from sacrum induce contractions of rectum, bladder, and anus.

Due to this system, a chemical called 'Acetylcholine' is produced. It is responsible for the transmission of impulse from one place to another through the junctions of neurons and axons. Voluntary contractions of tissues are also due to this substance. Parasympathetic fibres passing to iris of eyes, salivary glands, stomach, intestines, bladder etc. produce this substance.

In both sympathetic and parasympathetic systems there are preganglionic and postganglionic fibres. Preganglionic and postganglionic fibres of parasympathetic system are parasympathetic. In sympathetic system, preganglionic fibres are parasympathetic and postganglionic fibres are sympathetic. In a part of the body where there are both type of fibres, the functions are opposite to each other.

Comparative description is as follows-

Body parts	Sympathetic effect	Parasympathetic effect
Heart	increase in heart rate	decrease in heart rate
Gastro-intestinal track	reduction in peristalsis	increase in peristalsis
Eyes	dilatation of pupils	contraction of pupils
Digestive system	decrease in juices secretion	increase in juices secretion
Blood supply of abdomen	contractions	relaxations
Blood supply of tissues	relaxations	contractions

## 2. Regulation of functions of nervous system through mind

All the important internal organs of our body are connected to sympathetic and parasympathetic divisions of autonomic nervous system- this is obvious from anatomy. Both sympathetic and parasympathetic nerves are motor by functions that is why it carries impulse to these organs. Formerly it was believed that autonomic nervous system functions independently and there is no interference by brain or spinal cord. But experiments and inventions changed this belief. In spite of being independent their functions are under control of brain. Figure 2 illustrates how its complete function is controlled. Through the five senses when any kind of impulse or stimulation reaches brain then it is first analyzed in brain. After that a necessary motor reaction is produced. For the activation of this reaction if internal viscera are required then its impulse passes to sympathetic system from where it is send to all the internal viscera. As per the nature of sympathetic system, all these viscera are stimulated intensely. For example, fear related stimulation causes dilatation of pupils, increase in heart rate, increase in respiratory rate etc. This way what is decided by will (brain) is passed on to the important organs of body through autonomic nervous system. If as a result of stimulations such an impulse is generated in mind (brain) which is supposed to activate parasympathetic system then it will not activate sympathetic system. At this time sympathetic system remains inactive and normal situation in body organs will be maintained. Wherever sympathetic and parasympathetic fibres contact with each other in cells, a junction is created. A neurotransmitter is released in this gap which enters in that tissue cell. After entering the cell it regulates neurotransmission energy and starts working upon related activity and process. As a result of this the target organ functions.

Usually all the body organs function with an optimum velocity to continue physical processes according to necessity. Changes in this velocity occur only due to external stimuli which reach to these organs through autonomic system. One another important aspect is that any external stimuli or impulse do not reach to the target organs in the same form as they are received by the receptors but they reach as a reaction. Generation of a reaction is completely dependent on brain. Thus it is also proved that functions of autonomic nervous system are basically regulated by mind (brain).

#### **Question for study**

1. Write the structure of autonomic nervous system.
2. Describe function results of sympathetic and parasympathetic divisions.
3. In which part Acetylcholine is produced?
4. How many nerves arise from spinal cord in parasympathetic division?
5. Describe three plexuses formed by sympathetic division.

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## **CHAPTER: 16 – IMMUNITY AND IT'S AUGMENTATION BY PREKSHA MEDITATION**

**AIMS** - after studying this chapter students will -

- (1) Acquire knowledge about immune process.
- (2) Be able to understand relations between mind and immunity.
- (3) Be able to understand the process of increase in immunity through Preksha Meditation.

**TOPICS** -

- (1) Introduction
- (2) Process of immunity
  - 2.1 Natural immunity
  - 2.2 Acquired immunity
- (3) Regulation of immunity through mind
- (4) Augmentation of immunity through Preksha meditation

### **1. Introduction**

Brain controls all the activities of body either physical or chemical. In this crosses the first function is to transmit external and internal impulses through sensory nerves to the brain. these sensory nerves and all these imposes are basically connected to five senses which are - ear, eye, nose, tongue, and skin.- through these senses when impulse reaches cerebrum of brain then forced it is analyzed there. in this function there is any important role of limbic system and hypothalamus of brain. of analysis form of reaction is decided. Since for a reaction to be provided the form of action any system or organ of body can be of help that is why mainly three routes of reaction arise from brain. In first route reactions from cerebrum are processed by sympathetic division of autonomic nervous system. Neurotransmitters arising from sympathetic fibres immediately stimulate all the organs related to this system. As a result their activities increase. In the second route the impulse of reaction coming from cerebrum passes through hypothalamus and reaches to pituitary gland. This in its progress stimulates various endocrine glands to secrete hormones. This hormone then mixes up with blood circulation. In the third route of impulse transmission reaction is to activate immune mechanism. This way we see that for any change to take in our body, brain is responsible either directly or indirectly. It is not wrong to way that without activity, power, and interference of brain regulation of various physiological activities is not possible. These processes include autonomic nervous system, endocrine system, and immune system.

### **2. Immune mechanism**

In human body one of the various systems gifted by nature is immune system. Actually it is not the individual system. But some particular tissues of circulatory system and lymphatic system together control immune mechanism. Even after so many scientific researches immune mechanism is still complicated. Function of immune mechanism is to protect body from those bacteria, viruses, organisms and toxic substances which create harm if enter our body. Immune mechanism is of two types

1. Natural (inborn)
2. Acquired

#### **2.1 Natural immunity**

In natural immunity which is also called general immunity, skin, other secretions of body, some enzymes are included. Besides, white cells of blood, lisozone, polypeptides, and some particular types of proteins are included. These all attack and destroy foreign substances in blood circulation. These destroyed substances are then excreted from body. In this mechanism white cells play the most important role. In an adult and healthy person there are about seven thousands of white cells per cubic millimeter of blood.

These white cells are of five types. Their percentage amount in blood is as follows –Neutrophils-40-70%, Eosinophils-0-4%, Basophils-0-2%, Monocytes-2-10% and Lymphocytes-20-45% In this natural immunity role of monocytes and neutrophils play the most important part in destroying foreign substances like bacteria, viruses, and toxic substances. Neutrophils are mature white cells which destroy foreign organisms in blood circulation whereas monocytes are immature white cells which get localized at the site of wound and multiply five fold in their number and take form of macrophages. These macrophages engulf and destroy bacteria trying to intrude in circulation thereafter these macrophages themselves get destroyed.

A human body continuously tries to maintain equilibrium. This process also includes protection from disease producing organisms called pathogens. In natural immune mechanism following ways of defense are found in our body.

**I. Skin and mucus layers**

**II. Phagocytosis**

**III. Inflammation**

**IV. Fever**

**V. Antibacterial chemical substance**

**2.1.1 Skin and mucus layers**

Skin and mucus layers are the first line of defense. Many kind of mechanical and chemical processes by them are helpful in protecting body.

As a mechanical process skin forms a strong protective layer around body and thereby protects. It's two layers called dermis and epidermis which are having an endothelium called keratin, form a tough barrier and organisms to enter the body. Besides this, due to continuous tear from a layer of skin called epidermis the organisms attached to it are automatically removed. These way organisms are prevented to enter the body.

Mucous layers are seen just below the skin with connective tissue. Through this a slimy substance called mucous is secreted due to which inner and outer layers of skin remain moist. Because of mucus many organisms and bacteria get entangled to it and thereby our body is protected Pores found in our nostrils also secrete mucous due to which organisms, dust particles, and other polluted particles from the inspired air are filtered. For the same reason there are fine pores in the upper part of trachea. This way the inspired organisms and dust particles are prevented to enter the lungs. In our eyes there are tear glands. These glands secrete a watery substance called tears. This substance doesn't only keep the eyes moist but also prevents dust particles and micro-organisms to enter the eyes and helps keeping the eyes clean. When a particle enters in the eye tear glands become active and start producing more amount of tear and thereby remove the particle. There is a difference between ratio of production and excretion of tears. The production is more compared to excretion. This way the process of removal of foreign particle is enhanced.

Among chemical reactions sebaceous glands found in our skin secrete an oily substance called sebum. This substance keeps the skin moist and oily. In this substance there is an unsaturated fatty acid which prevents micro-organisms to grow on the skin. Same way sweat glands found in the skin secrete sweat which helps in maintaining the body temperature as well as removing the micro-organisms. Sweat contains an enzyme called lysozyme which helps in destroying the bacteria.

**2.1.2 Phagocytosis**

If after crossing the first line defense of skin any bacteria enters the body and reaches blood circulation then it is destroyed by the process of phagocytosis. In this process micro-organisms or other foreign substances are destroyed by the cells called phagocytes. The phagocytes are of two types -

1. Granulocytes
2. Macrophages



The white blood cells called neutrophils play an important and maximum role in phagocytosis. Whereas eosinophils play a limited role.

### 2.1.3 Inflammation

When body's cells are injured due to intrusion of micro-organisms or other injury or due to chemical substance then the process of inflammation starts. This is a defense mechanism which has four major symptoms as follows.

1. Redness over injured area.
2. Pain
3. Heat
4. Swelling

Inflammation is a defense mechanism through which organisms, toxic substances, and foreign particles are removed from the injured area so that they cannot spread in body. Immediately after this process gradually the symptoms are relieved. At this site the damaged tissues are reformed.

### 2.1.4 fever

The main reason for fever in body is super infection by bacteria or virus. In this condition body temperature abnormally increases, as a result growth of micro-organisms is stopped and processes of reestablishment start. This way we see that fever itself is not a disease but it is a sign of outward manifestation of internal illness and a process of activating immune mechanism.

### 2.1.5 Antibodies

Besides the above described mechanical and chemical systems our body also creates so many anti-bacterial elements which defend our body in various ways. Some of the main anti-bacterial chemical substances are - 1. Interferon 2. Complement 3. Propordin

#### (i) Interferon

The cells infected by a virus or bacteria produce a special type of protein which is called interferon. These are of three types - alpha, beta, and gamma. In humans they're mainly produced by white blood cells called lymphocytes. These special types of proteins come in contact with those cells which are not infected and stimulate them to produce antiviral protein. This prevents the growth of virus and infection is cured.

#### (ii) Complement

This chemical substance is a combination of such 20 proteins present in a healthy blood. After intrusion of micro-organisms in body this special protein combines with them and prevents their growth.

#### (iii) Propordin

Like complement this is also a complex of three proteins which combines with bacteria and prevents their growth.

### Description disease protecting white blood cells

- |   |                            |
|---|----------------------------|
| 1. Total number of blood white cells          | 7000 per cubic mm of blood |
| 2. Percentage of various types of white cells |                            |
|   | Neutrophils-40-70%         |
|   | Eosinophils-0-4%           |
|   | Basophils-0-2%             |
|   | Monocytes-2-10%            |
|   | Lymphocytes-20-45%         |
2. Inborn immunity

- a. Neutrophils and Monocytes – Destroy intruding bacteria and virus.
- b. Neutrophils destroy bacteria and virus in blood circulation.
- c. Monocytes engulf bacteria and virus after they enter in to tissues through blood circulation.

### Acquired immunity

Acquired immunity is a unique immunity system developed in our body which is useful in destroying harmful bacteria, virus, and toxic substances. This process is not developed in our body until those particular types of bacteria virus and toxic substances enter in body. all these foreign substances are commonly known as antigens. In this special type of immunity to identify and destroy these antigens, two types of abilities are developed in body. 1. Cellular immunity 2. Humoral immunity

In cellular immunity amongst white blood cells one develops as Lymphocyte T-cells. it is called T-Cell lymphocyte. When an antigen enters macrophages bring it in contact with T-Cells and due to result of it T-Cells are indirectly stimulated, increase in size and divide to change in to various types of T-Cells. As a result of this process following types of T-Cells are produced.

- |                       |   |   |
|-----------------------|---|---|
| 1. Amplifier T-Cells  | - | Increase efficacy of other T-Cells.       |
| 2. Memory T-Cells     | - | Identify antigens.                        |
| 3. Helper T-Cells     | - | Facilitate antibody production.           |
| 4. Suppressor T-Cells | - | Prevent antibody production.              |
| 5. Killer T-Cells     | - | Directly attack antigen and destroy them. |
| 6. Allergy T-Cells    | - | Develop allergy.                          |

Generated and multiplied T-Cells are spread in blood circulation, search for the antigens and destroy them by directly combining.

Some lymphocytes convert into B-Cells. When these B-Cells come in contact with antigen their multiplication starts. They also increase in size and divide to change into Plasma B-Cells and Memory B-Cells. Plasma B-Cells produce antibodies which combine with antigen and destroy them, whereas Memory B-Cells facilitate destruction of antigens in blood.

### 3. Regulation of immunity through mind.

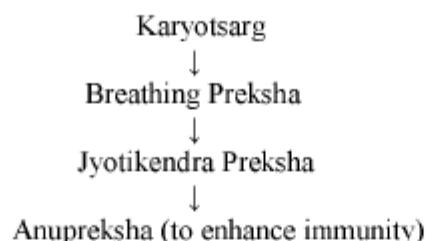
One important fact in regulation of immunity through mind is that besides receiving direct impulses autonomic nervous system and endocrine system play an important role in the three routes of immunity system coming out of brain. The main neurotransmitters coming out of autonomic nervous system Acetylcholine, nor-epinephrine, encephollin etc connect with T-cells of immune mechanism because they have got receptors for these hormones. By this contact they boost up the capacity of T-Cells. Same way endocrine hormones, in which ACTH, vasopressin, oxytocin, and adrenaline are the mains, stimulate defensive cells through their receptors. In immune mechanisms antibodies are destroyed by T-cells or B-cells either after their multiplication or through antibodies. During this process some particular secretions are found to be coming from these cells which are called immuno-transmitters. These immuno-transmitters send feedback messages to hypothalamus of autonomic nervous system so that the process continues till all the antigens and foreign bodies are completely destroyed. This way it is clear that during the whole complex procedure from multiplication of T-cells and B-cells to destruction of antigens brain

#### Figure

has an influence through hypothalamus, autonomic nervous system, and pituitary gland. Activity of brain does not only influence acquired immunity but also controls it indirectly.

### 4. Augmentation of immunity by Preksha meditation.

In preksha meditation following procedure is effective in enhancing immunity.



As a result of repeated performances of Anupreksha, new thoughts of enhancements of immunity are generated in memory area of brain and these information reaches to neurotransmitters and immunotransmitters. Immunotransmitters are received by white cells due to which their capacity increases. This whole process can be explained as follows.

Anupreksha experiments



Generation of thoughts of immunity enhancement in brain

**Command**

Access of neurotransmitters in blood circulation various nerves of nervous system



Reception of messages by the receptors of white blood cells.



Enhancement in the capacity of white blood cells

**Command**

Access of endocrinal hormones in from to blood.



Stimulation of white blood cells on receiving them



Secretion of immunotransmitters.



Enhancement in immunity

Anupreksha exercises are of prime importance in Preksha meditation to enhance immunity. But besides that 'Bhavkriya', diet control and positive changes in life style are also helpful in enhancing immunity.

**Questions for study**

1. Describe the process of defense mechanism.
2. Describe acquired immunity.
3. Describe white blood cells.
4. How many types of T-cells there are?
5. What is an antigen?

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## **CHAPTER-17: THEORY OF NATUROPATHY, PRINCIPLE AND CATEGORIES**

### **AIMS -**

After the study of this chapter students will

- (1). Acquire the knowledge of basic principles of Naturopathy.
- (2). be acknowledged with the facets and categories of Naturopathy
- (3) Acquire ability to put in to practice Naturopathy.

### **TOPICS -**

- (1). Introduction of Naturopathy.
- (2). History of Naturopathy.
- (3). Vision of Naturopathy.
- (4). Facets of Naturopathy.
- (5). Principles of Naturopathy.
- (6). Categories of Naturopathy.

#### **1.0 introduction of naturopathy**

Naturopathy subjectively is the treatment of elements which literally means diagnosis and treatment of 'Tritap' ('Adhidaivik', 'Adhibhautik', and 'Adhyatmic') from through six elements. Physical ailments are also included in it. In other words it can be seen that in naturopathy with the help of six elements viz. sky, air, fire, water, and earth every kind of diseases are treated. Naturopathy is being known by many names and is put into practice in many ways. Among these some of the names are- 'Prakriti Chikitsa', 'Prakritik Chikitsa', 'Naisargik Chikitsa', 'Prakritikopachar', 'Jal Chikitsa', 'Swabhavik Chikitsa', 'Nisargopachar', 'Kudarati Ilaj' etc. (Nature-cure, Naturopathy, Naturotherapy etc.). Subjectively no names amongst these are complete in relation with the usage of naturopathy. Possibly due to this reason some of the learned people recognised this science as the science of life or art of living. Naturopathy is not just a system of treatment of diseases but it is also an art of living a healthy, happy, and long life. Its speciality lies in the fact that the principles which are put into practice in maintaining health are also useful at the time when life becomes miserable. In both the situations rules are the same. By observing same rules and regulations a person can maintain his health and in the condition of not observing the rules suffers from diseases. By again taking resort to these rules he can reestablish his health.

#### **2.0 history of naturopathy**

The techniques and procedures of naturopathy are in vogue for many centuries. this system has been into practice since the time of Hippocrates, who was during 460-377 B.C., and who is considered the father of modern therapy. Hippocrates had said that nature is the greatest therapist. According to him a balanced and adequate diet is more important than medicines. The father of naturopathy was Vincent Pricenij who had established a Naturopathic nursing home in Sicilian series of mountains before two centuries. he was an under educated but a literate person and he was gifted with an extraordinary intelligence. He had invented the health improving power of cold bath ('Sheet snan') based on his logic. Later on his Therapeutic Centre became the religious place of naturopathy. Whenever a new invention or a principle is presented a strong opposition arises. Same way Pricenij also had to face a strong opposition. His opponents called him uncivilized, undisciplined and a fool and insulted him. he was sued to court for an accusation of invention of wrong principle. But these tortures made him famous. He placed a stone before his dispensary which read 'YOU MUST BE PATIENT'. He used to say that only patience can make you free from diseases. On the basis of his experiences and logics he presented a principle that the only way of getting rid of chronic diseases is to enhance the body's own immunity. In this process body gradually rejects accumulated toxic agents and impacted faecal matter.

After Pricenij, Johns Skrath moved these principles ahead. Making progress in this work he gave new facets to Naturotherapy on the basis of his experiences and logics. Like Pricenij, Scrath also had to face opposition. Coincidentally, during the time of Scrath, one Mr. Duke of Vintsbourg got a deep non healing wound on his leg which did not heal in spite of great deal of treatments by many doctors. According to doctors the only way to treat was to cut off the leg. On scrath's recommendations he gave a chance to him. Miraculously the wound healed completely. Impresses, Duke gave lots of publicity to Scrath's new system of medicine due to which Scrath's Naturopathy not only was authenticated but also made the opponents permanently tight lipped. In the progress of Naturopathy contributions of Father Sebastian Nip, German Dr. Hanneric Lohmann, Kunhe, and Adolph Just are unforgettable. American therapist J.C. Jackson was the first to give new facets to Hydrotherapy. Dr. Russell T. Tral established Hygienic college of therapy in Florence in which only Naturopathy was being taught. Dr. J.H. Kellogg and Dr. Henry Lindnar excessively nurtured Naturopathy Dr. Tilden described treatment of many diseases by means of changing behaviour. The book 'Impaired Health' describes his all procedures. Dr. Benedict Lust who was a disciple of Dr. Nip bestowed a system of treating diseases through diet control. Besides this, many therapists nurtured Naturopathy by their hard work and gave it new directions. Indian therapists' contributions are also not less for today's structure of Naturopathy which is before us.

### **Vision of Naturopathy**

While living close to nature and observing laws of nature no one can be unhealthy. Why is it so that wild animals are healthy and attractive? Simple answer is that they are close to nature. They sleep on ground, drink water from natural sources, breathe pure open air, receive adequate sunlight, eat natural of food like fruits, leaves, grass etc. the result is that they are never unhealthy. Whenever there is any disturbance in their health than the nature itself becomes a therapist and cures them. By means of behavioural changes another. And on the contrary human are eager to take strongest medicine on becoming unhealthy even a little. This is because we neither care for the natural resources nor do we use them.

These medicines which are artificially made, mixing with blood as much act as toxic chemicals destroying body tissues and cells as they help in healing the disease.

The secret of Naturopathy is gifted by nature itself. The entire universe is made of elements found in free or combined forms. In terms of Chemistry there are 107 elements in total e.g. Sodium, Potassium, Iron, Calcium, Phosphorus, Hydrogen, Oxygen, Nitrogen etc. According to scientists all the objects in this universe regardless in any form are made of combination of these elements. Stone, gas, water, animals, earth, plants, humans are created with the combination of these elements. Hydrogen and Oxygen when combined in a proper ratio in a proper atmosphere produce water, in a proper ratio if Sodium and Chlorine combine, they form salt. Carbon, Oxygen, and Hydrogen combining in a proper ratio give rise to formation of protein 'Jeans' are formed by D.N.A. and in the formation of D.N.A. again those proteins and other non-carbonic chemicals are used. Till these chemical compounds are in a balancing level, physical functions are appropriate. Due to some reason when this balance is disturbed then it creates disease. To treat this disease it is necessary to remove this chemical imbalance and that too in a natural way. This is the vision and principle of Naturopathy.

