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Why Do We Fall Ill

In the Chapter

- Health is a state of physical, mental and social well-being.
- The health of an individual is dependent on his/her physical surroundings and his/her economic status.
- Diseases are classified as acute or chronic, depending on their duration.
- Disease may be due to infectious or non-infectious causes.
- Infectious agents belong to different categories of organisms and may be unicellular and microscopic or multicellular.
- The category to which a disease-causing organism belongs decides the type of treatment.
- Infectious agents are spread through air, water, physical contact or vectors.
- Prevention of disease is more desirable than its successful treatment.
- Infectious diseases can be prevented by public health hygiene measures that reduce exposure to infectious agents.
- Infectious diseases can also be prevented by using immunisation.
- Effective prevention of infectious diseases in the community requires that everyone should have access to public hygiene and immunisation.

Intext Exercises

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1. State any two conditions essential for good health.

Ans. (i) A person can be said healthy only when he is free from disease.

(ii) The person should be free from mental tension and social problems because only the person who is physically, mentally and socially fit is called healthy.

2. State any two conditions essential for being free of diseases.

Ans. (i) Personal and community cleanliness and good environment are essential for being free of disease.

(ii) Sufficient and balanced food is also essential to keep body free of diseases.

3. Are the answers to the above questions necessarily the same or different? Why?

Ans. Both the questions have different answers. Because, by the term 'health' we mean the

mental, physical and social health of the person while, to be free of diseases refers only to the physical health. Hence, these are different.

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1. **List any three reasons why you would think that you are sick and ought to seek a doctor. If only one of these symptoms were present, would you still go to the doctor? Why or why not?**

Ans. Some general symptoms are

- (i) Headache
- (ii) Cough
- (iii) Dysentery

If any of the above symptoms is observed, the person should immediately contact the doctor.

Cause : Any of the symptoms can be the cause of disease. If these are ignored, the person may have to face a dangerous situation.

2. **In which of the following cases do you think that the disease has a long-term effect on your health and is likely to be most unpleasant?**

- * If you get jaundice
- * If you get lice
- * If you get a acne

Why?

Ans. In Jaundice because, it is a chronic disease which may stay for a long time.

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1. **Why are we normally advised to take bland and nourishing food when we are sick?**

Ans. During infection, the immune power of the body decreases. So, to maintain the immune power we are suggested to take sufficient and easily digestible food.

2. **What are the different means by which infections are spread?**

Ans. Following are the mean of spread of disease :

- (i) By air : By sneezing and coughing, the microbes spread into the air and enter the body of healthy man.
- (ii) By water : The microbes enter our body by drinking polluted and contaminated water.
- (iii) By sexual contacts : Some disease like AIDS, spread by sexual contact with infected person.
- (iv) By vectors : Some organisms like female anopheles mosquito also work as the vector of disease causing agent and hence spread diseases.

3. **What precautions can you take in your school to reduce the incidence of infectious diseases?**

Ans. (i) By preventing gathering of people.

(ii) By making available clean and fresh drinking water.

(iii) By keeping ground and classrooms clean.

(iv) By using handkerchief to cover mouth while sneezing or coughing.

(v) By preventing accumulating of water in and around the school.

(vi) By using vaccines and immunization.

(vii) By keeping the toilet clean.

(viii) By avoiding the use of uncovered food and fruits.

4. **What is immunization?**

Ans. When a vaccine is used to kill the microbes and prevent their entry into the body, the immune power of the body improves. So the process of developing immune power in the body to fight against the diseases is called immunization.

5. What are the immunization programmes available at the nearest health centre in your locality? Which of these diseases are the major health problems in your area?

Ans. Immunisation programmes :

- (i) Vaccine against measles.
- (ii) BCG vaccines against T.B.
- (iii) Polio drops against poliomyelites.
- (iv) Vaccine against small pox.
- (v) D.P.T. vaccines against diphtheria, tetanus and whooping cough.

