

HEALTH: THE ULTIMATE TREASURE
Class 08 - Science (Curiosity)

Time Allowed: 1 hour and 28 minutes

Maximum Marks: 140

1. Which method can be applied to keep the mind and body relaxed? [1]
 - a) Eating more fast food
 - b) Engaging in pranayama or yoga regularly
 - c) Skipping exercise
 - d) Excessive screen time
2. What is the term for the natural ability of our body to fight diseases? [1]
 - a) Therapy
 - b) Immunity
 - c) Resistance
 - d) Vaccination
3. Diseases can be broadly grouped into communicable and non-communicable diseases. From the options given below, identify the non-communicable diseases. [1]
 - i. Typhoid
 - ii. Asthma
 - iii. Diabetes
 - iv. Measles
 - a) (ii) and (iv)
 - b) (i) and (ii)
 - c) (ii) and (iii)
 - d) (i) and (iv)
4. What is the main cause of antibiotic resistance? [1]
 - a) Overuse of vaccines
 - b) Poor diet
 - c) Antibiotic overuse
 - d) Lack of exercise
5. What are pathogens? [1]
 - a) Healthy cells in the body
 - b) Nutrients in food
 - c) The body's immune system
 - d) Microorganisms that cause diseases
6. Why should one say 'NO' to harmful substances for maintaining health? [1]
 - a) To reduce the risk of health issues related to substance abuse
 - b) To ensure a sedentary lifestyle
 - c) To enjoy all activities without any restrictions
 - d) To prevent consumption of fruits and vegetables
7. Who discovered the first antibiotic, penicillin? [1]
 - a) Alexander Fleming
 - b) Dr. Maharaj Kishan Bhan
 - c) Edward Jenner
 - d) Dr. Kamal Ranadive
8. What does Ayurveda consider essential for maintaining well-being? [1]

Reason (R): Social interactions provide emotional support and improve mood.

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.

18. **Assertion (A):** Non-communicable diseases are increasing in India. [1]

Reason (R): Lifestyle changes, such as eating processed food and a lack of exercise, contribute to these diseases.

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.

19. **Assertion (A):** A balanced diet supports a healthy body by providing essential nutrients. [1]

Reason (R): Fruits, vegetables, and whole grains are rich sources of vitamins, minerals, and fibers.

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.

20. **Assertion (A):** Eating fast food and other junk food every day is harmful for our health. [1]

Reason (R): Junk food contains high levels of unhealthy fats and sugars which can lead to obesity and other health issues.

- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.

21. What are the health effects of poor air quality? [1]

22. How does climate change lead to the emergence of new diseases? [1]

23. Which environmental factors affect human health? [1]

24. How do communicable diseases spread? [1]

25. Give an example of a communicable disease and a non-communicable disease. [1]

26. What are pathogens? [1]

27. What are the components of a balanced diet? [1]

28. How can you use symptoms to decide if medical attention is needed? [1]

29. What is the role of vaccines in controlling diseases? [1]

30. Who discovered the first vaccine and for which disease? [1]

31. Match the following: [2]

Column A	Column B
1. Typhoid	(a) Virus (Influenza)
2. Dengue	(b) Bacteria (Salmonella typhi)
3. Flu	(c) Virus (Varicella-zoster)
4. Chickenpox	(d) Virus (transmitted by mosquito)

32. Match the following: [2]

Column A	Column B
1. Vaccination	(a) Dengue
2. Removing Standing Water	(b) Polio
3. Washing Hands	(c) Typhoid
4. Wearing Masks	(d) COVID-19

33. Why do some groups of people get affected more than others during disease outbreaks? [2]

34. Define the relationship between environmental cleanliness and individual health. [2]

35. How does the holistic approach of Ayurveda differ from conventional medicine in promoting health? [2]

36. In what ways are traditional medicine systems like Ayurveda beneficial, and what limitations do they have in disease management? [2]

37. What is the definition of health according to the World Health Organization (WHO)? [2]

38. What is the role of Ayurveda in maintaining good health? [2]

39. Explain how antibiotic resistance develops and mention two ways to prevent it. [2]

40. What are the benefits of routine vaccination from an individual and public health perspective? [2]

41. How can you apply the concept of balancing digital screen time to improve your health? [2]

42. Describe the main purpose of a vaccine and explain how it helps in preventing diseases in humans. [2]

43. Describe how maintaining a balance between body, mind, and surroundings can impact a person's health. [3]

44. When our body encounters a pathogen for the first time, the immune response is generally low but on exposure to the same pathogen again, the immune response by the body is much more compared to the first exposure. Why is it so? [3]