### **Facets of Naturopathy**

It is said that prevention is better than cure. Prevention is connected to our habits and life style. A person falls ill only when his immunity is diminished. In other words, force of life reduces or becomes weak and defense ability is reduced. Force of life is a combination of physical ability, mental-physical power, vigour, and happiness. Amount and flow of force of life are the characteristics of health. Sick pale face, continuous pain in body, headache, dyspepsia, and constipation are the signs of low level of force of life. If we succeed in enhancing the vital force then we will definitely be safe. That is why it is necessary to regulate our natural processes and daily routine. These are called facets of naturopathy. For enhancement of vital force, following facets should be paid attention-

(1) Sleep

(2) Sunlight

(3) Air

(4) Water

(5) Food

(6) Lifestyle

**Sleep-** It is necessary to take an adequate sleep. Sleep does not relieve tiredness but also fulfills lack of vital energy. During sleep requirement of energy is minimum. But sleep is not sufficient in a person under a stressful condition. In such a case use of 'Yogic nindra' (Yoga sleep) is beneficial. The more the Infants and children sleep, the healthier they remain. A sleep of 6 to 8 hours a day is necessary for adults for a good health (physical as well as mental). The proverb "Early to bed and early to rise, makes a man healthy, wealthy and wise" is applicable even today. But it is necessary to be relaxed before going to bed. Worry is harmful, allow it only while awake.

**Sunlight** – The first requirement after waking from sleep is the sunlight of the rising sun. Just like plants get parched without sunlight, to maintain a good health also sunlight is necessary. No other source of light can be a substitute. It is quite possible that a person devoid of sunlight will become a dead. Sun is the eternal source of energy for the entire universe. Receiving light from it, plants prepare food for us. All the biochemical processes in our body are dependent on sunlight. Thus, sunlight forms the second important basis of Naturopathy.

**Air** – One of the most important qualities of life is metabolism. Metabolic process can be divided in to two parts. Compound elements received by food are broken down into their basic elements which is called catabolism. We eat various types of food but once it is assimilated in our body, it gets turned in to flesh, bones, hormones, neurotransmitters, blood, tears etc. Besides metabolism, to carry out other organic, mechanical, and chemical processes also energy is required. For this air (Oxygen) is continuously required. So, in any condition we need pure air which contains adequate oxygen for our life and health. This it is considered the next step of Natural healing.

**Water** – "Water is life" this is a common truth. The reason behind is that 70 percent of our body comprises of water. It is nourishing as well as necessary for cleanliness. It is a required and indivisible component of hormones, juices and other secretions. It's balance should be maintained in our body otherwise great difficulties can be created for our life and health. That is why it is considered to be the important facet of Naturopathy.

**Life-style** – Everyone lives its own life but some of the people live healthily while others unhealthily. It has become an established fact that life-style creates a deep impact on health. Our food, drinks, behaviour, our dressing, etc. have a great influence on our health. Naturopathy has an innate relationship with health, in other words we can say that necessity of interference of therapy only becomes necessary when the rhythm of health is disturbed. That is why it can be said that life-style is also an important facet of Naturopathy.

### **Ten pioneer principles of Naturopathy**

#### **1. All diseases are the same, reason is same, therapy also same**

Naturopathy is a vision. According to it's principle all the diseases are basically the same, their reasons are also the same and therapy is also the same.

Just as a truth presents in different forms, gold is exhibited as different ornaments, same way Naturopathy also has this firm principle that only one foreign element in human body is reflected as many diseases and various names.

According to the above mentioned principle of Indian culture, human body is a single and sole unit. The whole human is single and in-separate. The whole world is one and in-separate. The whole universe is one and in-separate. The power of empire that unites the whole universe is single and in-separate and this

is the meaning of 'Sarvakhalvidam Brahma'. This very principle of unity is the major principle of vision of Naturopathy. With an intangible vision and thinking the singularity of various diseases affecting humans starts appearing. All the diseases in spite of being many in number are basically the same. They differ only in their forms and categories. This fact can be cleared with an example –

There are four animals in a family. All of them are living unnatural life. Consume drugs and other intoxicating agents. Eat everything voraciously. Do not exercise. Do not utilize clean water, sunlight, fine air etc. nature's gifts adequately. As a result their blood becomes toxic. Their body becomes saturated with toxic materials called 'Foreign elements' ('Vijatiya dravya'). Finally all of the four animals have to become ill at any time so that nature can remove that foreign element in their bodies to make them healthy.

Depending up on condition, age, tendency etc all of them can not suffer from same disease despite that the reason is the same. One of them can suffer from diarrhea, another can suffer from fever, and someone can have piles. All these diseases are different but basically have same background i.e. excretion of foreign elements from the body in different ways. Now what can be the duty of the patient and the therapist in the process of excretion? Only to facilitate and to aid this advantageous process. This can be done by fasting, water therapy ('Jalopachar'), fomentations, clay bandage, massage, enema etc. These procedures open and activate outlets of excretions and thereby facilitate rejection of foreign elements. Thus we will see that all the diseases are actually the same, their reasons, diagnosis and treatment are also the same. In majority of cases it is seen that a person goes to a Naturotherapist for the treatment of an ailment, but with treatment he also becomes free of various other minor diseases along with the chief ailment permanently. This is a striking example of the fact that all the diseases are the same and they are cured with only a single type of therapy because they have the same reason- accumulation of toxic materials in the body.

## **2. Micro-organisms not due to disease.**

Through the above explanations after believing the toxic substances to be the reason of diseases, it becomes undoubted that micro-organisms are not due to diseases as the modern Allopath doctors not only believe it but it is their principle also.

The reality is that if we are habituated to consume proper food regularly then micro-organisms which are universally spread, cannot stay on in our body. But they get converted in to innumerable healthy cells which our body is composed of. But if our food habits are irregular and unnatural then these universal particles will take the form of micro-organisms in our body and make us diseased.

It is a natural law that all the molecules of every object in the universe are continuously motile. Those objects whose molecules have same velocity have attraction with each other, and those having opposite velocity have repulsion with each other. So, according to this principle existence of micro-organisms is possible only in those bodies which already have the reason for disease i.e. foreign element, or those who are already diseased, or those who are liable to receive disease. But those bodies who have healthy nourishing elements which are opposite to micro-organisms, are impossible of being infected with those micro-organisms according to the law of nature. And if it is at all possible then because of the presence of immunity in these bodies, the toxic nature of micro-organisms will be destroyed and they themselves will be annihilated. In a healthy body, even all of the micro-organisms of the world together can not create disease. But in the body which has impurities to nourish these organisms, they will always grow and create disease. This way we see that micro-organisms are not due to disease but the disease itself is due to micro-organisms.

## **3.0 Severe diseases are friends and not enemies.**

One famous naturotherapist said "You give me fever, I will give you health". That means to cure a body containing toxic materials disease like intense fever is the only true solution. In body there is continuous production of toxic elements, which are excreted from our body through various outlets like



pores of skin, rectum, kidneys etc. If due to any reason these toxic substances can not be excreted out then they try to come out by producing illness. This condition is called disease. After understanding this fact it becomes clear how important production of disease is when need arises. In other words, diseases are not enemies but they are friends which provide health. For example suppose that nature wants to clear faecal material from abdomen. This can be done by inducing vomiting or diarrhoea. With this there may be excessive thirst. To clear impurities of brain they may be cold, cough, excessive thirst and running nose etc. What we know as a disease is in fact a therapy. On becoming ill we should try to look for our faults. We should think that by getting ill we're paying for the mistake we made and it is for our own benefit. Because if toxic materials would have continued to accumulate then the future would have been dangerous. Life would have been miserable, early death would have occurred. Thus there is no reason to fear from a disease; on the contrary it is wise to welcome a disease.

Now a question arises that if diseases are as the results of nature's efforts to purify our body then why do people die because of them? The answer is that in such cases either the force of life is diminished or there is an excess of toxic materials in the body where the treatment taken is inadequate for harmful. In such cases nature fails its purification process and the patient dies.

The pleasure we get from sleep after getting tired, the pleasure that food offers when we are hungry, the peace we get on praying God during difficulties, the same amount of peace and pleasure one should get after getting rid of a disease. If the disease has not been suppressed then the patient should feel that his body is free of a burden and rejuvenated. If this feeling is not there then it means that there is some hurdle in the sanctity the nature wanted to offer through disease.

#### **4.0 Nature itself cures**

It is believed in naturopathy that life is controlled by a strange, surprising, and almighty power which staying in the back of every life takes care of birth, death, health, a disease etc. To this great power the naturotherapists call as Life-force, 'Divine power'. This power when feels the need of creating a disease then it creates disease.

and the same power releases us from the disease and provides health. Therapy is a power which resides in us. Only it maintains health in us and protects us from diseases. God has said in Shree Geeta –

अहं वैश्वानरो भूत्वा प्रणिनां देहमाश्रितः।

प्राणपान समायुक्तः पचाम्यन्नं चतुर्विधम्।।

Means, "It is me in the body of all the animals taking the form of appetite, digest all the four types of foods." Thus all the processes and conditions of body are due to the presence of this central power. It does not remove only physical disabilities but also help to get rid of mental perversions.

We are astounded to think how nature has created human body with great deal of intelligence and efficiency. It makes us surprised as to what a great efficiency has been used in creation of organs and arrangement of fulfillment of all the needs of these organs. How surprising it is that God has arranged for every requirement ready to use in this little body itself. The vital force alleviates disease produced by the combination of these things and keeps functioning for reconstruction and improvements of body starting from birth to death. This power fails only when we ourselves out of ignorance create disturbances in its way or interfere in its functions.

#### **5.0 Treatment of the whole body of the patient and not of the disease.**

Other system of medicines have emphasized on treatment of diseases. But in Naturopathy the whole body of the patient is treated and is rejuvenated. Through this, all the signs of disease vanish. Those things which are named disease in other systems are called signs of disease in the terms of Naturopathy. The actual disease is the accumulated foreign substance or toxic element which when gets chance, tries to come out in the form of disease. That is why, it should not be the symptoms which should be treated, but

the disease itself should be treated. This is done in Naturopathy. On getting headache, it is not the headache which should be treated, but reasons for headache such as digestive disturbances or impurity of blood etc. should be treated which will cure the headache.

With Naturopathy, every disease can be cured but not every diseased person. Because cure of the diseased person depends on following five points –

- (1) What is the amount of foreign matter (Toxic substances) in the diseased person's body?
- (2) Whether there is vital force in the person's body which is essential for the treatment.
- (3) Up to what extent the patient has taken or taking treatment? Is he losing patience?
- (4) Before starting treatment of Naturopathy was he given harmful medicines? Or was he operated?
- (5) Does the patient have a faith on Naturopathy?

#### **6.0 Disease diagnosis is much necessary.**

As explained above Naturopathy does not treat disease, but it treats diseased person. In this situation there is no question of disease diagnosis. Uselessness of disease diagnosis is proved from the fact that, if nature wished to allow doctors to look through to the internal processes of the body of a diseased person, then instead of providing us with the opaque layer of skin and flesh, it would have provided us with transparent membrane around us so that the doctors can easily look through as to what disturbances there are inside the body and there by easily diagnose. This proves that nature does not wish us to make efforts behind diagnosis of diseases which is absolutely unnecessary for the treatment. For diagnostic purpose human intelligence has designed so many equipments which are incapable of exploring the secrets of nature, then how can we expect them to be of help in disease diagnosis. And this is the reason that those who try to diagnose are wrong in 90 percent of cases and rest of the 10 percent are true only coincidentally or accidentally. Not it can easily be understood that how harmful the doctors of wrong therapies depending on wrong diagnosis are for human society. How big responsibilities they take on their shoulders and give harmful results which patients have to pay for.

This way it can be said that accumulation of foreign matter in the body is the disease. For diagnosis, a naturotherapist is only supposed to look for the part of the body where this toxic matter is located-in the front part, sides, back or spread in the whole body as in obese people. If this foreign matter is minor then it can be soon removed with naturotherapy, if it is in the sides then it is removed with somewhat difficulties as compared to the front and if it is in the back or spread all over the body then the problem is considered complicated. Besides this, diagnosis can also be made looking to the conditions of face, neck of the patient, skin tone and also by listening to the complaints of the patient. In every situation the aim is to find out as to where the toxic matter is accumulated in access. With keen observation not only a Naturotherapist can see the problem but also other can see it and think of its proper treatment. This say we see that in the diagnostic procedure in Naturopathy there is no chance for failure or making mistake.

There is one more difference between disease diagnosis of doctors and Naturotherapists. Doctors have been trying to acquire knowledge of diagnosis through dissection of dead bodies for ages. Whereas a Naturotherapist takes in to consideration processes occurring in living body and works his way within no time.

#### **7.0 Treatments of chronic diseases take time.**

One of the opponents of Dr.Lindlhar told him while accusing on Naturopathy that Naturopathy takes too much time in curing patients, up to an extent that they are bored. But doctor said that absolutely not. With Naturotherapy, patient get well very soon and not only that it is the fastest therapy available in the world. But the problem is that we get most of the patients of chronic diseases who have got disappointed after taking treatments from everywhere.

In fact, patients disappointed from everywhere take their last resort to Naturopathy. At that time they are not only affected by the disease but also with harmful medicines. That's why a Naturotherapist doesn't only have to treat the actual disease but also has to eliminate the toxins of those medicines which may take months or sometimes years. Besides, the meaning of this therapy is not only to eliminate disease but also to acquire a new life, become completely healthy and powerful. Thus it is not the sort of waving a magic wand. This may take a long time.

### **8.0 Suppressed diseases come to surface with Naturotherapy.**

Where with other treatments, diseases are suppressed, with Naturotherapy, suppressed diseases effervesce and then permanently go away. To understand this golden principle of Naturopathy, we will have to first understand as to what do we mean by 'Effervescence' in Naturopathy.

'Effervescence' is called in Naturopathy as severe form of disease, recurrence of old chronic disease, healing crisis or curative crisis. The simple meaning is that an intense reaction of disease in the treatment of a chronic disease, or exaggerated manifestation of suppressed disease under the effect of acquired vital force before getting removed from the body. This effervescence remains for two to four days or maximum for one week, then calms down and goes away leaving the patient in a state of health. A striking feature of this effervescence is that the suppressed disease reappears in the reverse order of its appearance and then go away.

Under the command of nature there are two main forces working viz. Constructive and Destructive, the examples of which we see everywhere. In Naturotherapy the constructive force comes into play to create curative crisis, make a patient free of disease, and make him healthy. The destructive force creates destructive disease crisis and causes death of the patient. The second situation arises when the accumulated foreign matter in a patient's body doesn't come out of the outlets of the body and as a result of that the patient dies. Death is resulted only when disease progresses beyond his body's annihilating power.

As above mentioned, the examples of 'Effervesce' are not only found in relation to diseases but also can be seen everywhere around. Dr. Lindlbar has linked revolutions to be a healthy condition for big empires, improvements to be for religion and strikes and revolts to be for business related.

Sometimes in summer on some day weather becomes too hot and humidity increases. This can be called as seasonal crisis because after it wind storm surely starts, there may occur a light or heavy rain following which the weather cools down.

After winter during fall season leaves start falling from all the trees and the trees become unclothed and exposed. This way nature creates curative crisis for them because a few weeks after this the trees again become green and covered with numerous newly grown leaves.

Just before passing stool or urine there is a feeling of urge with a little discomfort. What else it is then nature's 'Effervesce'? As soon after this one feels relaxed.

Menstruation in females, labour pain in females, pain of a suppurated boil, severe pain while removing a piercing thorn, etc. are also some of the examples of nothing else but 'Effervesce'.

All the critical diseases like cholera, fever, diarrhea, chicken pox etc. make efforts to eliminate toxic materials from our body through vital force. This can be called as intensive form of a disease or curative crisis.

This way we see that during treatment how important, beneficial, and essential it is for a disease to effervesce during which instead of panic we should be happy. It is not wise to induce effervesce quickly or to give it a severe form. In this situation hastening can harm. Nature should be allowed to complete its work gradually. Complicated effervesce have only been observed in those patients who had been taking harmful medicines before starting Naturotherapy and to eliminate them Nature hurries.

Those who live a natural life and are free from medicines get less severe effervesce or no effervesce at all during therapy.

### **9.0 Treatment of mind, body, and soul together.**

Healthy harmonious compatibility of body, mind, and soul means health. In naturopathy, health improvement of all these three is equally considered. This is the most important aspect of Naturopathy system. Naturotherapists consider mental health of humans to be of more importance and superior than physical health, and spiritual health or spiritual power to be of supreme and maximum. Through a Naturotherapist's eye, physical health does not merely mean a disease free body, but also he knows that the internal health is closely related to mind and soul.

Sukarat used to say that, "A human only physically strong is of no importance, a corpse is not a human, it is just a corpse, a body is just a body and nothing else." But in a living human, mind and body have an integrated relation. Both should be considered one and one can not be grown without another one. A man making his body strong while keeping his mind at its summit is on the way of bliss.

Natural life-style, natural food, and drink bring sanctity in our life and make us upfront. Controlling mind takes us to spirituality. If human race will accept and follow the vision of naturopathy then the earth will be free of cruelty, barbarism, and mirthlessness and the earth will become a heaven. Worship to God is the chief part of treatment of a diseased body, feeble soul, and a contaminated mind with Naturopathy, it is an unailing system of therapy.

### **10. Use of irritating medicines in Naturopathy is out of question.**

It is the principle of medicinal therapy that disease is an external element which attacks a body, so it should be defeated using the most powerful weapon. That's why doctors, vaidyas administer toxic medicines like mercury, opium etc. and try to deal with diseases. But they never try to care about that a poison is after all a poison, whether its amount is large or small. It is always harmful and due to that the disease instead of shrinking, gets grave day by day. That is why in Naturopathy; use of such medicines is considered not only useless but also detrimental. Because, the principle of therapy in Naturopathy is exactly opposite to that of other therapies. In Naturopathy, disease is considered the internal matter and not external and it is removed with the use of exactly the same Natural mechanisms which produce disease when necessary. In other words, whatever measures we take to protect ourselves from diseases, on getting ill we use the same measures to eliminate the disease; comparable to a driver who drives a vehicle forwards as well as backwards with the use of same power of steam. The energy which provides us the paramount health, the same energy also provides freedom from a disease. When a vehicle is moving backwards, the driver does not use any other external gadget to move it forwards. Same way when our body becomes ill, we do not need any external tool (medicine) to reestablish health, and neither there should be.

In the medicines of doctors there are no nutritional elements which are necessary for the body. And the reactions that take place in the body are not because of those medicines but are due to the body itself in which those lifeless medicines enter. Can a medicine act on a corpse? The question is not that what effects those medicines create. But the question is that how body deals with the medicines taken. The body always tries to get rid of those external substances to make itself free of contamination. Naturotherapists do not only consider these lifeless toxic medicines useless but also harmful.

When at the first instance we do not consume medicines especially some of the toxic medicines during health, then how come we consume them in a diseased condition and with what kind of hopes? The medicine which can harm a healthy person, then how is it possible that the same medicine will be beneficial during an illness?

As per mentioned under the principle 4, nature itself cures i.e. nature makes us free from a disease and not medicine. Medicine is not meant for making us free from a disease. Medicine is a stuff which is

brought in to work by nature for the purpose of repairing. It is so because; it is receivable by body and is used in elimination of foreign matter. This is the actual definition of a medicine and the medicine used by doctors is totally different from the definition of medicine. This way all the lively edible elements can be called medicine – air, water, fruits, vegetables and many non-toxic herbs which can be of use as edibles.

In Naturopathy these are the edibles and medicines as well. They are firstly edibles and then they are medicines.

This way wooden medicines fall under Naturopathy. Here the condition is that they should be fresh and non-irritant. If they are sole or of the same group then should not be mixed together more than two or three. In Naturopathy wooden medicinal therapy ('Kashth Aushadhopachar') and diet therapy are the two names of same thing. Every substance may have parts which comprise human food, for body cells there are many fresh and effective medicines which are liberally used by Naturotherapists according to the patients' tendency.

### **Types of Naturopathy**

The principle of Naturopathy is resolute, unflinching, and unchangeable. Because the six elements which are considered valuable and helpful; will always be effective in the future. God, nature, and truth- all these three are anonymous and universal. Creation of human body with the use of air, water, fire, sky, and earth and presence of divine element in it is a truth too. So the system of therapy based on these six universal and real elements is also a truth, and is eternal. The best system of medicine is the one which has three qualities together – serenity, decontamination, and complementation. Naturopathy has got all these three qualities. With this therapy, the internal toxic matter which is the root of disease is eliminated and body is purified. This is the quality of decontamination. After that with painless procedures a patient becomes restful which is the quality of serenity. And with that patients are provided nourishing elements which is the quality of complementation.

Maharshi Suchrut has said that, "शरीरं लाघव करं यद् कर्म वा पुनः तल्लघमितिज्ञेयम्।"

Means, fasting removes reason of disease from the body i.e. toxic matter; the body becomes free, so fasting is the only treatment of all diseases.

Here the word 'Fasting' does not only mean literal. It also means all those therapeutic procedures which are carried out in Naturopathy for the treatment of disease viz. emesis ('vaman'), purgation ('virechan'), enema, steam bath, use of elements of water, use of elements of air, use of elements of fire, and use of elements of sky. According to Maharshi Charak –

चतुष्प्रकारण संशुद्धि, पिपासा, मारुतातपौ,  
पाचनान्युपवासश्च व्यायामश्चेतिलंघनम् ॥

Means 'Fasting' stands for following ten procedures for decontamination of body –

- (1) Emesis ('Vaman Kriya')
- (2) Purgation ('Virechan Kriya')
- (3) Enema
- (4) Steam bath
- (5) Various procedures of water element
- (6) Various procedures of air element.
- (7) Various procedures of fire elements
- (8) Various procedures of earth element.
- (9) Various procedures of sky element (fasting, sleep etc.)
- (10) Exercise.