Following diseases are the major problems :

- | | |
|--------------------|----------------|
| (i) Hepatitis | (ii) Small pox |
| (iii) Tuberculosis | (iv) Tetanus |

Exercise

1. How many times did you fall ill last year? What were the illness?

(a) Think of any change you could make in your habits in order to avoid any of/most of the above illnesses.

(b) Think of one change you would wish for in your surroundings in order to avoid any of/most of the above illnesses.

Ans. Three times

- (i) Malaria
- (ii) Dysentery
- (iii) Viral fever

(a) Change in daily routine

- (i) Cleaning our body
- (ii) To prevent the growth and reproduction of mosquito
- (iii) Spraying insecticides
- (iv) Taking balanced diet

(b) Change in surrounding

To prevent accumulation of garbage and dirty water and to keep the surrounding clean.

2. A doctor/nurse/health-worker is exposed to more sick people than others in the community. Find out how she/he avoids getting sick herself/himself.

Ans. Doctors/nurses/health workers fall sick more frequently than others. They can keep themselves safe by :

- (i) cleaning their hands after checking up the patients
- (ii) using mask during checking up the patients
- (iii) avoiding direct physical contact with patients
- (iv) avoiding sexual contact with patients
- (v) avoiding taking meal with patients
- (vi) taking balanced diet

3. Conduct a survey in your neighbourhood to find out what the three most common diseases are. Suggest three steps that could be taken by your local authorities to bring down the incidence of these diseases.

Ans. The three common diseases are :

- (i) Dysentery
- (ii) Malaria
- (iii) Viral fever or jaundice

Precautions:

- (i) Keep the surrounding and environment clean.
- (ii) Regular cleaning of sewage line and proper exit of sewage water.
- (iii) To destroy the places of mosquito breeding.
- (iv) To spray chemical and fumants to kill mosquitoes.

4. A baby is not able to tell her/his caretakers that she/he is sick. What would help us to find out:

- (a) that the baby is sick?
- (b) what is the sickness?

Ans. (a) Some particular symptoms, e.g. cough, dysentery, etc. indicate that the child is sick.
 (b) (i) Every disease has its own particular symptoms which tell us about the disease.
 (ii) By carrying tests in the laboratory, the disease can be diagnosed.

5. Under which of the following conditions is a person most likely to fall sick?

- (a) When she is recovering from malaria.
- (b) When she has recovered from malaria and is taking care of someone suffering from chicken-pox.
- (c) When she is on a four-day fast after recovering from malaria and is taking care of someone suffering from chick-pox. Why?

Ans. (b) When after recovering back from malaria she is taking care of a person suffering from small pox.

Reason : Due to unavailability of sufficient and balanced diet and weakened immune system.

6. Under which of the following conditions are you most likely to fall sick?

- (a) When you are taking examinations.
- (b) When you have travelled by bus and train for two days.
- (c) When your friend is suffering from measles. Why?

Ans. (c) When my friend is suffering from measles.

Reason : In this condition, I will frequently visit my friend's house. Measles is an air-borne disease. When my friend coughs or sneezes, small drops from his mouth containing microbes mix in the air. The microbes may be carried away by air. So, the chance of getting infected increases. Hence, in this case I may fall severely sick.

Additional Questions

1. Name the basic units of living beings.

Ans. Cells.

2. What is meant by an acute disease?

Ans. Disease that lasts for very short period of time is called acute disease.

3. What will the improper functioning of cells and tissues lead to?

Ans. It will lead to the improper activity of the body.

4. Name some substance which make a cell.

Ans. Proteins, carbohydrates, fats or liquids.

5. Why are overcrowded and poorly ventilated areas a major factor in the spread of air borne diseases?

Ans. Overcrowded and poorly ventilated areas are a major factor in the spread of air borne

diseases because infection can be transmitted from a diseased person to a healthy person in these areas easily.

