5 DISEASES - CAUSE AND PREVENTION

In this chapter you will learn:

- Diseases caused by viruses, bacteria, parasites and fungi, their spread and their preventive measures.
- Spread of microorganisms through air, contact, faeces, animals and skin abrasions and wounds.
- Preventive measures against microbial diseases.
- Diseases caused by smoke and smoking.
- Mental diseases and their treatment .
- Differentiation between drugs, medicines and addiction, their uses, abuses and effects on society.

Microorganisms are the living cells which are present all the time around us in the environment such as earth, air, water. All the infectious diseases are caused by microscopic bacteria and viruses. These organisms are of different shapes and sizes. Nevertheless some disease producing organisms can be seen by human eye, such as intestinal worms etc. The fungus look like plants but they have no roots, stems and leaves and these can also cause many diseases.

5.1 Diseases Caused by Germs

Virus, bacteria, fungus and worms can cause many diseases.

Viral Diseases

Small pox

It is an acute infectious disease. Now this virus is non-existent in the world as an

Dengue Fever

It is caused by Dengue Virus. Dengue Fever is also know as Break Bone Fever due to severe joint pain. Detail is given on page 176

infectious agent but it is kept in the laboratory for further experiments in South Africa, Russia, Great Britain and America (USA). The common symptoms of this disease are acute fever, headache, backache, vomiting and fits which occur often in children. On third or fourth days of fever spots may occur on arms and legs.

This virus may affect both sexes at all ages. One attack of smallpox may produce immunity for whole life and second attack is very rare. The virus spreads by the coughing, sneezing, talking to the patient and thus enters the respiratory tract of the healthy people.

Poliomyelitis

Polio is an infectious viral disease. Poliomyelitis is very common in the children below 2 years of age. It is primarily an infection of the human alimentary tract, the virus gains entry by the

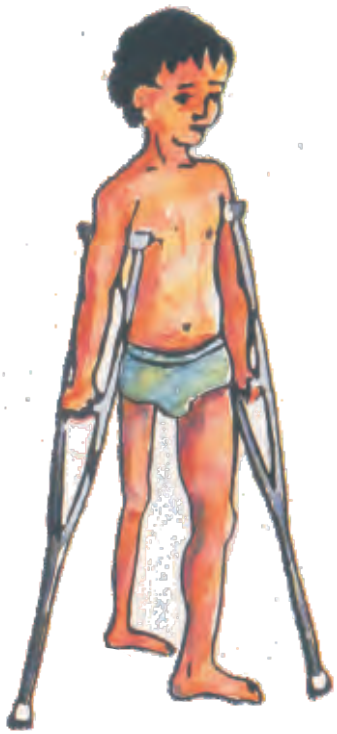


Fig. 5.1: The effects of polio

Fig. 5.2: Preventive measure against polio

Polio Day

Give your children the drops of polio till 5 years of age to save them from this disease.

eatables and water. It may affect the central nervous system resulting in varying degrees of paralysis. The patient feel cold and fever, vomiting and pain of muscles. Often paralysis does not occur but if the infection is severe then paralysis of any part may occur. Poliomyelitis may paralyse one or both legs which causes weakness and retards the growth of the limb. Once paralysis

Protect your child by giving polio vaccine at birth then at 6th week, 10th week, 14th week and finally at 9th month.

of poliomyelitis occurs then no medicine can cure it. Antibiotic are also of no help. The child who is paralyzed by poliomyelitis, should be given balanced diet to promote defence system of his body. He should do regular exercise and physiotherapy to strengthen the other muscles of the body. During the first year of the disease some improvement is expected.

The sick child should be isolated, from other children in a separate room. Polio vaccine is the main protective method available. The expanded programme on immunization in Pakistan is a milestone in polio vaccination.

Influenza or Flue

Influenza virus is of three types, type A, type B and type C influenza virus, but type A and type B are more dangerous.

Influenza is a rapidly spreading disease which spreads from one or two patients and finally involves the whole world.

The main symptoms of influenza are sore throat, fever, cough, watery nose, watery eyes, headache, and muscular cramps. After a minor work the patient gets tired.