All the above mentioned processes together are included in 'Jal Chikitsa', 'Mitti Chikitsa', 'Vayu Chikitsa', 'Agni Chikitsa', and 'Akash Chikitsa'. These are discussed in detail in next chapter.

### Sample questions

#### 1. Assays.

1. Describe ten pioneer principles of Naturopathy.
2. Mention chief facets of Naturopathy.

#### 2. Short questions.

1. Describe brief history of Naturopathy.
2. What is the basis of Naturopathy?

#### 3. Objective questions.

1. Under what element does 'Fasting' fall in Naturopathy?  
(a) Air            (b) Earth        (c) Sky            (d) Importance
2. The best system of therapy is the one in which there are three qualities viz. -  
(a) Complimentation, purgation, holding breath.        (b) Respiration, sleep and serenity.  
(b) Decontamination, complementation and serenity (d) Sound, sky and air.

#### References –

- (1) Prakritik Ayurvedigyan – Dr. Rakesh Jindal (This book is the main basis of this chapter)
- (2) Rogo ki sahi chikitsa – Dr. Nagendra Niraj and Manju Niraj
- (3) Nature cine for common disease – V. Modi

## CHAPTER: 18

### SKY, AIR, FIRE, EARTH, AND WATER THERAPIES

#### AIMS –

- (1) Acquire knowledge of various procedures of Naturotherapy.
- (2) Achieving expertise in practicing procedures of Naturotherapy.

#### TOPICS –

- (1) Sky element therapy.
- (2) Air element therapy.
- (3) Fire element therapy.
- (4) Water element therapy.
- (5) Earth element therapy.

#### 1. Sky element therapy.

Sky is the most useful and the first element among the five elements. It is also called 'Space'.

Just like God is formless but real, same way sky is also formless but real. God is everlasting. Same way sky is also everlasting – not even after the end of the world. This is the same case with sky. So it provides us a purity and clarity (Health). Angels are believed to be dwelling in skies which are undying. Using sky in adequately and properly, we can definitely become healthy and long living if not interminable.

Remember that in achieving formless element we never get a hard object. On the other hand hard objects can be achieved by energy. Same thing can also be applied to the formless sky because to achieve formless element, we need something formless. The power we find from God or sky is always precious and benevolent for the improvement of physical, mental, and spiritual health.

It is a fact that if sky would not have been constructed then we wouldn't have existed. It is also the basis of remaining four elements. Internal energy and delightfulness is only possible due to the sky element.

Body's creation: Body is composed of five elements, just like a poet has said –

पवन, पानी, पृथ्वी, प्रकाश और आकाश।  
पंचभूत के खेल से, बना जगत का पाश।।

Strange machine: Among all the creatures of nature, a human body is the strangest. A body is a small replica of universe.

'यथा पिंडे तथा ब्रह्माण्डे'

Sky is also the basis of universe. Fasting is a powerful tool to achieve it. By eating less food than our hunger we can attain happiness and peace by acquiring this precious element. We can compliment the deficiency of this element when ill by providing space to vital force from physical tasks through fasting. As a result of this we can get well ourselves. The functions of sky element are sorrow, desire, anger, affection, and fear. In our body the main locations of sky are – head, throat, heart, abdomen and waist. The sky located in brain is the part of air ('Vayu') and is the major site of soul. That is heart is a part of velocity and is the site of bile ('Pitta') and digests food. Sky located in abdomen is the part of water which facilitates elimination of excreta. The sky in waist area is the part of earth which is more of a steady and is the site of smell. We should not try to fill the sites of sky. If we control our diet then the body will enjoy



freedom. If we do fasting once in a week or a fortnight then this plus and minus are balanced. If full day fasting is not possible than giving off one or more times food intake will also be beneficial.

Achievement of sky element for the growth of our vital force and cure of disease can be done by celibacy and repression, nobleness, mental balance and discipline, rest and quietness, cheerfulness, entertainment and sound sleep besides fasting.

### **Celibacy and repression**

In our religious books there are two groups of celibacy described. One is named 'Upakurwan' and another is 'Naishtik'. When a disciple after studying one, two, or three Vedas, enters marriage life by order of his Guru, then it is called 'Upakurwan'. When a disciple accepts celibacy for life time then it is called 'Naishtik'.

### **Repression-**

Celibacy and repression are closely related. Repression is the greatest ideal of human life. Observing restrictions in food intakes, drinks, thoughts, behaviour, and life-style, a man can remain healthy and happy physically as well as mentally. In the implementation of this rule there is no question of gratification of senses because, it is an art of life. Apparently it seems uninteresting and unacceptable to observe a restricted life but resultantly how much beneficial it is, is a matter of giving a thought, understand and experience. Subjectively repression is a natural duty of humans, from getting away of which, a human no longer can be a human.

Thus by control of mind implies control of speech as well as actions. Still our Maharshis have described different ways of controlling mind, speech, and actions in detail which are briefed as follows.

### **Repression of Mind**

Mind control is very difficult. It is the basic reason of agility of mind. A man is in the hands of desires of humankind. He is governed by desires and plays in the hands of senses like speech, touch, attraction, anger, desire, fascination, arrogance etc. What is perplexing is that these desires neither can be fulfilled nor they are able to satisfy human desires. No one can ever be peaceful with them. These desires one after another victimize humans. Due to this a man is not in a position to think of his welfare. This happens due to the interchange between the master and the slave. We have allowed ruling our senses over our intellect. Humans require food, water, heard work etc. in their lives to fulfill basic requirements, but it is not wise to leave it on senses to decide which of the things they need in what amount, what frequently and at what time. It should be up to their intellect to take decisions. Training the intellect gradually makes it able to rule over senses.

Self-evaluation in solitude helps in mental cleanliness. Everyday before going to bed, thinking our good and bad acts is called self-consideration or self-evaluation. It is a quality of super-humans. It gradually alleviates mental agility. This is because we always try to conceal our bad qualities in front of others, but we can't do the same with ourselves. So when we analyze our acts of the day, all of our hidden sins start coming in to consideration one by one. At that time we ourselves get terrified by looking to our bad qualities and determine not to repeat them again.

One other gadget of mind control is 'Prayer' which is lacking in current so called educated and civilized society. Every religion has mentioned to pray to god which is not fruitless. It facilitates mind control as well as sacredness of mind. About twenty minutes prayer every day is sufficient for mind control, and it works.

### **Repression of speech**

Speech has got that power to deviate senses so, control of speech is very important for humans.

Making sarcastic comments to others, mocking, using bad words, expressing hatred, smirking, and making bad jokes, etc. are the signs of uncontrolled speech. Keeping away from these is called control of mind. Harsh words arouse conflicts and can break intimate relationship within no time. On contrary, a few words of love can turn enemies to friends. It has been said that –

“वशीकरण इक मन्त्र है तज दे वचन कटोर।”

Words have incredible power. ‘Word’ is the other name of ‘Mantras’ which accomplish impossible task. But not every word can be a mantra. Some say not mantras from every one’s tongue can have an influence. The man, who has got control, can only have that speech with incredible energy able to fascinate the listeners. People having control over speech have great influence on others; they can make others to do what they want.

The only way to control speech is quietness (‘Mounavalamban’). There is a great power in keeping mum. Peace is the other name of quietness from which all things in this world have been originated, and are going to mingle in the same at the end. In Vedas at which place peace is defines, it has been called ‘Shantam’ there. ‘Shantam’ is the basis of happiness. It is ‘Shantam’ which is called love, A, which is floating in our every breath. All the work done by nature is peaceful. A child grows in mother’s womb quietly; plants grow and get destroyed quietly. After confrontation with supreme power, an organisms becomes quiet. Nature is quiet; even the supreme power (‘Brahma’) itself is invisible and quiet; and this is the proof of eternal energy of quietness.

We should observe ‘Moun Vrat’ once in a week or a fortnight to control our speech. This day we should concentrate our mind and contemplate over God. We should think whether we have hurt anyone or got ourselves in to quarrel with someone during last few days, and repent on these deeds. Besides we should pray to God not to let us repeat the same acts in future.

### **Repression of actions**

To understand good and bad actions and implements them is called control of actions. In this work we have to take resort to rationality. When there is any task before you and your intellect considers it to be a good one, then you should do it. If you have a wish to donate then do it, because afterwards you may lose the chance or may there be any obstacle in your way. Hold on your actions, and your actions are not going to leave you too. It is a pleasure in making good actions. The one, who is ‘Karmayogi’, can not be stopped from doing his actions (‘Karma’). An action without expectations (‘Nishkam Karma’) is the only escort in the way of life. One should do public welfare; not with expecting compensations, but with considering it to be a duty. Control of action is in making actions without expectations but this is not easy. Hypocrisy, ambitions, expectations etc. are enemies which try to put hurdles in the way of a ‘Karmayogi’ on every step. But with practice everything becomes possible. We should leave ourselves to while away with the stream of ‘Karma’. Not getting affected by ‘Karma’ is another gadget of control of actions. It is the body which makes actions, but mind should be intact. To remain bound with actions is called attachment (‘Bandhan’) which is different from control of actions.

### **Discipline of mind and balance**

Everyone knows that mind has a great power. This power is also responsible for the health of humans. So, the outcome of a disease i.e. good or bad depends upon the mental condition of a person during disease. And why only disease, even death comes only after once a person is mentally ready to accept it. In other words, a person dies after he is mentally prepared for his death. This condition in mind is prepared automatically to get what is wished – death, disease, or health. This is the nature’s law. Mind is the centre of a secret energy which resides in brain. Mind is responsible for a man’s progress, regress, joy, sorrow etc.

Effects of evil thoughts are always reflected on our body at any point of time arousing mental or physical illnesses. Same way, effects of physical illnesses also impact adverse effects on mind.

### **Use of mental power in the treatment of diseases**

Just as thought of disease creates actual illness in the body, same way positive spirits related to disease have got sufficient power to heal. Changes in thoughts start changes in health status. A man's health depends on his high spirits in his mind about illness. When a treatment is less advantageous, then the reason may be lack of concentration of the patient or his unwillingness for the treatment. Such a patient no matter whether he goes for the best treatment, if he is not able to keep his mind free of stress, his disease will not be cured. A thought when is repeatedly considered, it takes form of a self-command which brings incredible changes in behaviour as well as in body. What a man thinks, that he becomes. This principle is also applicable in relation with health and diseases. So far as a man is pessimistic, every event of life makes him sadder. But when he becomes optimistic, every event turns to be of his own well-being. A change in flow of thoughts brings about changes in luck, health, and everything. On having will, all the mental powers are activated and change the situation. If will can change everything by faith, confidence and decision, then why can't it remove diseases? It surely can. The all you need is just a strong faith and decision. If spirits are true and powerful then however slowly, it surely brings about changes in situations.

So, in morning and in evening a patient should willingly decide that his so and so disease will go away. While caressing hand on his own body, he should say with a true feeling, "I am healthy. There is no disease in me." After a few days he will feel that he has become healthy and has got a new charm.

### **Relaxation and immobility**

#### **What is relaxation?**

The simple meaning of relaxation is taking rest after work. Relief in tiredness, mental and physical peace after rest is called relaxation. Relaxation is not just physical. We can get relaxation only by getting both mental and physical relaxation. When we are at rest our body, especially brain is under constant stress. This happens due to the irresolute mind and this is not relaxation. See how relax a child is when asleep. How freely a child lies in bed with his body completely relaxed. This is the best way of relaxation. With practice we can have a habit of lying down relax. To stay relax is very important. In the Naturopathic term this is called Curative Relaxation which is one gadget of Sky therapy.

We need relaxation both during health and disease. Still we must know that relaxation and idleness are not the same. After working hard, regaining the lost energy through rest is called relaxation. But without working hard, taking rest increases inactiveness of mind and body and it is called idleness. Idleness makes mind and body inactive whereas relaxation provides energy and swiftness to mind and body. A lazy person is not willing to work whereas a relaxed person is always eager to do work. Such a person resumes back to work with a new energy.

### **Fasting**

#### **What is fasting? Why fasting?**

The purpose of fasting is to provide rest to digestive organs. Basically, it is only during fasting that these organ can relax because normally we fill our stomach two to three times a day due to which our digestive organs have to constantly function.

In our Indian culture fasting has been given a lot of importance since ancient times. In our religious books fasting has been considered a tool for sacredness of mind and body. This ritual has been in vogue especially in Jainism and to a certain extent in Hinduism also.

Fasting is a natural condition. It is a natural need. Animals, birds, etc. every living organism needs fasting, and it is natural. A diseased animal is wiser than a diseased human which doesn't even look at the

best of fodder when falls sick. This is because it understands that during sickness to eat something is poisonous and to keep fasting is a blessing and is the remedy for the disease. When we are sick, our hunger naturally vanishes and though being intellectual animals, we ignore the nature's order and keep eating something and thereby suffer more. On becoming sick to keep away from toxic matter, fasting is a powerful weapon. During fasting, our vital force entirely works to eliminate the disease. Here we should understand one thing that fasting is not a process to create some new energy, but it facilitates elimination of toxic matter from our body which is responsible for the illness. This is the reason why because of fasting, our body becomes healthy and energetic. So this makes it clear that whoever is healthy does not need fasting. But if the healthy people occasionally do fasting then their health status will be maintained.

Many people mistakenly consider fasting as starving. As mentioned above that the toxic matter which is responsible for a disease, gets destroyed by the process of fasting. Besides, body starts using those elements which nature had stored in body as reserves so that they can be used when need arises. For example, a camel which is the animal of desert has to stay hungry for days; in this situation he fulfils his needs from the elements stored in it's hump and fulfils need of water by an organ in it's abdomen which stores water. On fasting, our weight is lost. In this situation our body receives it's needs from the reserves of our body. At this time an actual appetite is felt. If fasting is still continued then our body gets it's nutrition from those elements without which life is not possible. At this point death starts. From fasting death occurs only if it is continued beyond the point where body has eliminated all the toxic materials and essential tissues have destroyed. Till this point a man only loses weight, that's all. But when body starts getting nutrition from essential tissues then only destruction of body starts and the person dies. This is the difference between fasting and starvation.

Medical expert Dr. Carrington has cleared this difference in a few words, "Fasting starts from last meal and ends at the beginning of appetite. And starvation starts from beginning of appetite and ends at death."

Once someone asked Mahatma Gandhi, "Whenever you are in some trouble, why do you start fasting?" Mahatma Gandhi answered, "A devotee of nonviolence has got this only weapon. When a human intellect doesn't work then he starts fasting. Fasting paves a way to worship. Means fasting is a spiritual thing which faces to God."

It is true that fasting is the only way for sacredness of body, mind, and spirit but to get it's thorough benefit one has to master this art. On having incomplete knowledge of science of fasting, on lack of proper guidance, on breeching the rules of fasting or on improper implementation many people have lost their lives. If fasting is done rationally according to it's rules then it is proved to be of great advantage but on breaking the rules it may impact a great deal of harm to our body.

It is a groundless statement that only reduction in quantity of food serves the purpose. Eating less compared to the intensity of appetite does not fall under the rules of nature. It is proved from experiments that eating less do not have any benefit. On the contrary it may harm. In fasting, only initial two or three days are difficult, whereas eating less creates difficulties everyday. With experiences it is also seen that with eating less debility comes soon, whereas this is not the same case with fasting. Thus it is to be concluded that eating less is not a category of fasting.

### **Categories of fasting**

#### **(1) Morning fasting –**

This is the most comfortable way of fasting. In this category only morning breakfast is to be given up. Meal is to be taken twice. In English it is called 'No Breakfast System'.

#### **(2) Evening fasting**

This is called half fasting ('Ardhopavas'). In this category only evening meal is to be stopped; and meal is to be taken once. Those who are suffering from chronic disease can have a great benefit from this category of fasting. In this kind of fasting, whatever meal is taken has to be digestible and natural

**(3) Single meal fasting (Ekaharopavas) -**

Eating one kind of food once is called 'Ekaharopavas' e.g. if chapatti is taken in morning then vegetables are to be taken in evening, the next day morning a fruit and in evening milk etc. In case of minor ailments of body, this kind of fasting is helpful.

**(4) Juice fasting (Rasopavas) -**

In this type of fasting, no cereals or other solid food is taken. Only fruit juices or vegetable soups are taken. Even milk is not to be taken because milk also falls in solid foods category. During this type of fasting, simultaneous use of enema helps in cleaning the body.

**(5) Fruit fasting ('Falopavas') -**

Staying on fruits, fruit juices, and vegetable soups is called 'Falopavas'. In this type of fasting also bowels should be cleaned by using enema. Sometimes consumption of only fruits leads to abdominal discomfort to some people. These people should do complete fasting for initial two or three days and then start 'Falopavas'. Those fruits should be consumed which are easily digestible. If one is not comfortable with fruits then he should take vegetables. In any kind of fasting, indigestion should not be allowed. In case of bleeding piles 'Falopavas' for 21 days is so much helpful that piles just vanish.

**(6) Milk fasting ('Dugdhopavas') -**

It is also called 'Dugdh-Kalp'. Staying on milk 4-5 times in a day for a few days is called 'Dugdhopavas'. The milk which is consumed should be of a healthy cow.

**(7) Mathopavas -**

This is also called 'Matha-Kalp'. In case of poor digestion, 'Mathopavas' should be done instead of 'Dugdhopavas'. The matha (a milk product) should be free of ghee and less sour.

Prior to starting 'Dugdhopavas' or 'Mathopavas' if complete fasting is observed for 2-3 days then it is more beneficial. These fasting can be easily continued for 1½ to 2 months. With these fastings not only diseases are cured but also they are advantageous for health improvement. Whenever abdominal heaviness is felt, enema should be used.

**(8) Complete fasting ('Poarnopavas') -**

Voluntarily giving up all kinds of food except pure water is called complete fasting. In this kind of fasting many regulations have to be observed which are mentioned ahead.

**(9) Weekly fasting -**

Complete fasting once in a week is called weekly fasting ('Saptahik Upavas'). This improves a normal health and chances of catching illness are reduced. Those who have clerical or other sedentary job should at least do this type of fasting. If along with fasting, enema is also taken once or twice then it is the best. This fasting reduces dislike for food. Headache, lassitude, and other physical and mental ailments are automatically cured.

**(10) Short fasting ('Laghu Upavas') -**

Complete fasting for three to seven days is called 'Laghu upavas'.

**(11) Strict fasting ('Kada Upavas') -**

This fasting is for chronic stubborn diseases. In this kind of fasting, all the regulations of complete fasting have to be strictly observed.

**(12) Intermittent fasting ('Toot Upavas') –**

In this type, a complete fasting for 2 to 7 days is followed by natural meals for a few days and then again complete fasting for same period of time is to be followed. This is to be continued until disease is cured. This kind of fasting is used in difficult illnesses.

**(13) Long fasting ('Deergha Upavas') –**

In long fasting, complete fasting is to be observed for long period of time for which no time is stipulated from beginning. This may take from 21 days to 50-60 days. It is discontinued only after a natural hunger begins to feel or all the toxic elements from body are finished and essential tissues are threatened to get used. If this fasting is observed for physical purpose then its aim is elimination of accumulated toxic matter in the body; so once the purpose is solved, fasting is discontinued. This type of fasting should not be performed without acquiring complete knowledge of art of fasting. It better to continue this type of fasting under the observation of a fasting expert, otherwise it may lead to problems and create harm.

Those who are victims of chronic diseases should gradually make changes in their diet prior to beginning this type of fasting. For example, give up breakfast initially, then stop taking cereals for 2-3 days and continue with fruits, and then start complete fasting. This way, fasting period becomes comfortable.

**2. Air element therapy ('Vayu Tatva Chikitsa')**

**Air element ('Vayu Tatva')**

Air element is the second essential element among five. Water is life and air is the soul of animals. If we do not get air to breath for a minute then we become suffocated. If air is not available for a longer period then life ends. Thus it is a very essential element. We use a big amount of air continuously. A man breathes 14 to 16 times in a minute. In one breath we breathe 25-30 cubic inches of air and in a day we breathe 32 to 37 pounds of air. Process of breathing is related to more than a hundred tissues. Every day the air we breathe is seven times more than the food we eat or the water we drink. The air breathed by us hovers for more than 15 sq. feet in our lungs. Our lungs always sustain 60 cubic inches of air continuously and 25-33 cubic inches of air is breathed out.

The atmosphere in which we breathe is spread over 300 miles around the earth. This atmosphere is a mixture of many types of gases including a good amount of vapour of water. Besides it also contains four parts of Nitrogen and one part of Oxygen. These two gases are very much essential for our body. Carbon-Dioxide comprises one part per ten thousand. There are also some other gases generated from chemical reactions in very minute percentages. Dust particles are also spread in atmosphere.

The Nitrogen present in the air which is breathed is useless. It is breathed out as it is. Oxygen is not breathed out; it mixes with blood in lungs and blood gets oxygenated.

Plants survive on Carbon-Dioxide and they release oxygen. Due to this arrangement, carbon-dioxide does not get concentrated in air and oxygen does not lack as well.

Oxygen facilitates generation of light as well as heat. Body heat of animals is owed to oxygen. What is life? It is nothing but smoldering of body organs in combination with oxygen, just like a candle. Red cells of blood receive oxygen and convey to body cells, which is called oxidation. With this procedure heat is created, body temperature is maintained and life continues.

In air there is one more essential gas which is called 'Ozone'. This element is found only in the atmosphere of jungles, mountains, and sea. Ozone is a very strong smelling gas. Patients of Tuberculosis are benefited in mountains due to this gas.

Purification of air can only be done by 'Agnihotra'. This is why our ancestors had made it a ritual. Air has also been called life. In Ayurveda, one of the names of air is 'Vishnu-Padamrut'.

