

## 32. Health and Hygiene

- Health is of importance to one and all, but constant efforts are required to maintain it.
- Health is physical, mental and social well being, not merely absence of a disease.
- Both personal and community health are important for well being of an individual as well as that of the community.

• Health	
Personal health Includes	Community health includes following activities and programmes
<ul style="list-style-type: none"> <li>• Balanced diet</li> <li>• Personal hygiene</li> <li>• Consuming clean food and water</li> <li>• Regular exercise and sleep</li> <li>• abstaining from habit forming substances</li> </ul>	<ul style="list-style-type: none"> <li>• cleanliness of the locality through proper garbage disposal and effective drainage system</li> <li>• Prescribed standard in food stores</li> <li>• Health promotion and disease prevention activities e.g. national immunisation programmes for infants, pulse polio programme</li> <li>• Awareness about diseases of national importance such as AIDS, T.B., Malaria, Polio, Leprosy</li> <li>• mid day meal in schools</li> <li>• ensuring access to hospitals and health centre</li> </ul>

Health is enhanced by balanced diet, hygiene and exercise. Health is affected negatively by disease, substance abuse and certain environmental factors

### • Disease

Type of Disease	Cause	Examples
(i) Communicable diseases	Pathogens	Cold, TB, Cholera
(ii) Non-communicable diseases	Nutritional deficiencies	Marasmus
	Hormonal disorders	Goitre
	Genetic defects	Down's syndrome

- Communicable diseases are spread in different ways
- Immunisation plays a very important role in control of communicable diseases
- Alcohol and drugs are harmful and addictive in nature
- Techniques like MRI, Ultrasound and X-rays help in early detection of the disease.
- First Aid is the immediate care given to the victims of an accident or sudden illness before medical help arrives.

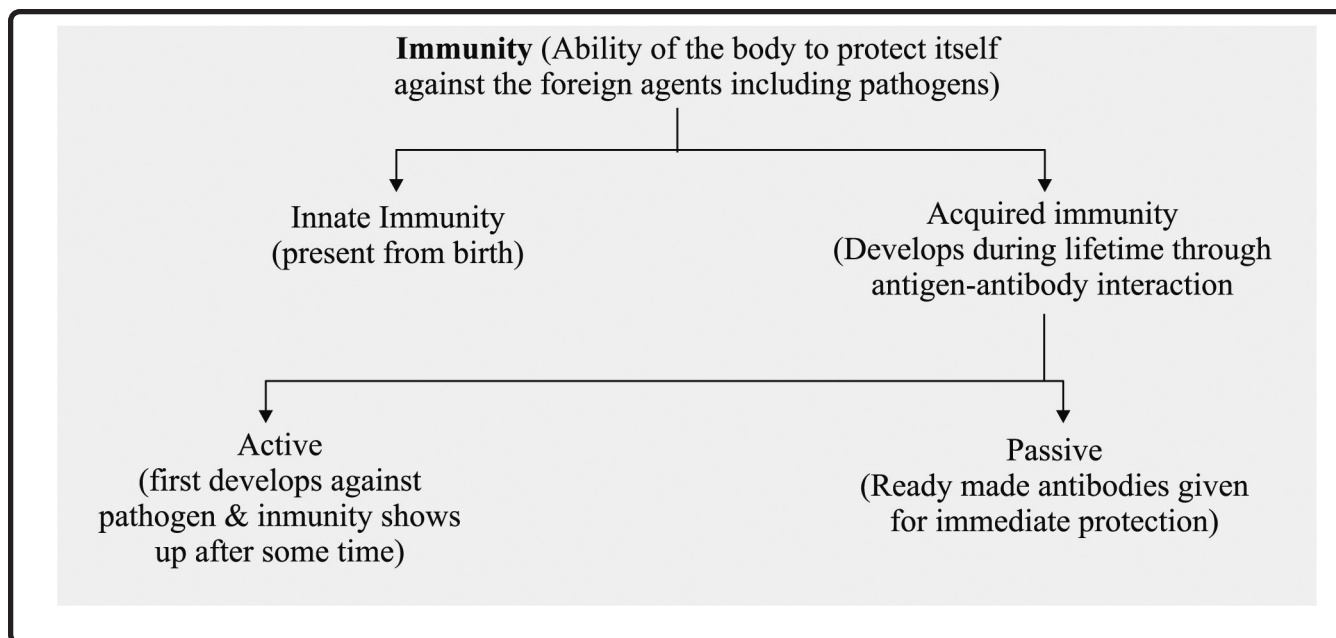
### Build Your Understanding

Communicable diseases are caused by entry of pathogens into the body and are contagious. Can be spread directly or indirectly.