45. Explain why non-communicable diseases are referred to as lifestyle diseases and provide one preventive measure. [3]

46. How do emotions like stress or worry affect us and make us sick? [3]

47. Could climate change lead to new types of diseases? [3]

48. List three examples of communicable diseases and describe how they are transmitted. [3]

49. What is the primary difference between communicable and non-communicable diseases? [3]

50. How can vaccines and antibiotics complement each other in disease prevention and management? [3]

51. Define "health" in terms of physical, mental, and social well-being according to the World Health Organization. [3]

52. Identify and discuss the modern challenges to achieving a balanced health as suggested by Ayurvedic principles. [3]

53. **State whether the given statement is True or False:** [4]

(a) A disease can occur when one or more organs fail to function properly. [1]

(b) Malaria is a disease caused by a virus. [1]

(c) Vaccines can treat illnesses after someone is already sick. [1]

(d) A healthy person maintains a positive mindset and enjoys social life. [1]

54. **Read the following text carefully and answer the questions that follow:** [4]

Our body generally functions in a balanced way to keep us healthy. When we feel unwell, it means something inside is not working properly. We may notice symptoms, such as pain, tiredness, or dizziness, and signs like fever, rash, or swelling. A symptom is what we feel, while a sign can be observed or measured. Doctors use these symptoms and signs to identify what is making us unwell.

Questions:

- Give one example of a sign of illness. How is it different from a symptom? (1)
- Differentiate between symptoms and signs of illness with one example each. (1)
- Why do doctors need both symptoms and signs to diagnose an illness? (2)

OR

Explain with examples how symptoms and signs together give a clearer picture of being unwell. (2)

55. **Read the following text carefully and answer the questions that follow:** [4]

A disease is a condition that affects the normal working of the body or mind. Diseases can be communicable, caused by pathogens like bacteria, viruses, fungi, protozoa, or worms, and spread through air, water, food, or insects. Non-communicable diseases, like diabetes, cancer, or asthma, are linked to poor nutrition, unhealthy lifestyle, or environment. Understanding their causes helps in prevention. Simple steps like hygiene, vaccination, balanced diet, and exercise reduce the risk of diseases.

Questions:

- Name one non-communicable disease. How is it different from a communicable disease? (1)
- Differentiate between communicable and non-communicable diseases with one example each. (1)
- How do communicable diseases spread, and what measures can prevent them? (2)

OR

Why are non-communicable diseases becoming more common in India today? (2)

56. **Read the following text carefully and answer the questions that follow:** [4]

Prevention is better than cure, and good hygiene, sanitation, and vaccination are key to controlling diseases. Vaccines train the immune system to fight infections and protect communities. India is a leading vaccine producer, contributing globally. Antibiotics help treat bacterial diseases but must be used responsibly to avoid resistance. Traditional medicine and lifestyle changes also support health. Prevention, timely treatment, and wise use of medicines together ensure better disease control and healthier lives.

Questions:

- Name one disease that can be prevented by vaccination. How does vaccination help? (1)
- What is the role of vaccines in disease prevention? (1)
- How can antibiotic resistance be prevented? (2)

OR

Why is prevention more effective than cure in controlling diseases? (2)

57. Define the term "disease." Identify and describe the difference between non-communicable diseases and communicable diseases. [5]

58. Explain the significance of hygiene and environmental cleanliness in preventing diseases. [5]
59. Evaluate how yoga and pranayama contribute to maintaining physical health and emotional balance. [5]
60. Explain the shift in disease patterns from infectious diseases like smallpox to chronic diseases such as diabetes and heart problems. [5]
61. Describe how the body responds to an infection like the common cold. [5]
62. What are pathogens, and how do they contribute to communicable diseases? Give two examples. [5]
63. **Fill in the blanks:** [10]
- (a) Vaccines provide _____ immunity by training the immune system. [1]
 - (b) A measurable change like a rash or swelling is called a _____. [1]
 - (c) _____ is a non-communicable disease caused by a lack of specific nutrients in the diet. [1]
 - (d) Diseases that spread from person to person are called _____ diseases. [1]
 - (e) The first vaccine was discovered by _____. [1]
 - (f) Taking antibiotics without need can lead to antibiotic _____. [1]
 - (g) The natural ability of our body to fight diseases is known as _____. [1]
 - (h) Medicines that kill the bacteria causing diseases are known as _____. [1]
 - (i) Headache is a _____ experienced by the patient. [1]
 - (j) A _____ helps our body fight certain diseases by training the immune system. [1]