The influenza virus attacks all ages and both sexes equally. It is more prevalent in winter and during the raining season. It spreads more rapidly in places where people are over crowded. The virus spreads by droplets released by coughing, sneezing and even talking to the patient in the air and inhalation of the same viruses in the droplets by the healthy people.

The hand kerchief, towels and other articles in patients use also play an important role in the spread of influenza. Influenza is a notifiable disease to the health department. This disease is prevented by vaccination.

Measles

Measles is a highly contagious disease which has high mortality rate in children. The main symptoms of measles are fever, chills, running nose, congested red eyes and cough. It spreads by virus contained in the very minute skin lesions. The disease becomes slowly severe. The sick child may feel pain in his mouth, develop diarrhoea (loose motion), pneumonia, malnutrition and infection of ears and eyes may occur. Two or three days of the disease the Koplik's spots (tiny white lesions of mucous membrane of the mouth) may develop. At the same time red lesions develop on the skin, first on the back of ears, on the neck and then face and lastly on the arms and legs. The child starts improving after the skin eruption is complete. The skin lesions remain for about five days. The affected children should be isolated

At the age of 9 months, the child should get measles vaccination done. The children must be given good nutritional diet to save them from dying of measles.

from healthy children, especially those who are malnourished, patients of tuberculosis or suffering from other chronic diseases. The patient should rest in bed. More and more liquid and balanced diet should be given to the patient. If an infant is unable to suck mother milk then mother should milk herself and feed the infant by spoon.

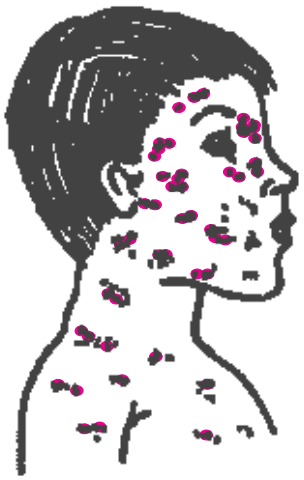


Fig. 5.3: The effects of measles

AIDS (Acquired Immune Deficiency Syndrome)

AIDS spreads by a virus which destroys the immune system of the human body. Any disease which attacks such a patient my prove fatal and end up in death. The AIDS virus is called H.I.V (Human Immune Deficiency virus.)

AIDS is not an infectious disease. It does not spread by touch, sitting with the patient, shaking hands or working together. HIV positive people does not show any illness or weakness. The symptoms of AIDS often take many years to develop. When the symptoms appear, and the patient is diagnosed for the case of AIDS, then the patient may live for about 2 years.

The AIDS virus is present in the blood and in the secretions of the sex organs of the patient. The virus is also present in saliva (secretion of mouth), tears (secretion of eyes) urine and in the sweat of the patient. The HIV virus spreads by the transfusion of blood or blood products, donated by an AIDS patient to a healthy recipient.

The practice of using common syringes may also help the spread of the disease. The HIV may spread from pregnant mother to the new born baby and also from affected sexual partner to other sexual partner. The disease can also spread through the barber's blades.

The early symptom is as simple as minor flue and then the man is free for any symptoms for months and years. Slowly he develops the apparent AIDS symptoms. There is a rapid loss of weight of the affected person, and loose motion may persist for a month or so. Fever, cough and pneumonia may develop. Some depigmented areas may develop on the skin.

The preventive measures of AIDS are to obey the laws of Quran. Always use disposable syringes. HIV screening of blood must be done before donating the blood.

Hepatitis

Hepatitis is the inflammation of the liver. The hepatitis virus is of many different types and similarly are the types of hepatitis. The main types of hepatitis are:

Hepatitis A: Hepatitis A is caused by HAV (Hepatitis A Virus). The main symptoms of Hepatitis A are anorexia (loss of hunger), nausea, and inflammation of the liver and later on jaundice. The hepatitis A virus is discharged in the faeces of the patient and spreads to others by water, food and milk. Usually one attack may develop life long immunity.

There is no vaccine against hepatitis A. The main protective measures include prevention of adulteration of food and milk. Also HAV screening of blood should be done before donating the blood.

Hepatitis B: Hepatitis B, which is caused by a dangerous HBV is a dreadly disease with a high mortality rate.