### **Air, equivalent to a hundred medicines**

#### **Air-bath ('Pavan-snan' or 'Vayu sevan')**

It is also called morning walk. This is a kind of bath due to which internal as well as external cleanliness of our body takes place. This bath is more useful when done naked.

If we understand that the way we breathe through our nose, our skin also breathes through fine pores on it then we can never deny the usefulness of air-bath. Just as we keep windows and ventilators of our home open for the cleanliness of our home; same way it is essential that air is allowed to enter through the windows of skin-pores in to the house of our body. On keeping our body covered with clothes, body becomes pale and pores of skin get wasted and some of them get closed too. As a result we suffer from constipation, diabetes, heart disease etc.

When a naked body comes in contact with pure atmosphere and takes air-bath then it feels as if it is savouring the entire pleasure of this world, silently communicating with the sky.

Those who do not exercise, for them morning walk is very much. With morning walk, 200 tissues from head to toes are naturally exercised. During walk our heart rate increases from 72 per minute to 82 per minute, respiratory rate also increases. More oxygen reaches our blood and blood is purified. With other exercises, heart gets more strain; that is why a morning walk is considered the best exercise.

In morning walk, noticeable thing is that it is advantageous only if done in pure atmosphere. Electric fans etc. do not serve the purpose because artificial breeze of air is harmful. Air coming from fan is whirling and fast which causes joint pains, headache etc.

In India, 5% deaths are due to lack of pure air. Every person inspires air from up to 21 inches away from his nostrils. This point should always be kept in mind.

Directions also matter in case of air. Air coming from east is dense, warm, 'Raktapittadushak' and unhealthy. Air from south is light, cool, beneficial for eyes, and 'Raktapittanashak'. Air from west is sharp, absorbent, light, weakening, 'Kafnashak' and 'Pittanashak'. Northern air is cold, soft, and light. Remember that before sunrise, air from any direction is free of every fault. That is why morning walk is preferred. Purification of air is done by rays of sun, water, trees, morning, and change of season. Damp air is better than a dusted air because a damp air contains three essential elements oxygen, nitrogen and carbonic acid gas in proper proportions.

For walking such a path should be preferred which is far from population, has arrays of green trees and farms along both the sides. And as if the rising waves of water reserves are ready to welcome the dusk. The one, who walks on this path, comes back with a new charm and a gleaming health.

Now the question arises as to how much we should walk; for which there is difficult to establish any rules. But yes, a normally healthy man should at least walk for 6-7 kilometers per day. A healthier person should walk 9-10 kilometers per day. To begin with, one should not walk up to much far distance. They should increase their speed as well as distance gradually. A speed of one kilometer per 10 minutes is enough. Weak and sick people should not walk more than half to one kilometer a day initially. But as strength begins to appear, they should increase this distance.

While walking, deep breathing exercise should be performed. One should walk seven steps during one breath, there after he should hold breath for four steps and then breathe out for seven steps. Initially one should be cautious in breathing exercise while walking. Deep breathing should not be exhausting. While breathing deep we receive vital energy which is necessary for reformation and growth of our body.



The process of walking also depends on the mental status of a person. So if we have to take maximum benefit of walking, then we should adjust our mental status properly. Walking should not be a duty, it should be an entertainment. While walking one should feel real pleasure. At this time there should not be any other feeling except pleasure. To enjoy more one should look at natural beauties like trees, reserves of water, etc. A walking person should think of beautiful things so that his muscles and tissues are relaxed. On doing this, all the tissues of body get revitalized and freedom from medicines is achieved.

There is a scientific reason behind emphasizing walking naked and on bare foot; which has been highlighted. In winter during excessive cold, walking while wearing a shirt and nicker is alright; but during other days, bare foot and naked walking is advantageous. This is because the direct contact of body with pure, cold, and healthy air is good for health. Impact of cold breezes of air on lower abdomen is the remedy for many diseases. It is said that –

“आरोग्य चापि परमं व्यायामादुपजायते।”

Well known western Naturotherapist A. Joost's main Indian disciple Mahatma Gandhi used to expose to open air with bare body through out his life.

Morning walk is more beneficial if one walks on green humid grass. This facility is available during the days of winter. Grass moistened with rain water is also equally beneficial. This relieves headache, throat pain, cold etc.

#### **What should be the diet of an air-bath taker?**

If a person who is enjoying regular air-bath with habits of balanced diet, regular life style, and adequate rest then it is the most ideal situation. Balanced diet means an easily digestible and nourishing meal. Fruits, curd, milk, vegetables, chapattis prepared from wheat flour etc. are nourishing foods. One should not consume many items at a time. There should be a certain period of time between two meals. Over eating should be avoided. Chilies, condiments, fried items are better avoided.

If after walking there is too much perspiration then it should be wiped off with a wet cloth, or take a bath. Taking bath removes additional heat of body and provides cold. But debilitated patients should not take bath immediately after walk.

Morning walkers should also pay attention to cleanliness of bowels for proper benefit. In morning, walking should be started only after passing stool; and after coming back for walk one should again go to pass stool if required. If necessary, enema should also be used.

#### **Resonance**

Besides external use of air, there is a fine use of air internally; knowing about which any person can get spiritual and material pleasure and health. Just like Pranayam, science of resonance is also a science of fine use of air through which we can protect ourselves from many diseases. Also we can remove those diseases on getting ill.

The science of resonance should be considered as a science of Yoga. This is of great use to human kind. Our every kind of behaviours, profit-loss, joy-sorrow, etc. all the mental and physical problems are surprisingly affected by the action of inspiration and expiration; with the help of which we can achieve happiness and remove sorrows.

As per natural rule, the perpetual process of inspiration and expiration does not occur equally in both the nostrils at the same time; but alternatively it occurs in both nostrils for a certain period. After a certain period, one of the nostril stops and another starts. When resonance also stops in one of the nostrils and begins in another one then it is called rise of resonance - 'Swarodaya'.

In each nostril resonance remains present for 2<sup>1</sup>/<sub>2</sub> minutes, there after it rises in the other nostril and there also it remains present for 2<sup>1</sup>/<sub>2</sub> minutes. This cycle continues day and night.

When resonance runs through left nostril then it is called 'Chandraswar' and when it runs through right nostril then it is called 'Suryaswar'. When resonance runs in both the nostrils simultaneously then it is called 'Sushumna'.

**Left resonance** – When left resonance is running, if a peaceful and steady work is done then it succeeds. Just like making friendship, enchanting, makeup, begin treatment, marriage, donation, making house, begin journey, buying, beginning study, etc.

**Right resonance** – When right resonance is running, hard, difficult and rude works should be done. Just like riding, tracking, exercise, bath, meal, etc.

**Sushumna** – When resonance is equal in both the nostrils then spiritual works should be done. Just like praying to God, Yoga, etc. The works which are to be done during left or right resonance, should not be performed during Sushumna, otherwise it gives adverse results.

How to know as to which resonance is running? This is very simple. Close one of the nostrils and then breathe fast two to three times. Then close the other nostril and do the same. In whichever nostrils it is easy to breathe through is open and the other one is closed.

**Voluntarily changing respiration** – There are three procedures for this.

(1) Press the nostril which is closed with your thumb and breathe through the open one. Then close the other nostril with your thumb and expire out the breathed air. Repeating these steps for sometimes will definitely change the flow of respiration.

(2) Lying down on the side of open nostril and then performing above exercise changes the flow of respiration very fast.

(3) Lying down on the side of open nostril for sometime changes respiratory flow.

These are all the procedures of changing left resonance to right and right resonance to left. Now below is the procedure of changing respiratory flow to 'Sushumna'.

While keeping one nostril closed, breathe forcefully with the other nostril and then rapidly exhale it out through the closed nostril. Now, with the nostril thorough which you have exhaled, breathe force fully through it and exhale through the other. Repeating this procedure for 50 times will open both nostrils and respiratory flow will start in 'Sushumna'.

**Relation of resonance to five elements** – Experts of resonance science believe that there is always presence of one of the five elements along with resonance. So long as respiration continues with one nostril, all the five elements (Sky, Air, Fire, Water, and Earth) rise one by one in order, stay there till their respective periods of time and then set down.

How to know which of the elements is present along with resonance? There are many methods but they are so much difficult that without practice a layman can not identify them.

**Just as –**

(1) Presence of element can be identified through the direction of breathe flowing through nostril whether up, down, diagonal or whirling.

(2) Each element has it's own shape. Presence of element can be identified by looking at the shape created by exhaling on a clear mirror.

(4) Through the various 'Chakras' present in the body.

(5) Through the particular taste each element has.

(6) Through the order in which each element arise. Usually firstly air, then fire, then earth, then water and at last sky arise respectively till 8,12,20,16 and 4 minutes in order.

(7) Through the results of elements. The procedure of this is as follows-

Take a fine light peace of cotton and bring it in front of open nostril. Move it towards the nostril gradually. Stop at the point where it starts moving due to respiration. Now measure the distance between the peace of cotton and nostril; if this distance is 12 fingers then earth, if 16 fingers than fire, if 8 fingers than air, and if it is 20 fingers than sky element is present.

### **Miracles of resonance and health improvements through it**

Truly it's fame is amazing. It's performers are very well acquainted with it's miracles and they successfully use it for the health improvement of others as well as of themselves. For the benefit of readers here are some examples –

(1) In morning as soon as waking, whichever side's nostril is open, view the same side's palm. Think of God while caressing your face with the palm. There after whichever side's nostril is open, put the same side's foot on the ground first. On performing this procedure your day will be full of happiness and comfort.

(2) When an illness occurs, as soon as the symptoms are noticed close whichever nostril is open and keep it closed till the disease is cured. By this, health is achieved rapidly and difficulties are not happened to be tolerated longer.

(3) If tiredness is felt due to any reason then lie down on right side. This will open the 'Chandra swar' and tiredness will be removed immediately.

(4) If there is pain anywhere in the body due to muscular problem then whichever nostril is open, should be closed; pain will subside by 2-4 minutes.

(5) When there is an asthmatic attack then the nostril which is open should be closed and the other nostril should be opened. Intensity will be reduced by 10 to 15 minutes. Repetition of this procedure daily will reduced the sufferings within one month. The more frequently the procedure is repeated in a day, the faster the disease is cured.

(6) The one whose left nostril is open during daytime and right one during night time never gets any pain. The person is always happy. If resonance is practiced this way by 10 to 15 days then it starts automatically working that way.

(7) Meals should be taken when right nostril is open. Even after meals, right nostril should remain open for 10-12 minutes. This is the reason for lying down on left side after meals, so that right nostril remains open. On doing this, food digests rapidly and constipation does not occur.

### **Pranayam**

Pranayam comprises of two words, 'Pran' and 'Ayam'. 'Pran' means life or age, and 'Ayam' means span. Thus, the process through which age can be lengthened, life span can be increased is called 'Pranayam'. In terms of Yoga, 'Pranayam' means controlling life. So before knowing anything about 'Pranayam', it is necessary to know about what is life ('Pran') in a body.

What is a life ('Pran')? It is a dynamic energy which is present everywhere in the universe, and the same energy is there in this body also. This is called life. It is through this life that our mind and all the senses function. It is the fine form of life.

### **Three orders of every 'Pranayam'.**

1. Rechak: Exhaling breath. 2. Poorak: Inhaling breath. 3. Kumbhak: Holding breath.

Kumbhak is further divided in to three categories.

1. Antah-Kumbhak: Holding breath in inspiration.
2. Bahya-Kumbhak: Holding breath in expiration.
3. Kaivalya-Kumbhak: Holding breath where it is.

#### **Ratio of Poorak, Kumbhak, and Rechak –**

It is 1:4:2. But for the beginners it is better to maintain 1:2:2.

#### **Advantages of Pranayam –**

Through Pranayam, every mental and physical distress goes away and the performer experiences a true pleasure. We can say that Pranayam prevents every disease from happening. So the performer's body becomes full of grace. The body becomes healthy, symmetrical, and graceful. He will never suffer from old age. He can live a peaceful and happy life and achieve a voluntary death.

Through Pranayam, patients can always have benefits. In case of diseases like asthma and tuberculosis it is definitely very helpful.

#### **Apanayam**

Just as in Pranayam, health improvement is done by controlling respiration ('Pran Vayu'), same way in Apanayam 'Apan Vayu' is controlled to achieve best of health.

From throat to heart, there is control of 'Pran Vayu' and from umbilicus to anus there is control of 'Apan Vayu'. Disturbances in 'Apan Vayu' can lead to many diseases; sometimes it even leads to serious consequences. At this time, the one who knows how to control 'Apan Vayu' can take benefits.

Stool, urine, flatus, etc. excreta of our body are removed with the help of Apan Vayu and thus cleanliness of body is maintained. When this Apan Vayu can not move in body in a proper way then it leads to accumulation of excreta in body and ultimately gives rise to disease. Constipation, headache, abdominal troubles, etc. occur due to Apan Vayu.

Process of purification of Apan Vayu is called Apanayam. Some of the processes are mentioned below; performing them can be of great help -

(1) Distend your abdomen how much you can, and then pull it inside. Try to approximate your umbilicus and back bone. This improves Apan Vayu as well as protects sperm. Now put your both hands on abdomen so that thumb remains on back and fingers remain forwards. Now again distend the abdomen and push it with your left hand towards right and with your right hand towards back. Now distend your abdomen from left to right. After this practice for a few days, abdomen will automatically move from left to right and from right to back and then again left. These rotations should be practiced for many days. After that try to move abdomen up and down and then down and up. By these performances, Apan Vayu is controlled and many abdominal diseases are removed.

(2) While standing, exhale your breath and then try to pull in both the sides of flank. To practice this exercise it is better to keep a table or other such object which can be hold and lifted. Now lift this object with both hands and repeat the same procedure. This way, stool automatically comes out. Now without using table, put your both hands on knees and after exhaling, try to pull lower abdomen inside. When stool starts coming out then hold your breath whether in or out and then remove stool. With this procedure also, Apan Vayu is controlled and many abdominal complaints are removed.

(3) You must have seen dogs and cats stretching their bodies. Lie down in the same position; spread your arms straight forwards. Rest your chin or cheek to ground and separate your knees. Keep your back as

low as possible. Now try to push out abdominal gas and then pull it back again. This relieves abdominal pain, gaseous distention, and headache. In Apanayam only 'Rechak' and 'Poorak' should be performed and not 'Kumbhak'. On completely relaxing abdomen, gas is released.

### 3. Fire therapy ('Agni Chikitsa')

Fire is the third useful and the major element among five. Air and Sky are the invisible elements Like The Almighty. Agni is considered God and is worshiped according to our sacred books. In the first mantra of 'Rugveda', Agni has been transcribed and worshiped as God. In the 'Gayatri Mantra' also which is the chief mantra, there is worship of founder of fire – Sun. Religious Hindus and Zoroastrians (Parsis) believe and worship sun as their God.

Sun does not only provide heat and light, but it also provides intelligence and long life.

“सवितानः सुवतु सर्वातीतं सवितानो रासतां दीर्घमायुः ।

Means “Let the paramount light which is lighting the whole world give us intellect and long life.”

It is the fact that the more a person utilizes sun light, the more his intellect is developed. With the use of sunlight, there comes a magnetic power in our brain which makes a man intelligent. Our ancestor Rishi-Munis became intelligent with the worship of sun; and now it is a question of doubt whether an equivalent intelligent person will be born on this earth or not.

With the Fire element health and wealth are gained.

“सूर्यो नो दिवस्यातु”

“अग्निं पार्थिवम्यः ।”

Means “Let the Sun protect our days and fire protect our health and wealth.”

“नमः सूर्याय शांताय सर्वरोग विनाशिने ।

आयुशरोम्यमैश्वर्यादेहि देव नमोस्तुते ।”

Means, “We pray the Sun which provides peace and destroys all sicknesses. Oh Lord Sun, give us life, health, and prosperity, we honour you.”

No matter if people of other countries do not understand importance of sun, in India sun has been considered as the originator of every object. Through Indian view point, the major organ of Lord Sun is eye because sun is directly present and it can see every animal, whereas this is not the same case with other Gods.

It is mentioned in Yajurveda that - “चक्षोः सूररिजायत” – Means sun is the eye of God. But actually sun is the eye of everyone because it is because of sun light that we can use our eyes. Without sun light, we are almost blind.

This way there are many quotes in our Vedas about sun which proves that we Indians have always been believing in the importance of sun. We have been worshiping sun and fire since the time immemorial because there is no life without sun. Not only in India, but in Rome, Unan, and Misr also sun is considered God. In Japan there are many temples of sun. In South America also there is a big temple of sun.

‘Surya Namaskar’ which is the part of our worship, is also a good exercise. In this procedure, water is poured before sun with a spirit of reverence. This is a very useful and health improving procedure. Scientists have found that in morning there are more ultraviolet rays in sunlight which are helpful for health. Sun rays have many other frequencies than ultraviolet. There are many objects through which only ultraviolet rays of sunlight can pass. One of them is stream of water; means when we pour down water in morning before sun then sunlight passes through the beam of water and ultraviolet rays are impacted on

our body and provide benefit to us. This is why this procedure has been given a religious form by our ancestors.

Actually if we see, sun is the founder of the world. Because the root of every object in the world is formed out of the different types of combination of sun rays. It has been said that the sun leaves its sperm in its seven colours and the moon leaves ova in its rays and that is how the world is created. Creation of every object in the world – metals like gold, silver, copper, zinc, iron and gems like - diamond, emerald, pearl etc. is owe to the sun rays of various colours. Every living organism's life is dependant up on sun light. One German therapist has said that, "Water is necessary, air is more necessary, and sun light is the most necessary."

Rests of the other four elements are satiated by fire. With this only in the world there is life, there are flowers, fruits ripe, medicines have their properties. It is through this element that clouds are formed out of sea water and they drench the land. With this only our food is digested and assimilated.

Joy, sorrow, sin, desire, anger, affection, love, fascination, etc. tendencies also originate from the combination of frequencies of sun light.

The erudite of sun sign can fuse or degenerate objects very easily, can construct or destruct. Conversion of iron into gold, awakening dead into life are all possible with this science. The learned people of this science are till date present in Himalaya and Tibet. Western countries have developed atom bombs and radiations based on this science only. But these inventions are negligible compared to the enormous energy of sun rays.

The limit or Veda or 'Shabd Brahma' is considered up to Solar system. After that starts what is called 'Brahmalok'. Rise and fall of every other element depends up on sun and fire. Fire element itself is sun. 'Omkar' is also sun. Because of its constant unsteadiness it is also named 'Ravi'. God's glitter itself has created sun.

On absence of fire element body becomes lifeless. And on shortage of fire element body becomes victim of illnesses like lethargy, debility, anorexia, drowsiness, constipation, swellings, paralysis, gout, etc. Eyes, nails, tongue, urine, etc. become yellow or red. Taste of mouth becomes bitter. Temper becomes irritable, body becomes thin, and dryness of organs and increased thirst are experienced.

1. Animal body is colourful. Externally visible as well as internal organs are all different in colour. Frequencies of speech and thoughts are also colourful. The whole human body is a blend of colours.
2. Dependency of body growth up on sunlight, sun rays, and heat of sun is a scientifically established fact. If dependency of animal life and health is up on sun then treatment with colours of sunrays is undoubted. It is a natural law that the more natural a therapy is, the more effective it is.

#### **Treatment of diseases with sun light**

The anti-disease properties of sun light have been discussed. Here something about treatment through it will be discussed.

The sun light which can destroy the whole world within a moment, the sun light due to which prosperity, beauty, energy, and life are blossomed in every particle of the world, the sun light, golden rays of which fetch droplets of water from sea and give rise to sprinkles of rain to scatter its magic all over the earth, if it is said about this sun or its light that it can not do anything for life or it can not make animals free of diseases than how wrong and improper statement would it be! It is altogether a different matter that we do not know how to utilize the power of healing of this greatest source of energy for the treatment of diseases, but that does not mean that it does not have that healing power. We can not deny of the truth that when the sun can do many amazing things, it is not a big deal to cure the toughest ailments for it.

Thus, sun is the blessing of God for the treatment of diseases. Famous doctor Rickly has said that human is the animal of air and light. So in the air and light up on which our development and life are dependent, must be having curative powers also. For human welfare this doctor has mentioned light as the supreme. He says that.

**“Water is good, but air is better and light is the best.”**

Those who know geometry are well aware of the fact that the people of Bornio Andaman Island and Bankver Island are continuously exposed to sunlight, so they do not know what disease is and in physical strength there can barely be any human race in the world compatible to them. And on the contrary, other human races that do not get adequate sunlight have to suffer from skin problems as well as bone related, and blood related problems; because in a land which is deprive of sunlight there can not be grasses or trees, then how can humans remain healthy. For example, at many places in Alps range there is lack of sunlight, so people suffer from many diseases here. Some of them are even mentally retarded or disabled. These people if shift to a place where sunlight is available, their health improve. This proves the healing power of sunlight. There is a proverb also which says, “Let the sunlight in and keep doctors away”, which is very much appropriate.

Today there are many ways of treating diseases. But for this purpose, natural powers are the more useful among which as mentioned above, sunlight stands at the top.

In sunlight therapy there are many ways for utilizing sunlight, which should be performed after a proper understanding otherwise there can be harm instead of benefit.

#### **Sun bath (‘Sapta Kiran Snan’)**

Sun is also called ‘Sapta Kiran’ or ‘Sapta Rashmi’. In myths the seven colours violet, indigo, blue, green, yellow, orange, and red have been compared with a seven faced horse. These seven colours combine to form white colour and these seven colours have the healing powers. These seven colours can be achieved through sun-bath.