Direct method		Indirect method
<ul style="list-style-type: none"> <li>• Contact with diseased person e.g. measles</li> <li>• Droplet infections e.g. tuberculosis</li> <li>• From infected mother to the new born e.g. HIV</li> </ul>		<ul style="list-style-type: none"> <li>• fomites, food, water</li> <li>• vectors eg mosquito</li> <li>• carriers like housefly</li> <li>• contaminated body fluids</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Some common communicable diseases</b></li> </ul>		
Name of the disease, causative agent, mode of transmission	Symptoms	Prevention and Treatment
(i) <b>Amoebiasis</b> caused by <i>Entamoeba histolytica</i> ; indirect	Abnominal pain and cramps, constipation, stool containing mucous and blood	<ul style="list-style-type: none"> <li>• Clean living conditions/ hygienic habits</li> <li>• Washing fruits and vegetables before eating</li> </ul>
(ii) <b>Malaria</b> caused by <i>Plasmodium</i> ; indirect	Fever with shivering followed by sweating and lowering of temperature	Eradication of mosquitoes treatment with antibiotics, prevent stagnation of water; use mosquito nets, door nets, mosquito repellents; Antimalarial drugs
(iii) <b>Influenza</b> (Flu) caused by virus; Direct transmission or indirectly through fomites	Fever, sore throat, cough, sneezing, running nose, headache, body pain, fatigue.	<ul style="list-style-type: none"> <li>• Patients should cover their nose and mouth when sneezing avoid public places, vaccination.</li> <li>• Take plenty of fluids; medicines prescribed by the doctor.</li> </ul>
(iv) <b>Tuberculosis</b> (T.B.) caused by <i>Mycobacterium tuberculi</i> ; Transmitted directly by droplet infection, indirectly through fomites.	Persistent low grade fever and cough and blood in sputum weight loss, chest pain, excessive fatigue.	B.C.G. vaccination at birth; isolation of TB patient clothers and utensils used by T.B. patients should be regularly disinfected. <ul style="list-style-type: none"> <li>• Regular course of antibiotics.</li> <li>• Treatment is for 6-8 months.</li> </ul>

### How human body fights back

- Human body fights a pathogens with W.B.C. engulfing them or by developing antibodies against the pathogens.
- For prevention, harmless version of pathogen is inoculated into human body which then produces antibodies against pathogen. This is called immunisation.
- Malnutrition and dietary disorders result in non-communicable diseases like diabetes, goitre, Marasmus, anemia, Scurvy etc.
- B.C.G., M.M.R and D.P.T are common vaccines given to children for immunity against Tuberculosis, Measles, Mumps and Rubella. Diphtheria, Pertussis (Whooping Cough) and Tetanus; Oral Polio drops for polio



### ✓ Maximise Your Marks

- Viral diseases like common cold, measles, flu etc are spread very fast as they get transmitted both directly or through indirect means.
- Why are diseases like goitre, diabetes, anemia classified as non communicable diseases?
- Mothers' milk provides essential antibodies that provided immediate immunity to the new borns which type of immunity does it provide?

Table below gives examples of certain commonly abused drugs

Name of Drug	Purpose
Narcotics –opium, morphine	Kills pain
Cocaine and Amphetamines	Provides sense of euphoria and energy
Barbiturates	Acts as a Depressant–change perception
Hallucinogens like LSD, cannabinoids etc	Send into a make-believe world
Tobacco	Used for pleasure that becomes a habit.

**Drugs** are chemicals most of which are for medical use. Certain chemicals however, are addictive and harmful for mental and physical health upon prolonged use. Hence their consumption is termed 'Drug abuse' rather than drug use.

Continuous abuse of drug leads to **addiction**, then **tolerance** of the drug by the body and ultimately **dependence** on it. It becomes difficult to give up the drug due to withdrawal symptoms

which become unbearable. The drug abuser begins to steal, indulge in criminal acts to procure money to buy drugs. Physical health deteriorates. Students abusing drugs give up studies. Drug abuse is triggered by unhealthy and unhappy domestic environment, peer pressure and experimentation. Prevention is possible when there is awareness or availability of guidance and counselling. Cure is possible if medical and professional help is sought.



### Stretch Yourself

1. Try to identify any two communicable and two non communicable diseases in your own locality and find out what causes them. Also, suggest remedial measures.



### Test Yourself

1. Why is amoebiasis said to be transmitted by the indirect method and tuberculosis by both direct and indirect methods? Explain.
2. A child who has been given vaccine for polio will still be susceptible to tuberculosis. Give reasons and name the vaccine for preventing tuberculosis.
3. Given below are names of certain diseases, their symptoms, causative agents and preventive measures in a jumbled up manner. Using different coloured pencils/pens, connect the names of the disease with its causative agent, symptoms and preventive measure. You may use multiple lines.

I	II	III	IV
Malaria	Bacteria	Fever	Oral vaccine
TB	Virus	Watering of eyes	B.C.G.
Amoebiasis	Protistan	Shivered followed by sweating	Gambusia fish
Influenza	Protozoa	Sore throat	Use of door nets
	Worms	Abdominal pain with mucus in stool	Not sharing used towels
	Protozoa	Cough with blood in sputum	Antibiotics

4. Why are B.C.G. and D.P.T. vaccines given to new borns?
  1. Tuberculosis
  2. Typhoid
  3. Cholera
  4. Amoebiasis
  5. Dipheria
  6. Leprosy
  7. Malaria
5. (a) Mention the odd one out in the following diseases caused by protista.
  1. Malaria
  2. Amoebiasis
  3. Typhoid
5. (b) Encircle odd ones among following diseases caused by bacteria.
  6. Differentiate between Pathogens and Vectors.
  7. How does the polio virus enter the human body and paralyse organs.