Hepatitis B-virus spreads by infected blood, tears, sweat, and other body fluids of an infected person to other healthy individuals. The severity of the problem can be judged by the fact that in Pakistan one person out of every ten people is a carrier of Hepatitis B virus. Carrier is a person who is apparently looking healthy and is harbouring the disease organisms in his body, but he spreads the disease in the community. The only prevention against this disease is vaccination. Two injections of Hepatitis B vaccine are given with one month interval each, and a booster injection is given at six months interval of the first dose. The hepatitis B patient should take rest and use excess amount of water and juices. Sugar cane juice is very useful. More and more juices should be given if the patient is unable to eat food, but if he can eat food then balanced diet should be given to him. Beans, meat, poultry and boiled eggs are best for this purpose.

Hepatitis C: This disease produces inflammation of the liver. It is caused by hepatitis C virus. It is more prevalent from 20-39 years age group.

Hepatitis C virus predominantly spreads through transfusion of infected blood, repeated use of syringes and needles and accidental needle prick in the laboratory workers. Loss of appetite, vomiting, fatigue, weakness, joint pain and fever are the main symptoms of this disease.

Hepatitis C patient should be isolated. No vaccine is available against this disease. Immediately destroy the blood and other body fluids of the patient, such as sputum and urine. Wash hands thoroughly with soap after attending the patient.

Bacterial Diseases

These are the diseases caused by bacteria.

Tuberculosis (TB)

It is a chronic disease of long duration and can attack any person especially weak and malnourished people and living with a patient of tuberculosis.

Tuberculosis is a treatable disease, even then hundreds and thousands people die due to it. Tuberculosis should be diagnosed and treated in early stages. This disease involves mainly the lungs but it can affect any organ of the body. The patient should be given well balanced diet as a routine.

Keep in mind leaving the treatment of TB incomplete is equal to suicide.

Fig.5.4: The effects of TB

All the people living with a T.B patient should be screened for tuberculosis. The children should be vaccinated against tuberculosis. The patient should be isolated from healthy children. The T B patient should cover his mouth during coughing and should not spit on the floor because when a T B patient cough, sneeze or spit very minute droplets of salvia are discharged in the atmosphere which contain millions of germs of tuberculosis. These mycobacteria get entry through the air into the lungs of healthy people during respiration and cause tuberculosis.

T B is a dangerous and rapidly spreading infectious disease. It can be prevented by B C G vaccination given at birth.

The main symptoms include over one month continuous cough, bloody sputum, continuous fever, night sweating , loss of appetite, loss of weight and feeling of tiredness after a little work.

Whooping cough

Whooping cough is an infectious disease. Its incidence increases in winter and spring seasons. Whooping cough may persist for three months. Whooping cough spreads by minute droplets of bacteria released by coughing, sneezing and talking from the mouth of the patient and enters the respiratory system of other healthy children by inhalation and causes disease in them. The disease starts after two weeks of entering the bacteria in the body. The episode of

cough persists for long time without respiration and this stage ends up in a group. During the episode of cough, oxygen in blood decreases which produces blueness of the finger nails and lips of the child. This episode of cough may end in vomiting. Child may look healthy during the attacks. The whooping cough may prove fatal for children under the age of one year. D P T vaccination should be done at a proper time.

Fig. 5.5: Spreading of whooping cough

Whooping cough is basically a disease of the young children. Its incidence is higher below 5 years of age and it is more fatal in female children than the male children. Its other symptoms are mild fever, throat irritation, severe cough accompanied by loud crowing voice. If it is not treated in time, it leads to pneumonia.

Diphtheria

Its prevalence is world wide. The developed countries of the world has practically controlled it by vaccinating their children against this disease. The disease starts with flue, fever, headache and sore throat. The bacteria attack the mucus membrane of the throat and nose and produces inflammation of the membrane and changes its colour to dark brown. It may cause swelling of the neck. The breath of the child become foul smelling.

The diphtheria germs may affect the cardiac muscles, cause their weakness which may result in death of the patient. Diphtheria is an air borne disease affecting other healthy people.

The patient should use plenty of liquid diet. He should be isolated from other healthy children and first aid be provided immediately. He must gargle with light warm salt water. Steam inhalation is also recommended. The child should be shifted immediately to hospital if suffocation occurs.