Usually everyone enjoys sun-bath in the days of winter. But in case of a diseased condition, it helps only if taken in a scientific way.

During taking sun-bath, following points should be kept in mind –

(1) Head should be protected while taking sun-bath. For this, head should be kept under shadow or it should be wrapped with a wet linen or green leaves (Preferably a leaf of banana). Before going to sub-bath it is necessary to first wash face, neck, and head.

(2) Do not take sun-bath in a heavy sunlight. Early morning or evening time is better.

(3) Gradually step up the time of sun-bath. Do not take sub-bath for long at a time. It should not be taken for more than one hour because any food whatever helpful, if over eaten then it harms. The same thing is there with sub light. Sub-bath if taken up to a proper period of time, it is advantageous. Vital energy increases, bones become strong, vitamin D is received, and many diseases are cured. But if it is taken in excess, then skin burn occurs, appetite is reduced, and bones get excessive vitamin D unnecessarily. In a diseased condition, sun-bath should be started with 7 minutes in the days of winter and with 4 minutes in summer.

(4) During taking sun-bath, the period of time you want to take sun-bath should be divided in to four and then different areas of the body should be exposed to sunlight by lying on back, abdomen, left side and right side so that no part of body remains unexposed.

(5) If sun-bath is taken on naked body then it is the best. Or one can also wear undergarments. Ladies can take sun-bath wearing a thin petticoat or undergarments.



- (6) In an open air where breeze of air is not too much is the ideal place for sun-bath.
- (7) Sun-bath should be taken 1½ to 2 hours after meal. Same way one should avoid taking meal immediately after sun-bath.
- (8) After sun-bath, take a shower with cold water or sponge with wet linen and then take a stroll for some time.
- (9) After taking sun-bath if you feel energetic and enthusiastic then consider it to be successful.
- (10) Take sun-bath regularly everyday.
- (11) In India 12:00 noon to 2:00 pm in winter and 8:00 am to 10:00 am and 3:00 pm to 5:00 pm in summer is the perfect time for sun-bath. Sun-bath should not be taken when there are chances of heat stroke.
- (12) Those who have fever or heart trouble should not take sun-bath. In case of lung diseases, sun-bath can be taken when there is low grade fever; but according to the rule, sun-bath can not be taken during fever.

#### **Use of hot air, hot water, and hot earth for the treatment of diseases**

Use of fire element for the treatment of diseases can only be done through the remaining four elements – sky, air, water, and earth. Use of sun light through the sky element has been highlighted. Now we will think of it's use through air, water, and earth.

In Naturopathy, hot water bags, hot bricks, hot earth etc. and steam, hot water, hot wet clay, wet linen etc. are used.

For therapy, use of water having more than 120 ° temperature should not be done. But our body can tolerate steam having 140 ° and hot air having 300 ° temperatures. In treatment, water having temperature according to following list can be used.

Tepid	82 ° to 92 °
Neutral	91 ° to 94 °
Warm	94 ° to 98 °
Hot	98 ° to 104 °
Very Hot	104 ° to 120 °

For the treatment of diseases, use of fire element should be done with proper understanding just like use of other elements. Properly conducted procedures definitely give advantage and those done improperly may harm also. Initially there procedures should be mild and short according to the condition of the patient.

#### **4. Water element therapy**

##### **Water element**

In the destruction phase the whole world gets submerged in water. In creation phase it again rises from water. During the origination phase of the world from the conscious power of God, after creation of sky, air, and fire, sap is created. From this sap, finally water originates. This sap and water elements are the same in their pure form, but after getting mixed with other physical elements this sap becomes sweet, sour, bitter or salty.

Making things wet, giving shapes to clay, quench thirst, keeping living organisms alive, making thing soft, alleviating heat, providing cleanliness – are all the properties of water.

Removing delusion, unconsciousness, thirst, and sleep, providing energy to body, removing toxins of body, becoming the reason for the six types of juices (saps) are the usual functions of water. coldness, simplicity, lightness, cleanliness, universality, permeability, and mobility are the natural properties of water.

Water is the fifth element for protection of life. It is as important for life as air is to breathe. In our body 70% part is water. In our eyes 98.7%, in heart 79.5%, in lungs 70%, in blood 80%, in bones 25% and in brain 90% is water.

The world had begun with water which is proved through scientific theory of evolution, mythological theory, etc. Thus our growth is dependant upon water; we can not live without water. Water is God, water is our care taker, and water is our guard. Atmosphere is actually a layer of vapour if the water part is omitted for a moment from air, and air is make water-free then there won't be any life on the earth. Everything dissolves in water; even glass and oil dissolve in pure hot water. At the temperature of 2000° every metal easily gets dissolved in water. If a red hot iron is dipped in water then water gets a particular medicinal property. At this point, Maharshi Sayanacharya's assertion comes in to mind -

‘यदग्निरापो अदहत् प्रविश्यत्रकूरादन धर्मघृतो नमांसि ।  
तत्र त आहुः परमं जनित्रे समसविद्वान्परिवृद्धयिष तवमनं ॥’

Means, the fire which ignites water on entering it, even angels worship it, the fire which originates fever; oh fever you identify this fire and leave our body.

Water has a property to contain fire which helps in treatment of diseases. Water can turn in to vapour on getting hot and can coalesce into sky and then it again can become the reason for the life of all living organisms by falling back on earth in the form of rain. On getting too much cold it can become as hard as stone in the form of ice. It has a special property to extinguish fire that is why it is successfully used in fever. Clay can also extinguish fire and this is the reason why the combined use of water and clay in the form of clay water bandage works magically in situations of increased heat like fever, abscesses etc.

### External use of cold water

Before we proceed with this topic, it is necessary to understand what effects cold water has on our body.

If a bucketful of water is poured suddenly on a person, then the person will internally feel a jerk and he will seem to have recoiled due to it. This situation is created because of constriction of blood vessels which supply blood to organs. With a jerk the person will feel cold because skin becomes cold due to water and constriction of blood vessels. But these symptoms are temporary and short lasting because immediately after once these symptoms start, it's reaction also starts. Means, the amount of blood which was surged inside, comes back to the surface again. The constricted blood vessels again relax, blood circulation is reestablished, and perspiration starts through which toxins of body come out. This reactionary symptoms are more long lasting and stable. Use of cold water on body in the initial moments feels inconvenient, disturbing, and very cold. But later on it is heat producing, convenient and very much beneficial. Dr. Dilkash has written in his book 'Prakritik Chikitsa' that use of cold water in Naturopathy is done for the purpose of it's reactionary and long lasting effect. It is to be remembered here that the more the temperature gradient between body and water, the more long lasting the reaction will be; so the effect will also be more steady.

### Short lasting use of cold water over body

1. Increases body temperature.
2. Increases skin activities.
3. Increases blood pressure.
4. Stimulates blood vessels of body.
5. Increases and enforces activities of heart
6. Constricts body tissues.

7. Constricts peripheral capillaries temporarily.
8. Increases nutritional power
9. Reduces respiration.

#### **Long lasting use of cold water over body**

1. Reduces body temperature.
2. Reduces skin activities.
3. Reduces blood pressure.
4. Imposes soft effect on blood vessels.
5. Reduces heart activity.
6. Constricts peripheral capillaries.
7. Affects nutritional power very less.
8. Reduces respiration.
9. Constricts body tissues.

This way, we see that the effect of cold water over skin is not just limited to skin but it also affects internal tissues, blood vessels etc; because, the surface area of body is strangely connected to internal parts through blood vessels and nerves. This is the reason why digestive problems are cured by the external use of cold water. Routine bath with cold water increases appetite.

Use of too much cold water or ice over body is harmful. So, use of ice bag or ice water over a patient's body is not safe. Too much cold for body is as harmful as toxic drugs. Use of too much cold water suppresses effervesce of disease. This instead of curing the disease makes it more deep rooted. Old people, debilitated patients, and children should never bath with too much cold water. This may endanger their lives.

How long cold water should be used is also an important question. The important point is that it is the best and most useful to take bath when body is warm. Just like, taking bath immediately after body gets warm following exercise. The reason is that the reaction due to cold water starts immediately due to warmth of the body. But if the body is tired then the reaction is slow and it harms instead of providing benefits. Thus, use of cold water should be avoided in case of excessive tiredness. If after exertion, tiredness is felt then it is better to take rest for a while before taking bath. And if due to some reason it is urgent to take bath then first warm water should be used which should be followed by a cold bath. Not only in case of tiredness but if due to any reason if skin is not warm then warm water should be used first, so that blood circulates more near skin. Due to this only reason in water therapy they first make feet warm before using cold water.

How long should cold water be used depends on age, vital energy, duration of disease, and climate. So the decision is taken accordingly. Usually cold water should be used till it is comfortable. On longer use it gives energy but later on laziness, sadness and discomfort are felt which is not good. In water therapy due to this only reason it has been disallowed to take a cold bath for long time. Reactionary power in old people, debilitated patients, and children gets reduced; so use of cold water for long time is not safe.

### **5. Earth element therapy**

#### **Power and properties of earth (clay)**

Earth is considered easily available and negligible, but it's powers are also equally great. Below are mentioned some properties of clay –

- (1). To alleviate every kind of bad smell there is nothing as effective as clay in this world. This is the reason why people smear layers of clay in their houses. On applying clay on rotten substance, their stench disappears. Dirty hands are made clean by washing them with clay. Dead bodies are buried in earth so that they do not rot and stench. People dispose faecal material on earth but still the earth becomes clean and resumes back to it's original for within a few hours.
- (2). Earth has a power to prevent cold and heat. This is the reason why Yogis apply clay on their body which protects them from intense cold and heat.
- (3). Earth has amazing power to purify water; because of this the water from wells, rivers etc. sources is always clear.

- (4). Earth has got a great dissolving power. On applying a clay bandage, it induces suppuration in boils and abscesses and also heals wound.
- (5). Earth has also got a strange ability to absorb poison. Smear of clay over the stings of snake, scorpion etc. works surprisingly. Critical boils like carbuncle are also healed with the use of clay which is the example of earth's great absorbability.
- (6). Earth has a power of containing water as well as all types of metals in it. Oceans, rivers are all there on the earth only.
- (7). It is the earth which has power to allow growth of variety edible substances having various elements and juices.
- (8). Earth can prevent force of water. So flood water is prevented by constructing dams.
- (9). Earth can absorb heat and extinguishes fire. So wherever there is fire, clay is sprinkled to put out fire.
- (10). Earth can also prevent force of air. This is why buildings do not fall in storms and remain safe.
- (11). Earth can take different forms if added water. Utensils, buildings, sports goods etc. are the examples.
- (12). It can float with the air. There are innumerable suspended particles of clay in the atmosphere.
- (13). The whole world has been created from clay, same way earth can enclose everything at the end. It is said that-

**“Dust thou art to dust shalt return.”**

- (14). Earth has a great power to heal because earth contains chemical mixture of every kind of elements of the world which is not there in any medicine.

#### **Clay therapy**

A wet cloth or a clay bandage both has got similar effect in treatment of disease. But with experiences it has been learnt that where there is inadequate benefit of a wet cloth, a clay bandage is effective there because the power of absorption of increased heat created by disease in body and absorption of toxins is possible only with the use of a clay bandage. This is the reason why various procedures of clay for almost all the diseases of body are not only possible but also very easy.

Clay is a very easily available medicine. It can not decay. It's use in diseases is also very easy. Just filter it, add some water, and apply on the site of disease. Only that much to be done and it will show a very good and surprising effect i.e. cure the disease. Use of clay never harms and always gives benefits; whereas other medicines can harm. Many of the pains of body get almost disappeared with the use of clay which really surprise. Even chronic diseases are surely cured on using clay with patience. In the treatment of diseases, no expensive medicine is compatible to freely available clay.

Whether the disease is internal or external, clay can absorb it's toxin and heat gradually and will remove the disease from body.

The successful use of clay in the treatment of disease is not the recent practical; it is in the vogue in India for ancient times. Many Vaidyas cure biggest wounds with clay bandage where modern doctors fail.

#### **Use of clay in diseases**

In disease treatments following six procedures are done –

- |                           |                            |                           |
|---------------------------|----------------------------|---------------------------|
| (1). Hot bandage of clay. | (2). Cold bandage of clay. | (3). Bandage of hot clay. |
| (4). Dust-bath.           | (5). Mud-bath.             | (6). Balu-Bhakshan.       |

**(1) Hot bandage of clay and procedure to use it :** To make a bandage of clay the clay should be used which is available in the region provided the clay is clean and free of stones. 'Balui' clay is believed good and the clay of river shore is considered the better. For bandage, half of clay powder and half of sea salt mixture are considered the best. A raw brick after dipping in water, the water can be used for bandage. If one has to use clay of farm, then clay should be collected from about 1 foot underneath and take care that it does not contain any rotten material. To use bandage to apply on wounds, burned clay from a stove is considered very good. This is because the toxins in clay are burned due to fire. If clay is to be preserved then it should be dried in sunlight. Without drying in sunlight, clay can not be used for more than seven days after storage.

Pure dry clay should be crushed to make powder and then it should be filtered through a linen or sieve. Now while stirring it with a spoon or a stick, go on adding water so that the paste of clay is neither too thin nor too thick. Now spread this paste over a piece of linen cut in a shape of band which is slightly wider than the area where it is to be applied. Clay should be spread to make two finger or  $\frac{1}{2}$  inch thickness. Now put a piece of woolen cloth over it and then tie, attach, or sue with other cloth so that the bandage does not move. After putting this bandage on lower abdomen and tie with other long piece of cloth around waist. After this the patient should take rest. Clay bandage should be kept in position for 10 to 30 minutes or sometimes overnight. If there is itching at the area, then the bandage should be removed and the area should be wiped with a wet cloth and then the area should be massaged. This is called clay bandage. Use of woolen cloth prevents loss of heat so that the clay becomes warm due to body warmth and it's moisture gets gradually evaporated. The effect of this bandage is not cold, but warm. With this bandage, internal organs of body receive hot fomentation.

If the bandage is to be applied on lower abdomen then it should be 2 hours after meal. After that if you have to then take meal after 2 hours. Sometimes the site where bandage was applied gets swollen and itching is felt. The reason behind is that clay brings the internal sufferings to the surface. So need not fear of these problems and the procedure should be continued. If problem is more, than the area should be given steam bath and than the procedure should be done.

The bandage once used should not be used again because it contains toxic substances.

This bandage is very much useful in all acute and chronic as well as simple and complicated diseases. Especially chronic constipation, indigestion, diarrhea and other abdominal diseases and in fever also it works magically. To remove excess heat of body created due to disease this bandage is even more advantageous than bath. This is because a clay bandage contains two enemies of heat – clay, and water. This clay bandage is excellent in removing pain and burning simultancously.

In chronic diseases the clay bandage should be applied twice a day. In such illnesses, it is better to take abdominal bath after clay bandage. But if one has to take both enema and abdominal bath after clay bandage then it is better to take abdominal bath half an hour after enema.

Majority of diseases are due to abdominal troubles, so along with applying clay bandage at the site of problem if it is applied on lower abdomen also then abdomen becomes clean and the disease is rapidly cured. Many diseases are cured on applying bandage on lower abdomen only. If along with this therapy, fasting is also done or fruit juices, fruits and milk are consumed then it gives excellent results. If one takes resort to fasting then he should not forget to take enema during fasting period.

If the disease is not understood, or if the patient is not in a condition to describe his sufferings then apply clay bandage on the patient's lower abdomen for half an our twice a day, and if necessary thrice a day; along with that give enema following each application or after one of the applications. This will certainly control the disease, and it is of no wonder that the disease will be completely removed from the patient. When clay bandage is applied, it isolates toxic substances from the body first, then washes them

off and then absorbs these toxic substances from the body to remove them. With this it heals heat and swelling of the affected part and provides coldness to the body.

Clay bandage can be applied on any diseased part, e.g. on throat in case of throat problems, on chest in case of chest diseases, on back in case of muscular problems, on joints in case of joint problems, and in case of spread of toxin in the whole body, clay should be smeared all over the body.

**(2) Cold bandage of clay :** When after applying clay bandage on affected part woolen cloth is not used, then it is called the cold bandage of clay; because in this case it works as a cold bandage. In case of snake bite, scorpion bite, etc. this bandage is used.

**(3) Hot clay bandage :** When clay is made hot after adding water, then it is called hot clay bandage. In case of wounds, sprains, etc. this bandage is used. In females in case of uterine troubles, this bandage is very much helpful but in case of doubt of possibility of abortion, it should not be used.

Just like hot bandage of clay, here also it is necessary to put a piece of woolen cloth

**(4) Dust-bath :** About this topic, it has already been described under 'Earth element' before. This bath is very much helpful in skin diseases.

**(5) Mud-bath :** As per described under 'Earth element Therapy', clear and stone free clay is crushed and is added to water, thus formed mud is applied all over body or over some particular parts of body according to requirements; and this is called 'Mud-Bath' ('Pank-Snan'). This has been admired by Dr. A. Joost and Dr. Felke. A sea-shore or a shore of other water resource where a clear mud appears after water reduces is the best place for mud-bath. Greasy clay is very much useful. Mud has a great power of putting off excess heat of disease and healing disease; because the radium element of mud when mixes up with water then its healing power increases.

For mud-bath, mud should be applied all over body and one should expose to sun light. When one smear gets dry, another smear should be applied. This should be continued from 15 to 60 minutes. After that once clay gets dry, a proper bath should be taken. In diseases like eczema, ring worms, leucoderma, etc. and in impurities of blood this bath is advantageous.

There is one more way to take mud-bath. A trench of the depth equivalent to a man's height or up to chest is excavated and is filled up with mud. There after the patient is placed inside naked in a standing position. A patient with good vital strength is kept in this position for ½ to 1 hour and a weak patient is kept for 5 to 10 minutes. This procedure if continued for one month, it surely cures diseases like gout, skin diseases, backache, headache, abdominal pains, swellings, constipation etc. Snake poison can also be removed by this procedure.

#### Sample questions for study

1. Describe components of water therapy.
2. Describe benefits of earth therapy.
3. In sky element therapy, which elements are used?
4. Describe main procedures of fire therapy.
5. In what forms steam-bath can be taken?

**(Courtesy –** In the writing of this chapter the book 'Prakritik Ayurvigyan' by Dr. Rakesh Jindal has formed the basis. Our special thanks to the editor and the writer of the book on Naturotherapy.)

**CHAPTER: 19 –  
REGULAR LIFE STYLE AND ACCORDANCE WITH NATURAL POWERS  
AIMS:**

1. Discussing life style.
2. Acquiring general knowledge about natural powers.
3. Achieving competence to maintain balance between various situations of life style and changeable nature.

**TOPICS**

**I. Preface -**

**II. Regular life style**

1. Balance and controls in diet.

**III. Accordance with natural powers**

1. Controllable and uncontrollable urges.

**I. Preface -**

There are three important parts of life style –

**1. Diet** – Whatever we assimilate from food, we get energy through them to perform all the physical activities.

**2. Atmosphere** – Our actions towards our atmosphere with which we are in continuous contact, makes the second point of life style.

**3. Behaviour** - Our actions towards ourselves (i.e. towards our own body and our mind) as well as towards others – This forms the third important point of life style.

Usually when we talk of life style then it means as to what we eat, how we eat, when we eat, what, where and how much we sleep, when we sleep and when we get up, how we conduct our personal, social and family responsibilities, how and how much balance we can maintain between our privileges and duties, etc. For a healthy personal life and with an aspect of a healthy social structure our view points and behaviour should be similar in the above mentioned points. According to Acharya Mahapragya, irregular and undisciplined life style is the reason for many health related and social problems. We have lost our cultural heritage in imitating the so called modernization; as a result we are facing many physical and mental illnesses as well as social perversions. It has been cleared in Ayurvedic principles that if we can regularize our life style and establish concordance with those natural powers due to which we have been created, then the path for freedom from all difficulties will be uncovered for us.

**II. Regular life style**

**1. Balance and controls in diet**

Diet is a very detailed topic. Whatever is consumed e.g. food, water, swallow etc. are called diet. Whatever our body receives in any form has effects on our body. In Ayurvedic view point, these things change our 'Tridosha'.



The diseases which were in vogue 50 years back are less seen now. There has been a large change. Those days, acquired diseases were more prevalent due to lack of health related knowledge. But now these diseases are more commonly found among economically backward class of people. Labour class of people residing in slum areas suffer from diseases like cholera, diarrhea, malaria, typhoid etc. No one is found to be suffering from ulcers, insomnia, diabetes, colitis, depression etc. among these people. Some of them are found to suffer from malnutrition due to poverty. Those families which have more children and fewer earners are deprived of proper nutrition; so their children suffer from deficiency of vitamins, protein, and minerals. In India, people of high economic group are not different from western people. A poor person's malnutrition is totally different from that of a rich man residing in any part of the world. Rich people diseases are basically due to irregular meals, excessive alcohol, smoking habit, drugs habit etc. In western countries, there has been a drastic change in food habits of high society people. Technological development and industrialization are also responsible for this change. Eating hastily, eating readymade food, tin food, and some of the recipes of food are not acceptable in natural life style. These need immediate changes.

In Ayurveda, balanced diet does not mean tasteless food. Ayurved emphasizes on balance between time of meals, place of meals and amount and quality of meals according to one's tendency. Remember, if meal is too tasty then it does not mean you should go on eating. This can give rise to pain in abdomen. If you have craving to eat more due to taste then try to convince yourself like this –“I just want to limit myself up to the pleasure of having tasty food. I don't want myself to get in to troubles like obesity, abdominal pain, and liver problems out of getting beyond this pleasure. So I should as much eat as it is necessary for my body.”