USP

Solution
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1.
(b) Engaging in pranayama or yoga regularly
Explanation:
Practicing pranayama or yoga helps in maintaining mental and physical relaxation.
2.
(b) Immunity
Explanation:
Immunity
3.
(c) (ii) and (iii)
Explanation:
The non-communicable diseases from the options are Asthma and Diabetes.
Typhoid and Measles are communicable diseases (spread by germs from person to person).
Asthma and Diabetes are non-communicable diseases (not spread from person to person; linked to genetics, lifestyle, or environment)
4.
(c) Antibiotic overuse
Explanation:
Antibiotic resistance mainly happens when antibiotics are used indiscriminately (without proper need or prescription). When antibiotics are overused or not taken for the full course, bacteria adapt and become resistant to them. This makes infections harder to treat because normal antibiotics stop working effectively.
5.
(d) Microorganisms that cause diseases
Explanation:
Pathogens are microorganisms like bacteria, viruses, fungi, and protozoa that cause diseases.
6. **(a)** To reduce the risk of health issues related to substance abuse
Explanation:
Avoiding harmful substances like tobacco and alcohol reduces health risks.
7. **(a)** Alexander Fleming
Explanation:
Penicillin, the first antibiotic, was discovered by Alexander Fleming in 1928. He observed that a mold called *Penicillium notatum* killed bacteria in a Petri dish. This discovery led to the development of antibiotics, which are medicines used to treat bacterial infections.
8.
(d) Eating fresh, wholesome food
Explanation:
Ayurveda emphasizes eating fresh, wholesome food suited to one's prakriti (body constitution) as essential for well-being.
9.
(c) Adopting a balanced diet and regular exercise routine
Explanation:

A healthy lifestyle helps prevent non-communicable diseases like diabetes and obesity.

10. **(a)** Development of respiratory issues

Explanation:

Exposure to pollutants can lead to conditions like asthma.

11.

- (c)** Development of immunization

Explanation:

The development of immunization has reduced diseases like smallpox and polio.

12.

- (d)** Begin a course of antibiotics as prescribed

Explanation:

Begin a course of antibiotics as prescribed

13.

- (c)** Getting enough sleep

Explanation:

Proper sleep is essential for physical and mental health.

14.

- (c)** Complete physical, mental, and social well-being

Explanation:

The WHO defines health as a state of complete physical, mental, and social well-being.

15.

- (d)** Through direct contact like shaking hands

Explanation:

Communicable diseases can spread by direct contact, such as shaking hands with an infected person.

16. **(a)** Both A and R are true and R is the correct explanation of A.

Explanation:

Both A and R are true and R is the correct explanation of A.

17. **(a)** Both A and R are true and R is the correct explanation of A.

Explanation:

The psychological benefits of social interactions support mental health.

18. **(a)** Both A and R are true and R is the correct explanation of A.

Explanation:

Non-communicable diseases like diabetes, heart disease, and obesity are increasing in India. This is mainly because of lifestyle changes, such as eating more processed and junk food, physical inactivity, and lack of exercise. These habits increase the risk of long-term health problems, so the reason correctly explains the assertion.

19. **(a)** Both A and R are true and R is the correct explanation of A.

Explanation:

Both A and R are true and R is the correct explanation of A.

20. **(a)** Both A and R are true and R is the correct explanation of A.

Explanation:

Junk food does lead to health issues due to its unhealthy composition.

21. Poor air quality causes respiratory problems, worsens conditions like asthma, weakens immunity, and increases infection risks. Long-term exposure harms overall health, highlighting the importance of clean

air for well-being.

22. Climate change may alter ecosystems and pathogen distribution, leading to new disease patterns and challenges.
23. Air quality, clean water, and dust levels impact respiratory and overall health.
24. Communicable diseases spread through air, contaminated food/water, direct contact, and vectors like mosquitoes.
25. Communicable disease example: Typhoid.
Non-communicable disease example: Asthma.
26. Pathogens are organisms like bacteria, viruses, fungi, worms, or protozoa that cause diseases.
27. Fruits, vegetables, and whole grains are the components of a balanced diet.
28. Severe or persistent symptoms such as continuous pain indicate a need for medical evaluation.
29. Vaccines train the immune system to recognize and fight harmful germs, preventing serious infections.
30. Edward Jenner discovered the first vaccine for smallpox.