Diphtheria is a fatal disease. It can be prevented through D P T vaccination.

Tetanus

Tetanus is an acute disease. Their germs remain alive in the dust, faeces of the man and animals. If a person is injured in a roadside accident, these germs enter the wound and produce toxins. There is also danger of tetanus if an animal like cat, dog, etc. bites a person.

All the body muscles become stiff and remain stiff during the whole course of disease and then severe jerking movements occur in the muscles. This causes severe pain to the patient. The stiffness of the mouth muscles cause closing of the mouth, which is called **lock-jaw**. There is a difficulty in swallowing food. Later on muscles of the neck become stiff. There are severe fits and if the patient is touched the muscles again go into spasm as in fits. Tetanus injection should be given if a person gets injury.

Fig. 5.6: The effects of tetanus

The D.P.T vaccination save the child from tetanus.

Typhoid

Typhoid is endemic in all the countries of the world. In the developed countries of the world by better civic conditions and better quality of food, water and milk, incidence of this disease is reduced to a great extent. These germs remain alive in the human body. The patient or the carriers of typhoid excrete the bacteria in their faeces. When these bacteria mix with food, water, milk, etc., is transmitted through a man or fly then any person consuming these items may also ingest these germs which causes typhoid fever in that person. This disease is manifested by headache and fever of long duration. Usually typhoid fever is common in 10-30 years of age group and more in the rainy season and flies are important for its spread. Typhoid fever may occur by drinking the polluted water or by taking contaminated food.

Some preventive measures of typhoid are to drink boiled cool water, thorough washing of fruits and vegetables in plenty of clean water, cover milk and milk products. Do not eat stale food, avoid from ice creams and ice balls. Screen the houses and shops from the flies. Protect all age groups by vaccination as one injection may protect for 3 years.

Interesting Information

The germs of typhoid multiply and grow rapidly in milk without changing its taste and colour.

Cholera

This disease is characterized by watery stools. The severity of this disease may range from minor ailment to very severe condition in which watery stools abruptly start. It may accompany vomiting, which may produce dehydration in the body. The urine is scanty. The muscles start aching due to loss of salts from the body. About 30% to 40% patient of cholera die if not treated in time. Polluted water, food and milk are the main sources of spread of disease. The

direct contact of the patient with healthy person is also one of the reason of the spread of this diseases.

Always drink clean water, eat clean fresh food, do not eat stale fruits. Wash your hands with soap before eating. Protect milk and milk products from flies and cover the food articles.

Fungal Infection

Fungal infection can attack any part of body skin.

Fig. 5.7: The effects of fungus on skin

Ring worm

Ring worm usually appears in round circles on the skins, accompanied by itching. Ring worm of head may cause falling of hair in patches. The nail fungus may damage the nails. Ring worm is a contagious disease. Affected person should not have direct contact with healthy person. In preventive measures do not use others combs and towels. The patient should be treated promptly. The affected areas should be washed with water and soap daily. The lesion should be kept dry. The socks should be washed properly.

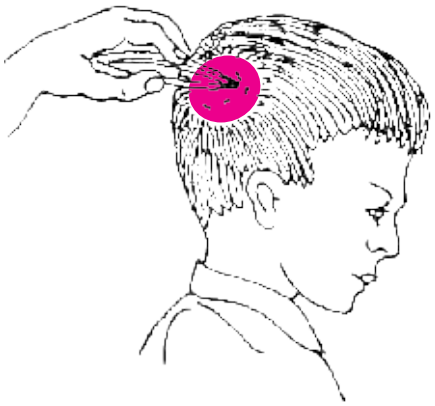


Fig. 5.8: The ring worm appears in circle

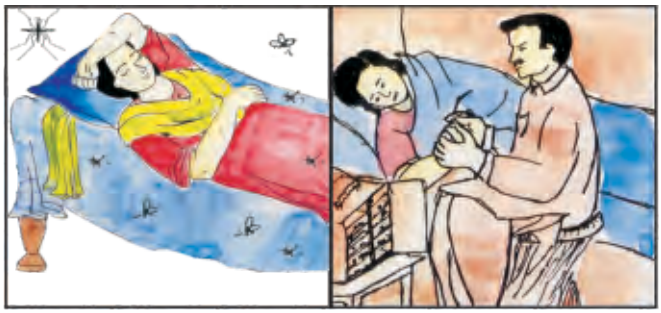
Parasitic Diseases

Malaria

Malaria fever is transmitted by the bite of female *Anopheles* mosquito. The first symptom of malaria is feeling of chill and then the temperature rises upto 104°F. The size of spleen can increase if there is chronic fever. In the third stage the patient perspire and temperature decreases. In Pakistan malaria occurs between July to November. The most important step in