6. How do children in many parts of India get immune to hepatitis A by the time they are 5 years old ?

Ans. Children in many parts of India get immune to hepatitis A by the age of 5 years, because they are exposed to this disease through polluted water.

7. How are communicable diseases transmitted ?

Ans. Communicable diseases are transmitted through vectors.

8. Give the definition of health as given by WHO.

Ans. According to WHO the health is defined as "a state of complete physical, mental and social well-being and not merely the absence any disease."

9. What is health?

Ans. Health is a state of physical, mental and social well being and not just freedom from disease.

10. A healthy boy of 12 years often picks fights with others. Do you think he is in good health? If so, then explain your answer.

Ans. No, he is not healthy. He may be physically fit but not fit mentally and socially.

11. Define health as per World Health Organisation.

Ans. Health is a "state of complete physical, mental and social well-being and not merely obsence of any disease". (WHO)

12. Against which disease is BCG vaccine used ?

Ans. BCG vaccine is used against Tuberculosis.

13. Why is food necessary for us?

Ans. Food provides the cells and tissues of our body with energy and raw materials so as to function properly.

14. What do the words 'poor health' imply?

Ans. The words 'poor health' imply the state of not well being.

It means that the person having poor health is either physically or mentally or socially malfunctioning.

15. Give the full form of BCG.

Ans. BCG = Bacillus - Calmette - Guerin.

16. Give one example of sexually transmitted viral disease.

Ans. AIDS.

17. Write four ways of maintaining personal hygiene to keep good health.

Ans. (i) We should wash our hands with soap after going to the toilet.

(ii) We should take bath and change our clothes everyday.

(iii) We should wash our hands with soap before eating food.

(iv) We should regularly cut our nails.

18. What do we think about when we think of health?

Ans. We think about societies and communities.

19. What do we think about when we think of disease ?

Ans. We think about individual sufferers.

20. How is malaria caused?

Ans. By the bite of female Anopheles mosquito malaria is caused.

21. Which virus causes AIDS?

Ans. Human Immuno Deficiency Virus.

22. Sweety suffered from chicken pox this year. Her grand mother told her that now she would not suffer from this disease again. What is the reason for such a saying?

Ans. Antibodies formed at the time of suffering from chicken pox will remain in blood for long and she will not suffer from this disease again.

23. Name two organs of digestive system.

Ans. Stomach and intestine.

24. What is the function of bones and muscles?

Ans. It holds the body parts together and helps the body move.

25. What are the two effects caused by an infectious disease?

Ans. (i) Tissue specific effects.
(ii) Common effects.

26. Name two air borne diseases.

Ans. Measles and Mumps.

27. Name the organ into which Malarial Parasite enters after mosquito bite.

Ans. Liver.

28. How do we pinpoint the disease?

Ans. We pinpoint the disease by getting the laboratory tests done.

29. What is meant by the term disease?

Ans. The malfunctioning of body organs due to one or the other reason is called disease.

In other words, disease is a type of disorder developing in the body.

Disease can be classified mainly into two classes – communicable or infectious and non-communicable or non-infectious diseases.

30. Name the organism which causes typhoid.

Ans. Bacteria.

31. Name one human disease which spreads through direct contact.

Ans. Ring worm.

32. Give one example of a carrier and disease spread by it.

Ans. Housefly - Cholera.

33. If a person gets tired easily, is pale and loses weight, which disease is he most likely suffering from.

Ans. He is most likely suffering from T.B.

34. What is infection?

Ans. It is the interaction between the host and the parasite with competition for superiority.

35. What are infectious diseases?

Ans. These are acquired diseases caused by virus, bacteria, fungi, protozoans and worms, etc.

36. Define a pathogen.

Ans. It is any organism that is capable of causing a disease.

37. What are the two causes of a disease?

Ans. Immediate cause and contributory.

38. Do most diseases have a single cause?

Ans. No, most diseases have many causes and not one single cause.

39. Write four immediate causes of diseases.

Ans. Virus, bacteria, fungus, infection by worms and protozoans are the immediate causes of diseases.