Some people calculate the amount of calories they are receiving from their diet. You are not a machine which needs oil, water, or petrol etc in a particular quantity. You should take as much food as it is necessary in accordance with internal and external environment. In humans there are cravings and feelings like taste, smell etc. and the process of taking meals is related to pleasure and social work. When you waste your energy for calculating amount of calories you are receiving then how can you enjoy your food? Whenever you feel satisfied while having meal, stop eating. Appetite sometimes can increase in spite overeating and can reduce on under eating. Some children have a disease of eating less that finally lose their appetite.

Initially these types of people eat less due to many reasons like a trivial illness, emotional reason, and monotonousness of food. Gradually their appetite reduces. Due to prominence of 'Kaf' in childhood appetite is suppressed. This way eating less is as dangerous as overeating. Some people start eating very less to reduce their weight. This perverts appetite. Whenever you want to increase or reduce your appetite then do it gradually. Concentrate on your obesity and habit of overeating simultaneously or else complexity will increase and it will be then difficult to come out of it. When people over eat in parties for about ten days then the problems start. This increases their appetite and weight. If they go on satisfying their appetite then they overeat. This means that we should keep control over our appetite and we should not allow such situations to rise which imbalances our diet and appetite and we start overeating or under eating.

Second meal should be avoided till the first meal is completely digested. If you eat again during digestive process then the first meal will get mixed with the food taken later on; this will imbalance all the 'Doshas'. So besides quality of food, interval between two meals is also important. In Ayurveda it has been stated that we should keep in mind in relation with food that there are three parts of our abdomen. First part is for solid food, second part is for liquid, and the third part is for 'Tridosha'. While eating it should be kept in mind that two third part of abdomen should be occupied and one third part of abdomen should be kept empty for 'Tridosha'. Charak has said that food has two types – less, and excess. Less eaten meals give rise to reduction in energy, tone, and development and 'Vayu' moves upwards. This situation harms ageing, immunity, and energy; it ruins body, brain, intellect, and senses. Eating too much deletes 'Vat',

'Pitta', and 'Kaf' and they get distorted. Distorted 'vat' leads to abdominal pain, bodyache, syncope, vertigo, digestive disturbances, spasms, etc. problems. 'Pitta' leads to fever, delirium, diarrhea, Thirst, vertigo, etc. problems. 'Kaf' gives rise to indigestion, fever with chills, heaviness of body, etc.

It has been said about food taken in an inadequate quantity that the food which is heavy, tough, dry, disliking, giving rise to burning, dirty, distending abdomen, taken in wrong time, taken during mental excitations like lust, anger, lure, jealousy, sorrow, fear and aggression also creates the above mentioned problems.

The first importance of food should be to consume it in essential quantity with mixture of those edible elements which balance 'Tridosha'. Common Ayurvedic books contain clear information about this. The second important quality of food is that it should be according to your basic Ayurvedic tendency e.g. those who have a 'pitta' tendency should avoid 'pitta' creating food. But they should take food which has a power to reduce 'pitta' so that balance is maintained.

The third important quality food should have is that it should be able to cure minor diseases in their primary stage by balance of 'tridosha' e.g. if your blood pressure falls due to hot climate then you should immediately take cold water in a good quantity, add something sweet to it and drink. Same way if you have pain in muscles due to excessive heat as it may happen due to decreased salt in our body, then take cold water with lime and salt and drink it. Take a glass of cold milk at bed time to remove acidity.

Now we will discuss about taking meals according to time and country location. Those who are residing over mountains will require different food from those who reside in deserts; because different locations have different qualities of 'tridosha'. Those who do not consider these things get ill on change of place. Forest area is chiefly 'vat' in its tendency whereas seashore has chiefly 'kaf' and 'pitta'. Desert area is chiefly 'vat-pitta'. Mountain area is chiefly 'vat-kaf' and swampy areas are chiefly 'kaf'. You should cautiously understand your problem, analyze it in context with your location, and then change your diet accordingly to treat yourself.

When people travel from one country to other then they should change their dietary habits and pay special attention to it. For example if you travel from a cold country to a tropical country then you should reduce your food intake and increase quality of food. In the countries having hot weather, those food items should be avoided which can increase 'pitta'. Liquids should be preferred and cold bath should be taken. Light meals, fewer amounts of fat, fruits, and salads, curd, milk and more amount of cold water should be taken.

There are so many aspects of meal. First aspect is meal according to age. In each age group (childhood, youth, old age) a particular 'dosh' is predominant so you should consume food according to your age group. Time, climate, season, etc. aspects should be considered.

**2. Physical changes and addiction** – Three subjects which ultimately give rise to diseases in higher economical groups should be given consideration. These are – diet, alcoholism and tobacco chewing. Excessive eating and alcoholism leads to obesity. Obesity later on creates big problems for health. In Ayurveda, eight defects have been mentioned in obese people – reduction of life span, sluggishness, impotency, weakness, unpleasant smell, excessive perspiration, excessive appetite, and abnormal thirst.

Charak has said that obesity is due to excessive eating, heavy, sweet, and cold foods, sleeping in daytime, remaining undisciplined, hereditary tendency, and lack of mental work. In obese people there is an excessive deposition of fat due to imbalance in metals.

Remember that if you have put on weight then you will have to endure this weight. Thin people also have same liver, heart, kidneys, and other organs as obese people have. But the difference is that in case of obese people the organs have to strain to provide nutrition to tissues and bear the excess weight. For example, suppose your initial weight was 70 kg, and now your weight is 85 kg. This is exactly like as if a

man of 70 kg is carrying a 15 kg suitcase with him all the time. Who will like to carry this much weight all the time? Obesity is even worse than this situation because the excess of weight is part of your body and you will have to provide nutrition to this part also.

People, who have proper weight, have properly covered bones. Skin is neither too loose nor it is hanging. Thighs, buttocks, and abdomen should not have excess fat. Some people have more fat deposition in some of the parts. To reduce over weight, Yoga should be performed, diet should be controlled, sleeping should be avoided during day time, and fat free food should be taken. To get freedom from obesity, a strict control over senses and a disciplined routine has to be observed. This needs a great courage. You must not bow down to temptations and must take simple food. You will have to be firm in your efforts, only then it is possible to lose weight. If you surrender in between then whatever weight you have lost, will increase again.

Charak has said that obesity is due to excess of 'kaf' and 'pitta'. To reduce obesity those edible substances should be consumed which have less amount of 'kaf' and 'pitta'. Hot, rough smears should be done. Obese person should not eat fatty and cold food. Night watching should be avoided and physical and mental exercises should be increased.

Quite opposite to obese people, there are some people who in spite of taking adequate food, are lean and thin. Excessive food can not increase their weight. To gain weight it is necessary for them that they do not take mental strain and do not get disturbed by business and responsibilities. These people should take food having cold tendency, ghee, massage, and take adequate sleep. Sleep, rest, comfortable bed, tension free mind, pleasure, curd, ghee, butter, sugar cane, rice, wheat, bangle gram, jaggory preparations, white dressing, diagnosis of deformed 'tridosha' in time, energizer substances etc. help in gaining weight and development.

Ayurveda and Naturopathy do not tell us to make our lives uninteresting, but they have mentioned the ways to increase our pleasure. But the craze to achieve this pleasure should not be so frantic that the person damages himself. A true happiness is never destructive in any form. If you are sure that what you call happiness is destructive then the definition of happiness needs revision. If you are smoking all the day and going on emptying alcohol bottles one after another and then if you say that it is giving you a great pleasure then be informed that it is not a real pleasure. You must have barely enjoyed cigarette, you just lit cigarette and went on taking puffs to turn it in to smoke. How can one taste 50 cigarettes a day? Same way, every day evening repeatedly pouring wine in to a glass, and drink it. How can this be of any pleasure? Some people enjoy rising and setting sun. If earth starts revolving with such a speed that sunset and sunrise are seen every ten minutes then is it possible for us to pay attention to sun? Suppose that a person is so eager to see sunset that he everyday goes to a particular place; then does not it sound that the person's wish is just mechanical? To expect happiness up to such an extent is like becoming slave of the habit.

Alcoholism gives rise to peptic ulcers, colitis etc. Liver is destroyed and besides, many health-related problems can occur. Gradually it destroys memory, rationality, and intelligence. The list of diseases created by smoking is very big. This can give rise to diseases varying from a minor respiratory problem to asthma or lung cancer. Smoking in constricted or polluted areas is more dangerous than smoking in open and clear atmosphere. In metropolitan cities we inspire a good amount of polluted particles in our breath, which give rise to many diseases. It is said that residing in Mexico City is as good as smoking one packet of cigarette everyday. New Delhi is still worse. In this condition if you are residing in a metropolitan city and you are smoking cigarette also then surely you add one packet to whatever number of packets of cigarette you are smoking a day.

## **2. Redemption from smoking and alcohol is necessary**

If you are smoking as well as taking alcohol (either daily or once a week) then reduce the amount of alcohol as well as smoking and use them while keeping in mind their adverse effects and quality. Take a

piece of paper and jot down a mark on it every time you smoke. This way, perhaps your hand will draw back while making marks; you will wince before smoking or drinking. This will break your mechanical repetition; possibly your conscious will arise and you may start giving priority to your life.

Never surrender to your habits. You are the master and you must have an ability to command yourself. A mentally sound person must have qualities like controlling his senses, self-control, and self-restriction. Remember that mind controls mind. For mental control, 'Pranayam' and 'Anupreksha' exercises are very much helpful. If you learn to control your mind and get rid of those addictions which are destructing your health, then you will become strong enough to deal with other problems of life in a better way.

Among the experiments of life science, experiments of freedom from addictions are very effective in getting freedom from smoking and alcoholism. Accepting them is very much advantageous.

Smoking and alcohol both increase 'vat' and 'pitta' in our body and contaminate 'agni'. This may give rise to high blood pressure. Tobacco can give rise to muscular problems and also it can affect nervous system. This may also cause sluggishness in action and offensiveness of urine. These effects are exaggerated in those who have 'pitta' tendency.

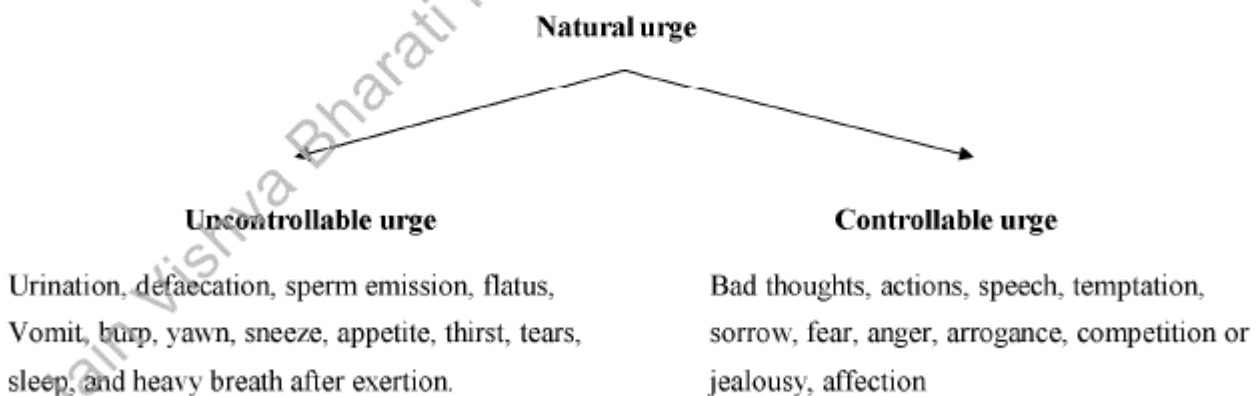
In short, all these mean that we should live our lives with rules and regulations. Malnourishing food, smoking, alcoholism etc. should not be used excessively. Surrendering to habits and being mechanical gives rise to imbalance of body and invites many diseases.

### 3. Accordance with natural powers

Nothing is stable in nature. Everything is subject to change, and this variation reveals tomorrow. Sequence of changes from one situation to another is life. In our body, there is the same soul was there during our embryonic phase and childhood, and later on also when we become young and then old. In Ayurveda it is called 'Jiv' (soul) which never changes, never gets old and never dies.

Our external world is formed of physical elements. Our internal world is a divine element which never changes. To learn to establish synchronization between them is the part of life.

**1. Controllable and uncontrollable urges** – Natural urges have been divided in to two categories – controllable and uncontrollable.



#### Uncontrollable urge

If a person tries to suppress his uncontrollable urge then it will create harmful effects on his health. Some people suppress their urge due to busy schedule, recklessness, and laziness. In long meetings, people do not get up to release their urge due to fear as to what other people will think. If such urges happen to have to restrain for long time then it leads to dire consequences.

Pain in bladder or urethra, dysuria, headache, backache etc. problems arise out of restraining urinary urge repeatedly. To get rid of such problems the patient should sit in a tub filled with warm water and do massage.

On restraining sperm pain in penis, pain in testicles, bodyache, cardiac pain, dysuria etc. problems may occur. To treat these problems massage, bath, rice, milk etc. are useful.

On restraining flatus gaseous distension of abdomen, pain, tiredness, and other abdominal problems related to 'vat' can occur. To get rid of diseases, oil massage should be done.

On restraining vomit itching, black spots, anaemia, fever, nausea etc. problems can occur. Emesis, light food or fasting, exercise, purgation etc. can give relief.

On restraining sneeze, pain in neck muscles, headache, migraine, weakness in genitalia etc. problems occur. Neck massage, nasal drops, and use of ghee after meals relieve these problems.

On restraining burps hiccoughs, tremulousness, heaviness in chest etc. can occur. In this situation, treatment should be aimed to reduce 'vat'.

On restraining thirst dryness of mouth and throat, difficulty in hearing, tiredness, depression, headache, chest pain, pressure disturbances can occur. In this situation, cold drink should be taken.

On restraining tears, burning in eyes, eye diseases, heart diseases, vertigo etc. can start. For this situation, a deep sleep and reassurance are helpful.

On restraining sleep yawning, bodyache, drowsiness, heaviness in eyes, uneasiness, forgetfulness etc. complaints occur. Sleep gives vital energy to body and mind. On taking inadequate sleep uneasiness and tiredness occur. To relieve these problems a good sleep and massage are required. Performing 'Yoga Nindra' is very much beneficial.

On restraining fast respiration after exercise tumour, heart disease, syncope etc. problems can occur. Rest and treatment of balancing 'vat' can relieve these problems.

### **Controllable urge**

After taking information about uncontrollable urge and problems created by their negligence, we will now describe those urges which can be controlled and for the human welfare, they must be controlled. This is possible through control of mind over senses. According to Charak, "Any person, who wishes his well, should prevent his evil thoughts, language, and acts." Temptations, sorrow, fear, anger, affection, immodesty, desire to seize other's property, etc. should be forsaken by intelligent people. A speech which is impolite, untrue, and uncontrolled should be stopped. Emotions and wishes like debauchery, theft, violence, which is creating problems for other should be controlled. Intelligent people should avoid and be careful about excessive exercise, laugh, sexual intercourse, night watching etc. Any person, who crosses these boundaries, meets sudden death. Just like a lion dragging an elephant. Those people who become weak due to excessive sexual intercourse, overweight, excessive walking, and purgation, become victims of anger, fear, and tiredness. Children, old age people, and those who have 'vat' as chief component, suffer from hunger, thirst, and speaking aloud. These people should not perform physical exercise. The one, who wants himself healthy, should accept life style of healthy people.

From the above mentioned statement of Charak the difference between modern therapy and Ayurvedic treatment becomes clear. In modern therapy heart and brain are seen as different entities. If a person goes to a doctor with a complaint of headache, then the doctor treats him but the patient does not still feel relief. Then the patient is sent to Neurology. Here his treatment will be done in a point of view whether the patient had any head injury in the past which has now come to the surface in the form of headache, of there is any kind of infection. If here the doctor is not able to find out any reason then the patient is sent to a psychiatrist with a comment that there is no obvious physical reason of headache so

there must be psychiatric reason for it, so to be investigated accordingly. In Ayurveda, the situation is different. The person who has headache is considered in different aspects like his meals, digestion, threshold, breath, occupation, place of occupation, family situations, other relations, emotional behaviour, social situations, sexual relationship, stress level, etc. etc. In Ayurveda, head is not considered different from body. Head and body are complimentary to each other and are connected. Excessive anger can give rise to abdominal discomfort as well as headache. Same way, 'vat' related problems can increase in our body. Similarly, improper food or cold can give rise to imbalance in 'vat' which can create fear and uneasiness in a person.

Similarly, basic of Ayurveda is body's harmony. But in Ayurveda, the word 'Psychosomatic' does not mean the same as it means in western countries. In western countries this word is used where the problem's root is psychological, sentimental, or mental; and which has no relation in its formation, structure and chemical level. Ayurveda does not believe in body and mind working in different directions, but they are considered complimentary to each other. So it can not be thought that mind is absolutely healthy and body is suffering from various diseases. Both of them are affected by each other. Moreover, the fact is that mind and body are ultimately related to universal truth.

The reason for weak or strong constitution of persons, their intellectual dissimilarity, variation in achievements, etc. are due to their natural constitution. Basic tendency reflects our emotional reactions, and nature of 'Tridosha'. We should control our senses through our intellect in such a way that they get in to only those actions which are promising of a good future and a good health. Temptation and lure does not only mean to be having desire to seize other peoples' things, but it also means to stock material things in a huge amount. In our age the number of enticed people is increasing day by day. Our modern culture which is technologically advanced is nourishing this urge by putting it in rivalry. This urge is considered to be the symbol of progress. This is the reason why there is a lack of satisfaction in humans. For more progress people have got themselves engaged beyond limit. They have to work excessively and they suffer from uneasiness of mind. All these lead to increment in 'vat' and ultimately give rise to 'vat' related diseases like – psychiatric problems, sleeplessness, stress, abdominal discomfort, or blood related problems.

When people go to meetings, establish contacts, and move to distant places for their important works, then they are compelled to restrain their urges. These urges can't be restrained, so they invite diseases and reduce life span. Such a person in between his routine hustle-bustle needs to stop himself for a moment and ask himself, "Why am I doing this? Why am I doing these anti-life works?" What is the meaning of running behind progress and achievements when there is no life, or there is a very short time of life is left? Remember that the priority of life should be life itself. A man surrounded by temptations forgets that every person who rises falls one day. Our stay on this earth is not permanent but it is temporary. So instead of struggling behind big pleasures, it is wise to look for happiness in small things. The journey of life is not going to lead us very far, it is limited. A journey means getting pleasure out of natural beauty, and not only to reach the destination. If you will crazily start climbing the mountain fast to reach to the summit then even if you reach, you may feel tired or fall ill. So rush and engagement to work are not going to provide any benefit. So I advise you to spare time for those works also which you want to do for yourselves.

To brood over sorrows excessively is also harmful for health. Suffering of sorrows can take the form of a disease. Staying crowded by grieves can produce ulcers, colitis, cancers, all kinds of pains and other 'vat' related diseases. We should not see our problems magnified, but we should think that it is not only us who are unhappy. Such people are always preoccupied by self-pity. They give much importance to themselves and their problems. Excessive affection towards wealth, children, husband, wife, etc. gives profuse sadness. Harm to one of these provides grief.

First of all, be informed that pleasure is the condition of mind. It is there in our mind. Pleasure originates from satisfaction. There is nothing in life which is actually frightening; life is a series of events.



There is surely a positive aspect of every bad situation. This world is not going to end because of your grieves. Do not sink in to the ocean of your sorrows. If you see even a faintest ray of hope then hold it and try to come in to light. Yoga, Ayurvedic therapy, and Naturopathy teach us that our joys and sorrows are the reasons of our luck and our rewards. The result of our former deeds is 'Dev'. If you are sad and brooding over your sorrows then you are worsening the situation. With the help of 'Dev' you can improve your actions, and this is your present action which you have to perform. Remember that sadness is the part of life. With our actions we have to work up on it with such intelligence that we do not have to pay for our present sorrows in the future. We have to break this cycle of sorrows.

Remember, everyone has to pay for his deeds. We can not help others beyond a limit, no matter if they are your sons, daughters or other relatives. Ascertain your limits and do not be sad for whichever is out of your control. Too much affection leads to sorrow. To protect us from it, we should think over the short-livingness of our body and relations. Everything goes on changing in this world. We should always try to be immaterial. Put in to practice courage, fearlessness, and straightforwardness. Feeling of fear is destructing. So try your best to face fears. If you are fearless yourselves then don't get fear in to others' minds. If you are a master, ruler or on other similar position then do not try to fear others. Be strong and trust your insight. Our insight and our soul is the reason for life and it can't be destroyed. Whenever you feel fear, concentrate up on your insight.

Basically people speak lie either due to temptations (e.g. businessmen or companies to earn and to sell their items.) or out of fear. To speak truth courage and fearlessness have to be there. When a child breaks some valuable thing, then it becomes fearful. The child fears of parents' fury because the child is little; and that's why the child will speak untruth. Parents should reassure their children that they will be rewarded on speaking truth. Do not create fearful situations before children.

Always maintain a courage to speak truth, no matter if you have to face adverse situations because that. A liar is always anxious about his untruth becoming revealed. Feeling of fear harms respiratory tract, digestion, nerves, and heart. Whenever you feel fear, think about of those mountains which are resolutely standing among whisks of air. Think about the limitless sky, powerful sun. Arouse your internal powers and gather courage to speak truth.