controlling malaria is to kill the mosquito. It is done by spraying insecticides in the houses and filling of ponds and other breeding places. Crude oil is sprayed on the surface of water which kills the mosquitoes and their larvae. During night mosquito repellant oil should be used on the exposed parts of the body, use mosquito nets during night and lastly use chloroquinine for the protection against malaria.

The doors, windows, ventilators should be screened by net to prevent the entrance of the mosquitoes. The ponds around the houses should be filled with soil to cut down their breeding places while on other ponds, used mobile oil is spread so that the mosquitoes do not lay their eggs. Insecticides should be sprayed in the houses. During spray all the household things should be taken out and for the next 2 months the rooms should not be white washed.



Have a blood test for malarial fever

Complete the course of medicines.

Cover the windows and doors with nets.

Fill the holes with clay near your house.

Have a spray in your house to prevent from malaria.

Fig. 5.9: The preventive measures against malaria

Round worm

Round worm is the common name of *Ascaris lumbricoides*. The worm is about 20 centimetre to 30 centimetre long and is pink in colour. The worm is clinically manifested by symptoms of nausea, vomiting, gastritis and cough. The live worms may pass through the faeces or may be vomited out.

These worms live in human intestine and move freely there. Their eggs are discharged through faeces in the soil and become infective in 2-3 weeks. On ingestion by man these embroynated eggs

hatch in the small intestine. These eggs hatch and larvae are released in the small intestinal wall and are carried to the liver and lungs via the blood stream. The larvae are coughed up through the wind pipe and then swallowed by the man into the stomach and then into small intestine. On reaching the intestine, they become mature. The life span of an adult is between 6-12 months.

Fig. 5.10: Ascaris

The infection rates are high in children than the adult, and children are the most important source of spread of the worms. They contribute to malnutrition especially in children who may show growth retardation. The onward transmission of the worms may be accomplished by strictly implementing the primary hygienic principles.

Water should be boiled before use. The salad, vegetables and fruits should be thoroughly washed before eating. Hand should be washed before and after eating and before cooking of food. The food should be covered from the flies and dust.

Thread worms

The thread worms are small, thread like measuring one centimetre in length. They are white in colour. These lay eggs around the anus in thousands. They cause an irritation especially during night. Due to unhygienic conditions these eggs pass in the faeces of one person and are ingested by another. The eggs may also be spread through affected persons nails. This cause the onward transmission of the threadworm in other children by the ingestion of eggs. The eggs mature in the intestine and hatch in larvae which transform into adults in the intestine.

The thread worms are not dangerous but due to anal irritation these disturb the child during sleep. The anal area of the child should be washed thoroughly early in the morning and after each defecation. Hand and nails be washed properly with soap. The clothes of the child should be changed and washed properly and dried up in the sun. The important preventive step against thread worms is personal hygiene of the child.

5.2 Agents Spreading the Germs

The germs spread by different ways as air, water, and animals etc.

Air

Those diseases which spread by inhalation of microorganisms in the air through

respiratory track are called "Air Borne" diseases. When a patient of such diseases talks, coughs, laughs or sneezes then thousands of droplets of the secretions of mouth and nose are expelled in the air and remain suspended for some time. The microorganisms also remain suspended along with these droplets and gain entry through the mucous membrane of the respiratory tract during respiration in other healthy people around. Some air borne diseases are flue, measles, whooping cough, and tuberculosis. These diseases spread more rapidly if the patient coughs and spits openly in over crowding and poor ventilation.

Touch

The germs spread from a patient to other healthy people by either direct or indirect contact. The disease producing germs may affect other healthy person by direct touch of his skin as in scabies. In the indirect method the germs spreads by touching the different items of his use such as clothes, bedding and utensils etc.