40. What is a non-communicable disease? Give an example.

Ans. The disease which does not spread by contact between infected and healthy persons through air and water is called non-communicable disease e.g., arthritis, heart disease, cancer, etc.

Multiple Choice Questions

1. Which one of the following is not a bacterial disease?

- (a) Cholera (b) Tuberculosis
(c) Anthrax (d) Influenza

Ans. (d)

2. Which one of the following diseases is not transmitted by mosquito?

- (a) Brain fever (b) Malaria
(c) Typhoid (d) Dengue

Ans. (c)

3. Which one of the following diseases is not caused by bacteria?

- (a) Typhoid (b) Anthrax
(c) Tuberculosis (d) Malaria

Ans. (d)

4. Which one of the following diseases is caused by protozoans?

- (a) Malaria (b) Influenza
(c) AIDS (d) Cholera

Ans. (a)

5. Which one of the following has a long-term effect on the health of an individual?

- (a) Common cold (b) Chicken pox
(c) Chewing tobacco (d) Stress

Ans. (c)

6. Which of the following can make you ill if you come in contact with an infected person?

- (a) High blood pressure (b) Genetic abnormalities
(c) Sneezing (d) Blood cancer

Ans. (c)

7. AIDS cannot be transmitted by :

- (a) sexual contact (b) hugs
(c) breast feeding (d) blood transfusion

Ans. (b)

8. Making anti-viral drugs is more difficult than making antibacterial medicines because :

- (a) viruses make use of host machinery.
(b) viruses are on the border line of living and non-living.
(c) viruses have very few bio chemical mechanisms of their own.
(d) viruses have a protein coat.

Ans. (c)

9. Which one of the following causes kala-azar?

- (a) Ascaris (b) Trypanosoma
(c) Leishmania (d) Bacteria

Ans. (c)

10. If you live in a overcrowded and poorly ventilated house, it is possible that you may suffer from which of the following diseases ?

- (a) Cancer (b) AIDS
(c) Air-borne diseases (d) Cholera

Ans. (c)

11. Which disease is not transmitted by mosquitoes ?

- (a) Dengue (b) Malaria

- (c) Brain fever or encephalitis
- (d) Pneumonia

Ans. (d)

12. Which one of the following is not important for individual health?

- (a) Living in clean space
- (b) Good economic condition
- (c) Social equality and harmony
- (d) Living in a large and well furnished house

Ans. (d)

13. Choose the wrong statement:

- (a) High blood pressure is caused by excessive weight and lack of exercise.
- (b) Cancers can be caused by genetic abnormalities.
- (c) Peptic ulcers are caused by eating acidic food.
- (d) Acne is not caused by staphylococci.

Ans. (c)

14. We should not allow mosquitoes to breed in our surroundings because they :

- (a) multiply very fast and cause pollution.
- (b) are vectors for many diseases.
- (c) bite and cause skin diseases.
- (d) are not important insects.

Ans. (b)

15. You are aware of Polio Eradication Programme in your city. Children are vaccinated because :

- (a) vaccination kills the polio causing micro-organisms.
- (b) it creates immunity in the body.
- (c) prevents the entry of polio causing organism.
- (d) all the above

Ans. (b)

16. The disease which begins abruptly and last only for a short duration is known as

- (a) Acute disease
- (b) Chronic disease
- (c) Congenital disease
- (d) None of these

Ans. (a)

17. Vaccine is not available against which of the following diseases?

- (a) Polio
- (b) Tuberculosis
- (c) Diphtheria
- (d) Malaria

Ans. (d)

18. Which of the following is non-communicable disease?

- (a) Allergy
- (b) Malaria
- (c) Diarrhoea
- (d) Tuberculosis

Ans. (a)

19. Human disease caused by a bacterium is

- (a) Measles
- (b) Dengue
- (c) Tuberculosis
- (d) Polio

Ans. (c)