Competition and jealousy are created by lack of satisfaction. We also want those things which others own. On failure to do so, we get disappointed and yearn to achieve wealth. Try to satisfy with whatever you have. Even in adverse situations, think of those people who are living in worst situations. Never think that you will be happy by getting in to a situation in which others are happy. Imagine about a school teacher who is jealous of his neighbour who is a manager in a big company. This school teacher is able to see the manager's wealth and not his tensions and engagements with his business. The school teacher's leisure time during many free days, is much more valuable than wealth. To what benefit the wealth is which compels one to bear ill-health situations and then gradually lead him to those diseases which reduce his life span? Jealousy is a negative feeling; do not waste your time behind such thoughts. Speaking too much or speaking loudly is also detrimental to health. Do not speak louder than usual. Do not shout. Some people start shouting when they are hurt. This manifests imbalance of 'vat'. Speak less, speak slowly. Use those words that do not hurt others. Remember, whenever we hurt others, it harms us.

"Anger is an amnesic"- this has been stated in 'Bhagvat Geeta'. If you want to follow Ayurvedic life style to remain healthy and long living, and keep your memory healthy then avoid anger. Placate yourself with logic to keep away from destructive mentality, and find out proper solutions of problems. Some people get offended by trivial matters and create an idiotic situation.

**Accordance with age related changes :** According to Ayurveda the whole life span of a person can be divided in to three – childhood, elderly, and old age (after 60). Up to the age of 16 'Dhatu' are undeveloped, there is sexual indifference, body is delicate and fragile, and there is predominance of 'kaf'.



Up to the age of 30 'Dhatu' are developing, mind is unstable. Elderly age (mature age) is known by its energy, gallantry, grasping power, memory power, understanding power. At this age 'Dhatu' are in their optimum limits of development, physical and mental powers are well developed, and there is predominance of 'pitta'. This stage lasts up to the age of 60 years. After this, during old age there is gradual loss of energy, brilliance, gallantry, grasping power, capacity, memory, and power of understanding; at this stage there is predominance of 'vat'.

Changes are there in every age. Every moment we grow up compared to past moment. Growth of a child passing through teen age to youth seems very nice. This change looks good and attractive till the age of 40 years. Then it does not look good. No one wants to become old. So at this age every one thinks as if the major part of his life has got over. That is why people consider their past specialties positive and the future negative. Many people start to over-project their past. They do not accept the present as better than past and become anxious about future. But the fact is that every phase of life has its own beauties. Do not think that it was the best period when your mother was taking your care. A child is helpless, weak, and dependent. No doubt a student life is very beautiful, but in that period too there are responsibilities, anxieties, and uncertainties of future. Besides, some of the students struggle due to financial lack and they can not even rest.

There is one more facet of increasing age- disease, deformity, unattractiveness, and dependency on others. Old age is not necessarily so much sad as people think. For all these problems, irresponsibility to health during youth is responsible. During old age we achieve according to our past deeds. Some people talk of investing in various insurance policies or other investment schemes, but they can not spare fifteen minutes per day for meditation and yoga. We should place our foundation of healthy old age during our youth. Our body and mind do not forget past experiences. During old age, old wounds come to surface and old disasters start creating problems. Smoking too much, consuming excessive alcohol, night watching, speaking loudly, losing temper, etc. bad habits do not manifest their effects immediately; but every action leaves its stain behind. Try to make your old age healthy, attractive, and brilliant through your efforts during youth and not to become a senile old man by becoming irresponsible and indifferent.

Do not try to stay young; try to move on to your next stage beautifully. Learn to keep cope with time, accept the reality of elapsed time. Do not fear of past. Accept every day in the form of an elegant and priceless gift. Gather every day as a flower. Try to solve every difficulty of life with such magnificence as if you are making a beautiful painting.

Old age does not mean diseases and deformities. By accepting a life style according to our tendency and time we can avoid deformities. Food, life style, exercise, etc. should be changed according to age. If we do not follow the pace of time and a proper life style then 'tridosha' get imbalanced. If this imbalance continues for long then we become so much debilitated that we become victim of other diseases. In this situation, old age appears early, the person starts losing attractiveness, energy and beauty diminish. Our present actions and mental attitude both play an important role in maintaining youth power.

Men and women when reach around forty, become anxious on thought of old age. Graying of hair, reduction of vision, creases on skin over some parts, etc. warn them and they think that the process of degeneration has started.

Reaching old age is as natural as reaching youth from childhood. The fact is that we start stepping to old age from the moment we originate in mother's womb. This means that the changes occurring in our body are leading us to a certain target. This target is demolition of this body, end of material body. In Ayurveda and Yogashastra, there are some procedures mentioned which can maintain the journey of our life beautiful, happy, and peaceful.

Menopause, graying of hair, gradual reduction in energy by time, reduction in libido, creases, and finally stepping towards death- these are all material changes which should have support and cooperation

of our thought-process. You should not think that these changes are harmful; there is no need to fear of them either. On the contrary you should be ready to accept the basic facts of life that there is nothing which is going to last forever- neither happiness nor sorrow, neither youth nor old age. We are all heading to a particular ending which is in fact not the end but an illusion of the end. Our father, grand father, and others who were there on this earth and now they are not there, but still life goes on. Seasons change, earth revolves, we see sunrises, sunsets, we see moon. Same way when we will pass away, everything will go on. There will always be some people to take our place. Our body merges to those very five elements from which it was created; and the substance of life i.e. soul takes up a new body which is called rebirth.

In this cyclical world it does not make sense to lament on material changes, destructions, death etc. Wisdom lays in that we except the enormity of these changes with pleasure and make efforts to so that we can be happy in our old age. During youth usually people do a lot of fun when the 'Dhatu' are in developmental phase. As soon as they reach the peak of development, a fall starts. This makes them shocked. To hide the signs of increasing age, they accept some artificial ways like- hair dye, skin treatment, and everything which makes them look young. To maintain the energy of youth for long, it is necessary to take steps during the falling stage of 'Dhatu'. One can not think of digging a well on becoming thirty. Many women have to bear sufferings of menopause. Mental sufferings add to these physical sufferings. Sometimes the after-effects last longer. First, you should understand that cessation of menstruation is as natural as its beginning. It starts around the age of 13. Cessation of menstruation is the sign of end of your reproductive power and not the sign of end of your sexual life. Neither is it the sign of arrival of old age. This only means that you won't menstruate from now on, and you won't be able to recreate. To accept menopause with spontaneity, make yourself physically and mentally prepared from the beginning. Minor change in menstruation gives signal of arrival of menopause. In this condition, exercise yoga regularly, take food to reduce 'vat'. These will help to create a platform for menopause. Besides these, meditation, Pranayam, health tonics etc. are helpful.

Eyes, ears, nose, skin etc are sensitive areas where effects of old age are seen. If these are not taken care of, then graying of hair or hair fall starts earlier. Vision reduces and skin becomes lusterless.

Deformation of 'pitta', speaking loudly or speaking too much, stressful life, excessive anxiety gives rise to creases on face. To remove creases of face, above mentioned yoga exercises should be performed. Take adequate food and sleep and take care of your skin. Protect your skin from 'vat-dosha'. 'Vat-dosha' gives rise to dryness of skin and creases prematurely. Try to keep your skin moist and bright to protect it from creases. Massage oil over your skin and do every effort to take care of your skin.

### Questionnaire

#### 1. Assays

1. Describe accordance with natural powers.
2. What is the purpose of regular life-style? Clarify.

#### 2. Short questions

1. Describe chief functions of food.
2. What are the effects of intoxication on body?

#### 3. Objective questions – answer in single sentence.

1. What does food finally provide?
2. Which energy is wasted by anger?

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## **CHAPTER-20: OTHER ALTERNATIVE THERAPIES**

### **ACUPRESSURE, ACUPUNCTURE, MAGNET THERAPY: INTRODUCTION**

#### **AIMS**

After studying this chapter students will be-

1. Able to acquire introductory knowledge of various alternative therapies.
2. Able to learn theoretical knowledge and practical applicability of Acupressure, Acupuncture, and Magnet therapy.
3. Able to achieve expertise in diagnosing diseases through alternative therapies.

#### **TOPICS**

##### **(A) Acupressure-**

1. History
2. Indian culture
3. Definition
4. Classification
5. Zonology
6. Reflexology
7. Abbreviations
8. Instructions
9. Advantages

##### **(B) Magnet therapy-**

1. History
2. Physical properties of a magnet
3. Types of magnet
4. Science of magnet

##### **(C) Acupuncture-**

1. Background
2. History
3. Similarity
4. Yin and Yang
5. Proper correspondence
6. Foot correspondence
7. Three point correspondence
8. Referral point correspondence
9. Secondary correspondence
10. Flank correspondence

#### **(A) Acupressure**

##### **1. History**

Human body is a machine. Everyone knows that in unfavourable situations the parts of a machine can stop working any time. Even if a single part stops working then it makes a difference in the machine's function. Then scientists find reason for it and study that particular part and the reasons for its dysfunction. As far as a human body is concerned, this study is called therapeutic system. Man tried to research continuously to treat himself. It can surely be said that the first system a man had used to treat himself was 'Acupressure'; it is a different matter that the name of this system was given later on. Whenever you feel pain in any part of your body than what do you do? You press it first with your hand. Wherever the pain is- eyes, hands, head, or leg, we press it first with our hand. This has not been told us by anyone. We do the act of pressure spontaneously. Nature has taught us to press the site where there is pain. This is Acupressure. So this is the oldest therapeutic system in the world. Its systematic study was carried out in China, but still its origin is believed to be in India before 6000 years. In the great book of Ayurveda the reference of Acupressure is found; it was known as 'Marma Chikitsa'.

People of China claim Acupressure and Acupuncture to be of their own science and refer it to be 5000 years old. In the ancient books of China, their references are found.

During the time of 'Mouryas' this science was accepted and promoted by 'Buddha Bhikshus'. American Acupressure therapist Dr. William Fitzgerald gave modern move to this science. In countries like China, America, Japan, and Korea, this therapy has been authorized and is being used in hospitals for treatment.

World Health Organization (WHO) is also considering Acupressure. In many countries of world, its teaching and therapeutic centers are being run. In our country also its popularity and importance will increase for sure.

## 2. Indian Culture

In our villages it is a tradition to tattoo. You must have seen tattoo marks over the faces of some village women; this is the evidence of Acupuncture. Ear piercing, nose piercing etc. are the examples of Acupuncture only. Our ancestor did not introduce the necessities of this procedure; they just insisted it to be necessary. Our past generations followed it under an impression that it is a religious process, but they did not study it.

If ornaments are studied, then surprising facts will come to know. Anklets, bracelets, waist band, ear rings, necklace etc. create some pressure on body to maintain health. When we will acquire knowledge of reflexes then the things will become clear. Where ears are pierced is the point of sleeplessness, memory, and paralysis. Where bangles are wore, is the point of prostate and bladder. Where anklets are wore, is the point for sciatic nerve and lymphnodes. Due to continuous pressure there points remain active and healthy and the negative and positive (Yin and Yang) energy of our body (Chi) flows harmoniously. As a result, body remains healthy. Even today in some villages, women feel proud to wear all ornaments and remain healthy too. On the contrary, women residing in cities are losing interest in ornaments. As a result we all know that village women are healthier compared to delicate women residing in cities.

In Indian culture male outfit, clothing, rituals etc. have an important contribution in health point of view. Just like 'Pagdi', sacred thread ('Janeu'), ear piercing, waist band, bracelet etc. 'Pagdi' gives protection from intense sunlight. Sacred thread protects from urinary diseases, bracelet is helpful in male diseases, and waist band prevents hernia.

## 3. Definition

The word Acupressure has been derived from Acupuncture. Acupuncture means treatment of diseases by making punctures over various points of body by needles. Now when diseases are treated by applying pressure to these points then it is called Acupressure.

'Acupressure' is the combination of two words 'Acus' and 'pressure'. In Latin, 'Acus' means sharp object. So, 'Acupressure' means treating diseases by applying pressure over various parts with sharp objects.

## 4. Classification

For detail information, Acupressure has been classified.

## 5. Zonology

In this process, body is divided in to 10 parts in length. It is called 'Zone therapy'. Five parts are over left side and five parts are over right side. For every part of body we find a corresponding point over palms and soles related to the particular zone in which the body part is located.

Human body is also divided in four parts in width. To identify correspondence point hands and legs are also divided in four parts in relation with parts of body. First part is head area, second part is chest area, third part is digestive area, and the fourth one is sex & leg area

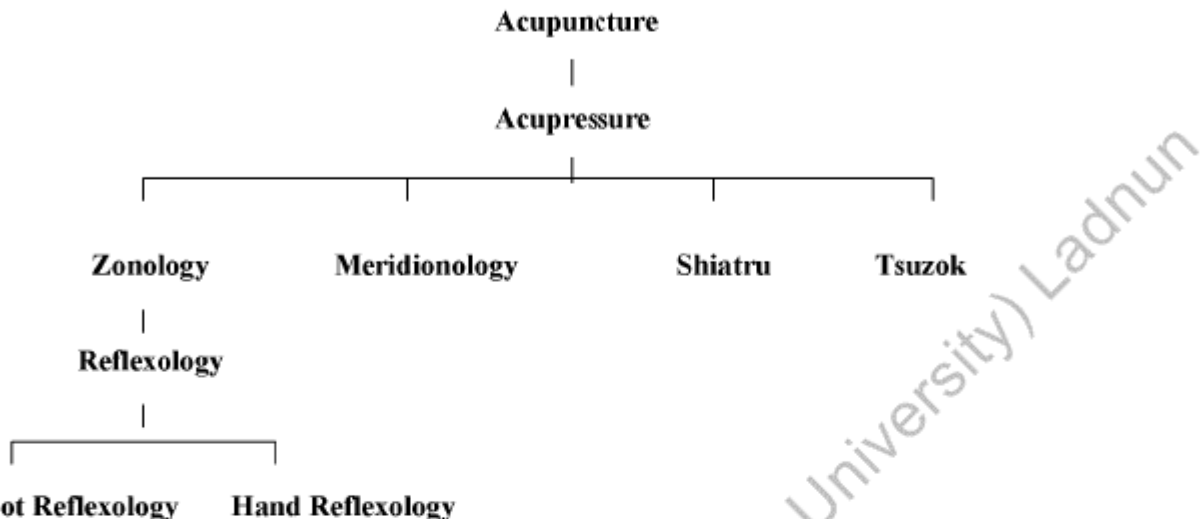
## 6. Reflexology

Reflex points are on many areas. For therapy it is necessary to identify as to which part of body is diseased. The correspondence point for that area is applied pressure to treat the disease. In this, 'Foot Reflexology' is more convenient and more impressive. If other reflexologies are also used along with foot reflexology, then you will get more success.

The endings of blood vessels and nervous system are over hands and feet. The nerves related to various parts of body are present in hands and feet. By looking at the chart it becomes easy to know as to which part of body falls under which of the related areas over hands and legs.

## 6.1 Foot reflexology

Applying pressure over correspondence points over soles and dorsum of foot for treatment is called foot reflexology.



Foot Acupressure is considered superior because of its influence over vital energy in the whole system and also it is a big correspondence area.

**6.2 Hand Reflexology :** Treatment of diseases by applying pressure over correspondence areas over hands is called Acupressure. If a patient's feet are not in a good position or if there is some difficulty in applying pressure over feet, then hand acupressure should be given.

**6.3 Ear Reflexology :** The shape of ear is the same as the inverted shape of a child while it is in mother's womb. Keeping in mind this shape, Acupressure points are identified.

**Acupressure points on ears :** Various points on ears correspond to body parts. Acupressure points of liver, gall bladder, and appendix are only on left ear, whereas Acupressure points of spleen and heart are over right ear.

- |                        |                         |                    |
|------------------------|-------------------------|--------------------|
| 1. Tonsil              | 16. Stomach             | 31. Asthma         |
| 2. Appendix            | 17. Trachea             | 32. Brain          |
| 3. Heel                | 18. Lung                | 33. Teeth          |
| 4. Knee joint          | 19. Lung                | 34. Liver          |
| 5. High blood pressure | 20. High blood pressure | 35. Spleen         |
| 6. Asthma              | 21. Internal ear        | 36. Gall bladder   |
| 7. Hip                 | 22. Eye                 | 37. Neck           |
| 8. Sciatic nerve       | 23. Eye                 | 38. Shoulder joint |
| 9. Buttock             | 24.                     | 39. Shoulder       |
| 10. Urinary bladder    | 25. Eye                 | 40. Abdomen        |
| 11. Urethra            | 26. Internal ear        | 41. Elbow          |
| 12. Kidney             | 27. Upper jaw           | 42. Knee           |
| 13. Large intestine    | 28. Lower jaw           | 43. Hip joint      |
| 14. Rectum             | 29. Lung                |                    |
| 15. Small intestine    | 30. Ovary               |                    |

## 7. Abbreviations

For compliance, following abbreviations are used in Acupressure.

G.P.	- General point
K.U.B.	- Kidney, Ureter, and Bladder
M.O.	- Medulla Oblongata
X. Point	- Sex point
C.N.S.	- Central Nervous System
L. Point	- Local point
10+3+8+3	- Ten + Three + Eight + Three (10 points of thigh, 3 points of knee, 8 points of calves, and 3 points for trochanter.)
Relax	- Relaxing by relaxation process
Solar	- Diaphragm, Solar point
Head Area	- Area of head
Chest Area	- Area of chest
Stomach Area	- Area of stomach
Sex Area	- Reproduction area
Reflex Point	- Correspondence area (Hand, feet, ear point)
Ex. Point	- Extra point
T1 to T12	- Thoracic
S1 to S5	- Sacral
C1 to C7	- Cervical
L1 to L5	- Lumbar

### 8. Instructions for Acupressure treatment

- ◊ Atmosphere should be clean, peaceful, and pleasant.
- ◊ Keep your patient in a proper condition during treatment.
- Patient and therapist both should be in a comfortable and relaxed situation during therapy.
- A therapist should be calm, devoted, service oriented, healthy and having a good character.
  - ◊ With Acupressure observe nutritious diet and light exercise.
  - ◊ Keep at least one hour's gap between meals and treatment.
  - ◊ Treatment can be taken twice a day eight hours apart.
  - ◊ Create positive feelings about life in patient's mind.
  - ◊ Patient should be in a sitting or lying position during treatment.
  - ◊ A therapist should keep his nails properly trimmed.
  - ◊ Before therapy, make the patient relax then observe his face and feet.
  - ◊ Serious patient should be given pressure over Meridian point and then Reflex point.
  - ◊ Patient's threshold, diseased part of body, and part to be given pressure should be considered before giving therapy. As much pressure should be applied as the patient can tolerate. Pressure should be pleasant and not painful.
- One point can be pressed from seven seconds to one minute. The whole therapy should continue from 20 to 30 minutes.
  - ◊ Apply pressure one by one starting from fingers to heels. Watch for results after one week and according to the result, continue or stop treatment.
  - ◊ After applying pressure, pressure should be withdrawn with a jerk so that blood circulation improves.
  - ◊ Treatment should not be given at places where there are fractures, injury, or operation.
  - ◊ During therapy, the patient should not cross his arms or legs.

- In a patient suffering from multiple diseases, the more problematic disease should be treated first.
- Do not apply pressure on bones.
- Use proper equipment on proper place.
- A pregnant woman should not receive this therapy.
- Do not protest if a patient is taking treatment from other systems.
- If a patient is on some medication, then keep a gap of one hour between the medicine and Acupressure.
  - Observe a gap of one hour between treatment and bath.
  - If a point gets pink on pressure, then do not apply pressure over that point.
  - Do not treat a patient if he is on empty stomach.
  - Do not treat an intoxicated or tired patient.
  - During treatment, there should not be any oily substance over either the patient's body or the doctor's (therapist's) hands.
  - Before starting treatment, patient should have passed urine and stool.
  - Patient's both legs should be washed and clean.
  - Initially patient feels pain, but afterwards it will gradually reduce; this should also be reassured to the patient.

## 9. Benefits of Acupressure

1. Produces liveliness in skin.
2. Improves spread of essential elements in body and creates elasticity in muscle fibers.
3. Maintains immunity.
4. The whole body stays functioning and performs actively.
5. This therapy can be done at home.
6. It is a less expensive and non medication therapy.
7. It is free from side effects and easy to perform.
8. Safe and painless.
9. So much easy that even children can learn.
10. It can bring changes in temperament.
11. This therapy does not need much time and can be performed anywhere at anytime.

## (B) Magnet Therapy

### 1. History of Magnet Therapy

In ancient times 'Aryas' used to call magnet as 'Ashma', 'Ashm', or 'Siktavali'; and they were very well aware of its property to attract iron. Besides this they also believed that it has also got a power to heal many diseases. This is why it has been mentioned in 'Atharwaveda' in mantra 3 and 4 of part-1, section-1, Sukta-17 as to how blood circulation is improved using 'Siktavali' prepared from 'Balu'.

In 'Atharwaveda, again in mantra 2 and 3 in part-1, section-7, sukta-35 it is mentioned how diagnosis of women's diseases is possible with a particular stone ('Ashm'). In the oldest book on therapeutic system 'Ayurveda', the word 'Lohakant' has been used referring to a magnet.

In modern age, magnet was invented many years B.C. There are so many legends about it. About 2500 years ago a shepherd named 'Magnez' observed while moving over mount Inda that his baton which was having iron covered end got stickled to a stone, also his shoes having iron nails got stickled to that stone. This made it difficult for him to walk. That stone was known as 'Load stone' those days. After its attraction to iron was recognized by Magnez, the stone was named 'Magnet' behind his name. Another legend is that a long time ago in the area of Asia Miner in Magnesia, a dark coloured raw iron was



available; which was mainly containing iron and oxygen. Now, as the dark coloured iron was having a phenomenon to attract ordinary iron, it was named 'Magnetize' behind the name of that region.