Faeces

The organisms passed out through faeces and spread disease via soil, food, water and hands. The faeco oral diseases are diarrhoea, polio, hepatitis, typhoid and worms.

Animals

The disease producing germs may spread in the humans by animal bites through saliva as rabies spread by the bite of dog which transmits the rabies virus into the human blood. The malaria is also transmitted through the mosquito bite.

Fig. 5.11: Animal bite

Scratches and Cuts

The germs get entry into the human body through wounds and scratches. For example in a new born when the umbilical cord is cut with an infected knife or blade, through burn skins, wounds of animal bite, and infected nail may spread the disease producing germs through the wounds.

Fig. 5.12: Scratch by thorn

Water

Water is a great gift of God. Water is a basic constituent of health and human body. Every drop of water is a life for man.

The untreated water discharged by factories, domestic used water mixed with phenyl and

acid, insecticides used in crops, and use of fertilizers may pollute the water. This causes many diseases in human body e.g. typhoid, cholera, heart diseases, liver, intestinal diseases and kidney problems.

5.3 Protection from Germs

The disease producing germs are present all around us. These are found in air, food, water, faeces, on the skin, clothes, animals and in soil. The germs can be prevented from spread by the following ways.

Sterilization

This is the best method of killing the germs. During the process of sterilization, milk, fruit juices and other food items are heated for 1-2 seconds at 148.9 degree centigrade. This process kills not only germs but also their resistant spores. Once sterilized, the food items can be kept at room temperature for many days.

Control on disease transmitting animals

The mosquito and squids spread the disease producing germs to man. By killing mosquito and squids we can control malaria and bilharzia. The mosquito can be killed by spraying insecticide such as D.D.T. Similarly by killing the rabid dogs we can control the rabies in man.

Vaccination of pet animals

The pet animals such as dogs, cats, parrots, can be made safe from producing diseases in man by proper vaccination. The proper look after and treatment of animals can reduce the risk of rabies and skin problems.

Isolating the infectious people

The diseases can be prevented by isolating the infectious people which are able to spread the disease in other healthy people. The children suffering from measles and scabies should not be allowed to go to school. Keep them at home. Treat them properly. These measures can prevent the spread of infectious diseases.

Personal hygiene

Personal hygiene such as daily bathing is very much essential to remain healthy. Wash your hand, with soap before and after taking foods (meal). Brush your teeth daily. Trim and clean the nails to prevent germs stay and grow in them. The clothes should be washed with soap and dried in the sun. The hair should be cared properly. The lice and their eggs should be treated properly.

Importance of Pure Water

Water is a great blessing of God. It is necessary for the life and health of human beings. Two thirds of the earth consist of water, but even then half of the world population is deprived of drinking water.

Sewage Disposal and Sanitation

Proper sewage disposal is necessary to control the water borne diseases and malaria. The mosquito lays eggs in stagnant water, so malaria can be controlled by proper sanitation and sewage disposal.

Immunization

Six fatal diseases can be prevented in children if fully vaccinated at one year of age. The six disease are tuberculosis (TB) whooping cough, measles, diphtheria, polio and tetanus.

The females during reproduction can also be saved from tetanus by vaccination against tetanus. It is noteworthy that to make the immunization successful, 80% of the children in the community should be vaccinated.

Antibiotic Drugs

The drugs that are used to treat the disease produced by the bacteria are called antibiotics. The viral diseases such as flue, measles, etc are not controlled by the antibiotics, so antibiotics should not be prescribed in viral diseases. Penicillines and tetracyclines are examples of antibiotics.

5.4 Effects of Smoke and Smoking

Some people chew the tobacco while other use it in cigarettes. Tobacco smoke consists of many chemical substances. Nicotine, tar and carbon monoxide are the most important chemical substances. Nicotine is a very poisonous chemical compound which causes addiction and which makes difficult to quit smoking in the smokers. Another most important effect of nicotine on the human body is that it causes the narrowing of the blood vessels which hinders the blood supply to all the organs of the body.

Tar is a gelatinous material which collects around the lung tissues and the function of the lung is affected. Tar also causes lung cancer.

Carbon monoxide present in the cigarette smoke combines with the haemoglobin of the blood and reduces the oxygen content of the blood. Because all the tissues of the body require oxygen for their proper function, just to compensate the low oxygen supply, the heart has to

work more, which causes more burden on the cardiac muscles. These are some of the reasons, that smokers have more incidence of heart diseases than the non-smokers.

Man is making progress in industries. The population of the world is also increasing at a rapid pace. Along with the human activities, the amount of smoke is also increasing in the atmosphere, by industrial and domestic activities. The smoke consists of carbon monoxide, chloroflourocarbon, (CFC's) oxides of nitrogen and sulphur.

This smoke collects below the ozone layer and by increasing its thickness. It causes rise in temperature of atmosphere of earth and that changes the climate. Sometime these gases in smoke start eating ozone and produce holes in ozone layer. These holes in ozone layer cause genetic mutations in the man, plants and animals. It also increases the incidence of skin cancers in the humans.

Respiratory Diseases due to Smoking

Cigarette smoke causes the inflammation of the bronchi, bronchioles and the lungs which is the main reason of cough and sputum. The inflammation of the wind pipe (trachea) and bronchi is called bronchitis. The smoking damages the air sacs in the lungs. This reduces the oxygen exchange in the blood. The patient has to breathe faster to compensate this if causing damage to him. This disease is called emphysema.

Heart Diseases due to Smoking

Smoking predisposes to heart attacks, hypertension and other heart ailments which are the main cause of death in smokers. The blood vessels including arteries and arterioles become narrow and especially the coronary arteries of the heart are more affected. This increases the heart attack chances more.

Skin Diseases Caused by Smoking

Most common skin disease is skin allergy. The skin colour also changes because of low oxygen content in the blood. The skin wrinkles and aging symptoms begin to appear.

It is our duty to make free our society from smoking.

5.5 Mental Diseases

Psychosis and neurosis are the important mental diseases. The detailed description of these ailments is as under.

Psychosis

Delerium and depression are common diseases of psychosis.

Delerium

This disease appears acutely and is caused by addiction of certain diseases, electrolyte imbalance in the body and oxygen deficiency. The main signs and symptoms of the disease are incoherent speech, fits, rapid movements of the eyes, double vision. In somnia, anxiety, stupor, sightedness, and fear from people. There should be counselling to patients that they should trust on other people.

Depression

In this disease a person is always in tension and in low spirit. Mostly the person is depressed in early morning. The patient's thinking and decision making power is reduced. He is under the influence of inferiority complex and self blaming. The patient complains the loss of sleep (insomnia), loss of appetite and thus he loses his weight. He also suffer from headache and back pain. It is recommended that all his business and domestic responsibilities be cancelled and through counselling his life pattern should be made better.

Neurosis

In neurosis hysteria and phobia are noteworthy.

Hysteria

The females are more prone to this disease. During the hysterical fit a patient may experience blindness, deafness, headache, ringing in the ears, stammering, paralysis, and fits etc. The patient may refuse to eat due to loss of appetite. The patient should be counselled for longer periods and encouraged to talk more about his problems. Try to solve his/her problems otherwise the same attack may recur.

Phobia

In this disease the patient feels undue fear from any place or person or things like bus, open space etc. The patient starts avoiding from that place or thing. Consult the doctor for his treatment.

Nervous Breakdown

The patient of nervous breakdown, is under the influence of depression, which does not persist longer and this affects the life pattern of the patient. Depression and nervous breakdown occurs when the person enters a new pattern of life accidentally, loneliness, after long illness, financial problems, death in family and separation or divorce. Some females get depressed after delivering the baby. According to recent researches a chemical neurotransmitter may cause depression when its production is low. The patient remains unhappy and starts avoiding from the things around him. He shows no interest in those things in which he was very much interested in

past. He becomes negative particularly about his future. His decision making power also decreases and he starts forgetting the things. If these symptoms persist then he can try for suicide.

5.6 Drugs and their Effects

Drug is usually any type of medicine which is used to treat the disease. These are used to relieve pain to prevent diseases and to save the life. Some drugs are used for protection from diseases, and are called vaccines. The vaccines produce antibodies in the body and these antibodies protect our bodies from many diseases. As for example if a child is given injection of measles vaccine, he is protected from measles because vaccine produces antibodies against measles virus.