800 years B.C. people of Unan were calling magnet as 'Chakmak stone'. Great visualizers Arastu, Aflatoon, and Homer have mentioned this in their books. When boatmen of China came to know that this stone found in nature has also got power to indicate direction, they made a Compass after great efforts with the help of which they used to find out their way in oceans. That's why they named it 'Compass stone' which then developed to earn fame in the history of magnet in the book of Phillips Oreyolos Parasales (1493-1541) - a Doctor, a stuntman, and a mystery man. He described one of the powers of magnet 'Healing power' for the first time. He wrote that magnet is especially effective in treating swellings, skin problems, intestinal diseases, and uterine diseases. Modern magnet therapists confirmed his every statement word to word.

Famous doctor of his own time Dr. William Gilbert (1540-1603), who was the doctor of Queen Elizabeth (First), was the first person to scientifically study magnetism and electricity. He was the first to describe that the earth is a huge magnet. To prove this he performed many experiments e.g. he buried an iron rod in earth having one end towards north and the other at south. Then he thumped hammer on it. As a result the rod achieved magnetism.

Many scientists researched on magnet after Dr. Gilbert, but the achievements of Dr. Michael Faraday are remarkable. His first achievement was that he proved that there is a magnetic field around electricity. He enriched magnetic science by submitting subjects like electro-magnetism, lines of force, energy created by revolution of a magnet etc. According to the records of invention, he made more than 16000 experiments on magnet. He is also considered to be the founder of Bio-magnetism and Chemistry of magnetism.

In India, Dr. Shanti Swaroop Bhatnagar, and Dr. K.N. Mathur wrote first book on Chemistry of magnetism and Magnet therapy in 1935. For this work they were rewarded also.

Many successful experiments on Magnet therapy based on principles of Bio-magnetism are not only performed in America, Russia, and Japan but also in our country there are many doctors, scientists, Yogis and Naturotherapists involved.

## **2. Physical properties of Magnet.**

Physicists found following physical properties in Magnet.

1. Magnet is a kind of sand stone.
2. A magnet has got a power to attract iron. If a magnet is less powerful and iron is heavy then magnet sticks to it. Vice versa if iron is light and magnet is powerful than it pulls iron.
3. If a magnet is suspended by a thread then its one end will face north and the other will face south. This situation can not be changed. This is why scientists named the one end facing to north as the North Pole (N) and the other one as the South Pole (S).
4. If two pieces of magnet are brought together then they will have either attraction to each other or repulsion to each other. When opposite poles face each other then they have attraction, and if similar poles face each other then they have repulsion.
5. No matter a magnet is broken in to however tiny pieces, its North Pole and South Pole can not be destroyed; means its one end becomes North Pole and the other becomes South Pole without fail.
6. If a magnet is attached with a piece of iron then that iron also possesses magnetic power; means the iron also becomes a magnet. If a few pins are attached with a magnet for a while and if you see after some time, the pin starts attracting other pins. This means that after coming in to contact with a magnet, the pins start possessing magnetic power.

7. The waves of North Pole are cool just like moon, and those coming out of South Pole are warm in character like sun. This is the reason why the North Pole shows reactionary result i.e. it is a germicidal and the South Pole becomes an energizer and exhibits its result by its actions. This means that the North Pole prevents decaying of wounds, and the South Pole relieves pain and swelling. To understand more, we can say that North Pole prevents growth of germs and bacteria and as a result it destroys pus found in boils and pustules and heals them. And the South Pole revitalizes tissues by improving blood circulation.

8. Magnetic waves can pass through glass, wood, plastic, aluminum, zinc, copper, gold, silver etc. except iron. This is the reason why if a magnet is placed on palm and pins are kept below palm then also the magnet can attract the pins and the pins get attached to palm. This proves that magnetic waves can also pass through human body.

9. According to scientists, the North Pole of a magnet contains Proton energy where as the South Pole contains Electron energy this is the reason why their attractions are in different directions.

10. Usually, the word 'Magnet' means the one which attracts. This is why we say that a person has magnetism so that whoever he comes in contacts with, the person follows him. But here by Magnet we mean the iron magnet, means a sand stone which attracts iron.

### 3. Types of Magnet

There are mainly two types of magnets-

1. Natural Magnet (Load Stone)
2. Artificial Magnet

Natural magnets are found in nature as sand stones which can be identified primarily by its power to attract iron. These magnets have a constant magnetism which can not be changed, so they can not be used tactfully in Magnet therapy. On the other hand artificial magnets are designed by humans and can be of different strengths and various shapes. In Magnet therapy we use these artificial magnets.

Artificial magnets can again be classified in to two types.

1. Permanent Magnet
2. Temporary Magnet (Electromagnet)

Permanent magnet ones created, its strength is always maintained. If preserved, they can go on for more than 100 years. An Electromagnet works only when electric current passes through it. Electromagnets cannot work without electricity. Electromagnets are used in Crain to load or unload luggage on ships, amplifiers, armatures, radios, bells, televisions etc.

### Shapes and types of magnets used in Magnet Therapy

Permanent magnets are prepared from many metals. But the most commonly used metal is called 'Alnico'. This metal is the mixture of Aluminum, Nickel, Iron, and Cobalt. Besides this, magnets are also prepared from Ferric and Barium Oxide which are called Ceramic, Ferrite, or Graphite magnet. Primarily we recognize all of these three magnets as Ceramic magnet.

For the routine use of magnet, different shaped magnets are prepared from above materials e.g. rod shaped magnet, split shaped solid magnets, ring shaped magnets, sickle shaped magnet, square magnets with a hole in it, 'U' shaped magnet, round magnets, etc.

The mainly used magnet in Magnet therapy is the split shaped magnet or sickle shaped magnet prepared from Alnico. There split shaped magnets are calibrated for their energy and shape and their assembling is done. This is divided in following five parts-

1. President Magnet
2. High Magnet
3. Medium Magnet
4. Low Magnet
5. Anti-pain Magnet

Every disease can be cured with the help of above five magnets. But for convenience, still low Powered magnets in the form of bands are prepared e.g.-

- |  |                                     |
|--|-------------------------------------|
| 1. Magnetic Head Belt                          | 13. Magnetic Ear Belt               |
| 2. Magnetic Throat Belt                        | 14. Magnetic Necklace               |
| 3. Magnetic Belly Belt (Single)                | 15. Magnetic S. Belt                |
| 4. Magnetic Belly Belt (Double)                | 16. Magnetic Gilas                  |
| 5. Magnetic Belly Belt (Triple)                | 17. Electromagnet Vibrator          |
| 6. Magnetic B.P. Belt                          | 18. Health Band                     |
| 7. Magnetic Knee Belt                          | 19. Magnetic Height increasing Belt |
| 8. Magnetic Knee cap                           | 20. Magnetic Spine Belt             |
| 9. Magnetic Spondylosis Belt                   | 21. Anti-pain Magnet                |
| 10. Magnetic Lumbar Belt (Small, Medium, High) | 22. Magnetic Head Cap               |
| 11. Magnetic Eye Belt                          |                                     |
| 12. Magnetic Tonsil Belt                       |                                     |

#### 4. Science of Magnet Therapy

A human body is made of millions of cells. These cells are continuously vibrating which creates 'Automated vital energy'. This vital energy is disease curing and energizing. From the homogenous vibration of these cells, a uniform magnetic field is generated and the organism feels complete health and freshness. But when the waves of these cells get disturbed then the magnetic field also becomes disturbed; due to the effect of which, the related organ becomes swollen, painful, stiff, etc. All these symptoms are known as different names in different systems of medicine. But the divine nature has a spirit of providing good health to every human. So to treat any illness, our vital energy starts making efforts to remove the disease. In fact, every disease is an effort to remove toxins from body. Symptoms of an illness should be considered as nature's warning, and not to be suppressed by medicines. The modern medicine has an attitude to quickly establish health which can in fact provide relief up to a certain period of time; but with that it damages our body structure. Instead of fighting with a disease, we should establish the basic reasons of that disease and treat accordingly. Where changes in diet, rest, fasting etc. procedures help in becoming quickly healthy, the use of a magnet will help in balancing the biological electricity.

Magnet therapy is a revolutionary gift to human kind. In this world, there are so many devoted people who are attempting to treat diseases with magnet. The basic truth is that every cell of a body is the unit made up of magnetic electricity. It has got its own magnetic field. In our back bone there is a nerve which is an 'Electronic Generator'. The electric impulse generated in it is brought to the body parts through nerves. Our general health depends on this nerve centre. Magnet therapy is very useful in balancing central nervous system through which every part of body gets energy. Just like Naturotherapy, Magnet therapy also works on the root of a disease. In fact this is a non medicative treatment which is gifted to us by God. No adverse effects of this therapy have been observed; whereas its effects are useful in blood circulation in body.

#### Therapeutic properties of Magnet

1. On whichever part of body a magnet is placed, blood circulation increases in that part. As a result the foreign matter at that place gets dissolved and is excreted out through urine, stool, or perspiration.

2. On the part of body where a magnet is placed, energy flow becomes rapid in the nerves which are present there. As a result the stiffness and constriction of those nerves disappears.

3. According to experiences, the North Pole of a magnet is cool like the moon, and the South Pole is hot like the sun. So wherever there is injury, swelling, or other problem where heat is required, application of South Pole provides immediate relief. But if there is a wound, or bacterial growth, or any other problem where cold is required, application of North Pole heals the wound, destroys bacteria and provides cold.

4. In the vicinity of a diseased part, if North Pole and South Pole are placed to form a circuit, then it destroys every kind of pain and disease immediately. It is necessary how to make a circuit and what is the procedure to use a magnet.

5. When blood circulation increases in blood vessels of any part of body, then it is natural that circulation also increases in small capillaries which gets reduced in case of old age and diseases. When energy flow increases in nerves then it is natural that energy flow also increases in muscles, which also gets reduced in case of old age and diseases. As a result, inactive cells become active. Dead cells are removed through outlets and new cells are generated; and the patient gradually starts improving.

### **(c) Acupuncture**

#### **(i) Introduction**

Tsuzok is a Korean word. Tsu-hand, Zok-leg. Hand and leg both are sufficient to cure physical and mental illnesses of human. This principle has been proving for last 5000 years by many systems. Among these systems, Acupressure, Rakie, and many other systems are brought in to use to treat human illnesses. In Acupuncture, Ear Acupuncture, Korean Acupuncture, Chinese Acupuncture etc, many types of experiments have been performed time to time which are still in vogue. In Chinese Acupuncture, how Meridian Energy flows in our body was found before more than 5000 years; according to that treatment is given by pricking needles in hands, feet, and the whole body.

Human nature can also be understood on the basis of structure and varieties of nails and their colours. Diseases can also be identified as well. In Astrology, a man's past, present, and future is known by observing lines and marks present in his palm. Various stones fixed with particular metals are wore in fingers and toes, and many diseases are treated thereby.

In short we can say that hands and feet are the important parts of human body, and through their correspondence points we can diagnose and treat every kind of physical and mental illnesses.

#### **(ii) History**

Tsuzok Acupuncture was invented by Korean Dr. Sir Park Je Vu. He was involved in this invention for past 30 years. Dr. Sir Park says that this invention was not done by him but it was established by God Himself for the benefit of human kind. He has taken the responsibility to spread this system all over the world for the welfare of human being.

In Tsuzok system the whole body has been outlined in the palms and heels. In this system many instruments like probe, needle, small magnets of the size of a button etc. are used. Besides, some particular points are applied pressure to treat diseases.

In Tsuzok Acupuncture, treatment is given by two methods. In first method, particular points of body are pressed by particular instruments, or using needles.

In an another method 'Meridian system' which is limited to middle finger and index finger, needles or small magnets are pressed over some particular points in a 'Metaphysical' manner. Both of these systems are perfect, but if both systems are simultaneously used as per requirement then we can achieve the best results.

### (iii) Similarities

Time to time hands and feet are brought in to use in many types of systems. Acupressure, Chinese Acupuncture, Korean Acupuncture, etc. systems are very much popular and treatment is given in many ways through correspondence points. Ear Acupuncture is also a type of correspondence system. The shape of ear is similar as that of a pregnant woman's inverted womb. Based on this, positions of organs are identified.

In all of these systems, correspondence points of hands and feet are not exactly similar to human body. But in Tsuzok Acupuncture, the correspondence points of hands and feet are exactly similar to human body.

A human body can be chiefly divided in to 6 parts. First part is from head to neck, second part consists of the torso, third and fourth parts are the both upper limbs, fifth, and sixth parts are the both lower limbs. Head's height is less than arms and legs, but it is heavier and stronger. Arms are less strong and small compared to legs. Thumb co-operates rest of the fingers and controls them.

In Tsuzok Acupuncture, thumb represents head and neck, middle and ring fingers represent legs, index and little fingers represent arms, and palm represents torso.

Thumb is divided in to two parts- head and neck. Rests of the fingers are divided in to three parts each which represent arms and legs. Arms have three parts- first is from fingers to wrist, second is from wrist to elbow, and the third part is from elbow to shoulder. Similarly, there are three parts of legs too- first part is from toes to ankle, second part is from ankle to knee and the third part is from knee to hip.

#### **Correspondence areas of above and below diaphragm**

Palm is divided in to two parts. One part is above diaphragm line, and the other is below diaphragm line. In Tsuzok Acupuncture, diaphragm line is very important in correspondence treatment.

This way in Tsuzok Acupuncture, the whole human body has been corresponded in palms and soles.

#### **Why is thumb leaned downwards?**

For a complete similarity, thumb should be above palm towards wrist. But thumb is leaning one side about 140 degree. The reason for this is that thumb works in two ways; first, it indicates correspondence area, second, it helps fingers to function. Thus, in an attempt to change in similarity of correspondence area, it is leaning to one side. Appropriately, hand is one of the best creations of God.

### (iv) Yin and Yang

Everything on the earth is depending on the principle of Yin and Yang. All mental and physical illnesses are based on Yin and Yang. No disease can be diagnosed or treated without knowledge of Yin and Yang. Those parts of body which are externally visible are called Yang and those which are hidden are called Yin. Skin colour of Yang parts is darker than that of Yin. Yang parts are stronger than Yin parts. Any disease starts from Yang parts. When Yin is energy deficient, Yang becomes energy excessive, and vice versa.

To understand Yin and Yang, the following chart is very important.

<b>Yin</b>	<b>Yang</b>
Soft	Hard
Woman	Man
Continuous	Occasional but hard
Slow	Fast
Death	Birth

Weakness	Strength
Darkness	Brightness
Large	Small
Low and continuous fever	High fever for a short time
Right side of males	Left side of males
Left side of females	Right side of females
Cold	Hot
Always hot	Sometimes hot
Chronic	Acute

The 12 major organs of body are divided into Yin and Yang. Every Yin organ has a complimentary Yang organ viz. as follows-

1. Liver	-	Gall bladder
2. Heart	-	Small intestine
3. Brain	-	Spinal cord
4. Spleen	-	Stomach
5. Lungs	-	Large intestine
6. Kidneys	-	Urinary bladder

#### **Main correspondence and secondary correspondence**

In main correspondence, body has been figured in palms and soles. In understanding Tsuzok Acupuncture main correspondence system plays an important part.

In main correspondence system treatment of every type of illness is possible. But in treating some chronic and obstinate diseases, Simultaneous use of Metaphysical methods gives better results. These are 'Biol Meridian system', 'Six system', 'Time Acupuncture' etc.

#### **5. Way to find out the right correspondence**

First thing is to decide whether the correspondence will fall in Yin direction, or Yang. Thereafter, a proper area of a proper finger or a proper body part should be found out e.g. if there is pain in hand then main finger of hand, and if there is pain in leg then main toe of foot should be observed. Thereafter, on whichever point pain is more should be looked for and treatment should be given.

While applying pressure, patient's facial expressions should be observed and as much pressure should be applied as the patient can tolerate. Children and old people should receive very mild pressure.

Sometimes in treating a single part, many painful points are found. In such cases, all points should be pressed or needles should be applied.

In Tsuzok Acupuncture, all the correspondence areas of the whole body are on palms and soles. Some of the organs in human body are either only on left side or only on right side. So the left sided body organs have their main correspondence over left side and secondary correspondence over right side; similarly, right sided body organs have their main correspondence over right side and secondary correspondence over left side.

If a human body is vertically divided into two halves, then main correspondence of right half of body is over half area of right upper or lower limbs and rest half area contains secondary correspondence for left half of body.

Same way, left half of body has its correspondence over half area of left upper or lower limb and rest half area has secondary correspondence for right half of body.

If diseases of left side are treated by working upon main correspondence of left arm along with secondary correspondence of right arm, then it gives better results.

## 6. Understanding Leg correspondence structure

It is sometimes difficult to find out leg correspondences, but if Yin and Yang are kept in mind while doing so then it becomes easy to find out.

If leg is seen from front then the internal part (hidden part) is Yin, and the outer part (visible part) is Yang. The line dividing Yin and Yang passes through the centers of ankle and knee.

### Leg based treatment (Special Partial Correspondence System)

In Main Correspondence system, treatment is given by applying pressure to proper points after deciding Yin and Yang parts. But leg treatment can be done by another method which is very simple to understand. In this system main correspondence is considered one of the toes according to the shape of leg and this toe is applied pressure over correspondence points or needles are pierced. This is called Leg based treatment.

**7. Three point correspondence system :** It is observed while treating patients that besides applying pressure to correspondence points, if pressure is also applied to adjacent points just above and below the correspondence point then results are achieved faster. In this system, mainly three points are applied pressure; that is why it is called three point correspondence system. This system is more effective in treating joints of arms, leg, chest, and shoulder joints.

**8. Referral point correspondence system :** It is observed while treating patients that if there is pain in arms and legs and pressure is applied to the correspondence point on opposite side then result is faster e.g. if there is pain in left elbow and pressure is applied over correspondence point on knee of same side and elbow of opposite side, then pain is relieved fast.

**9. How to search Secondary points :** There is a simple way to find out secondary points for a main correspondence point. If right palm is placed below left palm, then where there are main correspondence points on left hand, there are secondary points just below them on right hand. The method of placing right palm below left palm is that the index finger of left hand should be below the little finger of right hand, middle finger should be below ring finger, and little finger should be above index finger. Besides, palms should be kept straight.

### Skin and Anatomical correspondence points

Pain is often over or just below the skin and their correspondence points are according to that. But many times pain is quite deep to the skin. If the areas of pain over organs or bones are considered in accordance with correspondence points, then we can not properly find out pressure points. So it becomes impossible to treat without knowing these correspondence points. These points are mainly groins, uterus, ovaries, and armpit.

Correspondence points of lungs, liver, spleen etc. are close to each other and are merged. In such situations, many times we apply pressure over other points where we find pain instead of working upon the particular point we want to. In such cases, we do not find desirable results. To deal with conditions like this, we have to work upon secondary correspondence points besides main correspondence points.

### 10. Flank correspondence points

Flank is between armpit and pelvic bone. It lies on the meeting point of Yin and Yang. Flank is divided in to two parts.      1. Above diaphragm      2. Below diaphragm

It is sometimes very inconvenient to understand the position of main correspondence on flank because flank is on both sides of diaphragm line in our body. Besides, to see the area above and below diaphragm we have to consider different diaphragm lines for each. That is why it is more convenient and easy to work upon secondary correspondence instead of main correspondence of flank. Its main and secondary correspondences are as follows.



**Teeth correspondence points :** Teeth are treated by two ways. In first method, pressure is applied on area of mouth in the Yin direction of thumb. In the other method, around the nail of thumb every tooth can be treated according to number of teeth.

**Insect correspondence treatment system :** Considering the requirements of modern age, everything is given a convenient miniature form. Same way, main correspondence system is outlined in fingers and toes in Tsuzok Acupuncture.

Insect correspondence system is shown in fingers and toes considering an ant's body. The upper first part is head, second part is chest, and the third one is abdomen. Just like in a human body, arms arise from the upper outer part of chest and legs arise from lower part of lower abdomen, same way in insect system also arms are on both sides of second part and legs are on both sides of lower part. Those parts which are located over posterior aspect (back bone, kidneys) are shown over back of finger in insect correspondence system.

The process of application of pressure is same as it is in main correspondence.

**11. Mini correspondence treatment system :** In this system human body is outlined over the tips of fingers and toes like insect correspondence system. Just like in main correspondence system the human body is outlined in palm and palm is outlined on the tip of index finger, same way in mini correspondence system the whole human body is outlined over the tip of index finger.

In Mini correspondence system, if treatment is to be given according to the correspondence of leg then tip of middle finger is to be worked upon because it represents sole.

Before applying pressure to Mini correspondence points it is essential to find out proper pressure points because in this system, correspondence points are very small. Here also the method of pressure application is the same as in main correspondence points.

**12. Energy points :** In arms and legs there are 13 main energy points among which, 7 are over Yin part, and 6 are over Yang part. Pressurizing these points provides energy. Debilitated patients must be given pressure over these points, or moksa should be applied. On Yin part, pressure is applied from point 1 to point 7; and in Yang part, pressure is applied from point 1 to point 6. Application of pressure over this point gives heat to the body. Besides pressure, Moksa should also be applied over these points.

### Questionnaire

#### 1. Assays

1. Describe the principles of Acupuncture therapy.
2. Define main points of Magnet therapy.

#### 2. Short questions

1. Write down the benefits of Acupressure.
2. What do you understand by Zonology?

#### 3. Objective questions

1. Which ear contains the Acupressure point of spleen?
2. What is the meaning of J.P.?

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**YOGA AND SCIENCE OF LIVING**

**PAPER-VII : SCIENCE OF LIVING AND HEALTH**

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