Many people think it as unlawful drugs which produce sleep. In fact there are the drugs which are harmful and dangerous for the users and it is also unlawful to keep them and to trade. Almost all types either lawful or unlawful drugs are dangerous to some extent, but people have to use drugs to treat the disease and to relieve the pain.

Medicines

The drugs which are used according to the prescription of doctor and in suitable amount for treatment of disease are called **medicines**.

Pain killers

These are those medicines which remove headache. Examples are aspirin and paracetamol.

Narcotics

Those drugs which relieve pain, promote sleep, produce addiction are called **narcotics** e.g. opium, morphine. The unlawful drugs which cause addiction, their danger lies in the fact that these drugs produce addiction in the user and then he is unable to leave the drugs. His will power ends and at last he reaches that point where he neglects his official duties, family life, self respect, honour and dignity and he indulges in theft and even murder to get addiction. The addiction of drugs are of the following categories.

Sedatives

Those drugs which cause sedation are called sedatives e.g. diazepam, lorazepam etc.

Hallucinogens

Those substances which disrupts the brain function to the extent that the person is unable to recognize time, place, sound, colour and vision are called hallucinogens e.g. cannabis.

IMPORTANT POINTS

- Small Pox, polio, flue, measles, AIDS and hepatitis are viral diseases.
- Tuberculosis, whooping cough, diphtheria, tetanus, typhoid and cholera are bacterial diseases.
- Mosquito, *Ascaris* and thread worm can cause many diseases.
- Germs spread by air, water, touch, faeces and through animals.
- Diseases can be prevented by adopting different preventive measures.
- Cigarette smoke contains many dangerous gases which can cause diseases of lungs and heart in man.
- Mental diseases must be treated.
- The addiction of drugs can cause many dangerous effects on man.

GLOSSARY

AIDS: An abbreviation of Acquired Immune Deficiency Syndrome. This is a viral disease. The virus damages the immune system of body against diseases in man.

Ring Worm: A fungal skin disease which spreads by circular patches.

H I V An abbreviation of Human Immuno Deficiency virus which causes AIDS in humans.

QUESTIONS

Q1. Fill in the blanks:

(i) Bacteria can be seen by a _____

(ii) E.P.I. stands for _____

(iii) The AIDS virus is called _____

(iv) The measles vaccination is given to a child at _____

(v) Hepatitus virus spread by faeco _____ route through food and water.

(vi) B.C.G injection protects from _____

Q2. Put (✓) against right statements and (✗) against wrong statements.

(i) Polio virus affects the nervous system.

(ii) Antibiotic drugs are used against the viral diseases.

(iii) Tuberculosis is a non treatable disease.

(iv) AIDS is not an infectious disease.

(v) Cigarette smoker remains protected from lung and heart diseases.

Q3. Select and encircle the right answer

(i) The age of child in which the child is injected with measles is

(a) At birth (b) First month (c) 3rd month (d) 9th month

(ii) The drinks which can be used more in hepatitis are

(a) Water (b) Sugarcane juice (c) Juices (d) All

(iii) The age of the child in which he is given first injection of BCG is

(a) First month (b) At Birth (c) Third month (d) Ninth month

(iv) BCG saves the child from

(a) Measles (b) Whooping cough (c) T.B. (d) Hepatitis

(v) DPT is not effective in

(a) Diphtheria (b) Polio (c) Whooping cough (d) Tetanus

(vi) The chemical present in smoke of cigarette which makes the person addict is

(a) Tar (b) Nicotine (c) Carbon monoxide (d) Nitrogen dioxide

Q4. Short Questions

(i) In which age child is injected against measles and why?

(ii) What is the name of AIDS virus?

(iii) In which diseases DPT injection gives immunity to the body?

(iv) How does the malaria spread?

(v) Write the name of different agents causing diseases?

(vii) What is sterilization?

Q5. How does the AIDS spread? Write its preventive measures?

Q6. Write different methods to prevent from malaria?

Q7. What are the effects of smoke and smoking?

Q8. Briefly describe some of the mental diseases.

Q9. What do you know about Dengue Fever?

Q10. Describe treatment and prevention of Dengue Fever.

Q11. What is Dengue Hemorrhagic Fever (DHF)? Write in detail.