31.	Column A	Column B
	1. Typhoid	(b) Bacteria (Salmonella typhi)
	2. Dengue	(d) Virus (transmitted by mosquito)
	3. Flu	(a) Virus (Influenza)
	4. Chickenpox	(c) Virus (Varicella-zoster)
32.	Column A	Column B
	1. Vaccination	(b) Polio
	2. Removing Standing Water	(a) Dengue
	3. Washing Hands	(c) Typhoid
	4. Wearing Masks	(d) COVID-19

33. Some people are more affected during disease outbreaks because of:
 - **Weaker immune systems** (young children, elderly, or those already sick)
 - **Poor living conditions or hygiene**, making it easier for germs to spread
 - **Lack of access to vaccines, medicines, or clean water**
 - **Close contact** with more people or limited knowledge about how to protect themselves.So, health depends on your body, your habits, and your environment!
34. Environmental cleanliness is directly related to individual health because maintaining a clean environment reduces exposure to **pollutants, germs, and pathogens**, which can cause diseases. Clean surroundings ensure safe water, food, and air, prevent the spread of infections, and reduce the breeding of vectors like mosquitoes. A hygienic environment also improves mental well-being, lowers stress, and promotes overall health, highlighting the vital connection between environmental and personal health.
35. The holistic approach of Ayurveda differs from conventional medicine by focusing on the balance between body, mind, and surroundings to promote health. Ayurveda emphasizes preventive care through lifestyle modifications, diet, and natural remedies tailored to an individual's prakriti. It incorporates practices like yoga and meditation to achieve mental and social well-being. In contrast, conventional medicine often emphasizes treating symptoms of diseases, focusing more on curative measures using pharmaceuticals and medical interventions.
36. Traditional systems like Ayurveda use herbs and minerals to manage health and promote recovery, focusing on lifestyle balance. However, they may not be effective for all conditions, especially in severe or advanced stages, where modern medicine may be required. They are best for everyday well-being and minor ailments.
37. According to the World Health Organization (WHO), health is defined as a 'state of complete physical, mental, and social well-being, and not merely the absence of disease.' This definition emphasizes that health encompasses not just the absence of diseases but also the overall well-being in various aspects of life.

38. Ayurveda plays a significant role in maintaining good health by emphasizing balance among body, mind, and surroundings. It teaches that adhering to dinacharya (daily routine) and ritucharya (seasonal routine), as well as consuming wholesome food suited to one's prakriti (body constitution), can promote well-being. Additionally, practices like yoga, meditation, cleanliness, regular exercise, and restful sleep are vital in achieving balance and overall health.
39. Antibiotic resistance arises when bacteria evolve mechanisms to resist antibiotics due to overuse or misuse. Key ways to curb this include using antibiotics only when prescribed by a doctor and ensuring the full course is completed as directed. Avoiding unnecessary antibiotics helps maintain their effectiveness.
40. Routine vaccination protects individuals against specific infectious diseases and cultivates herd immunity, critical for public health. This collective immunity reduces disease transmission, protects immuno-compromised individuals, and minimizes healthcare burdens by preventing outbreaks, ensuring community resilience against common and emerging health threats.
41. To balance screen time and improve health:
- Set specific limits-** decide daily or weekly screen time for study, entertainment, or social media.
 - Include regular breaks-** follow the 20-20-20 rule to reduce eye strain and fatigue.
 - Prioritize outdoor activities or hobbies-** spend time exercising, reading, or engaging in creative pursuits.
 - Use apps or tools-** track and manage time spent on devices to stay mindful of usage.
- Balancing screen time supports **eye health, mental well-being, better sleep, and physical fitness.**
42. A vaccine trains the immune system to recognize and combat pathogens, like viruses and bacteria. It introduces a harmless component of the pathogen, enabling the immune system to develop antibodies. This preparedness helps prevent future illnesses by recognizing and eliminating the pathogen swiftly if exposed.
43. Balancing body, mind, and surroundings influences overall health by promoting harmony between physical fitness, mental clarity, and environmental factors. Such balance aids stress reduction, enhances emotional stability, and supports preventive health measures. A holistic approach encourages adopting practices such as regular exercise, healthy eating, mindfulness, and social interactions. It fosters well-rounded development, allowing individuals to handle life's challenges effectively, thus ultimately promoting a healthier lifestyle and improved quality of life.
44.
 - When our body faces a pathogen for the first time, the immune system's response is usually weak because it is just learning to recognise and fight that germ.
 - After this first exposure, the immune system "remembers" the germ. If the same pathogen enters the body again, the immune system responds much faster and stronger because it is already prepared to fight it.
 - This is why vaccinations work-they help train our immune system so we are protected if we ever encounter the real germ in the future.
45. Non-communicable diseases, also known as lifestyle diseases, arise primarily from lifestyle choices and environmental factors such as poor nutrition, lack of exercise, and exposure to toxins. These conditions, including diabetes and heart disease, often develop over time. A key preventive measure is to adopt a healthier lifestyle by maintaining a balanced diet and engaging in regular physical activity, which can mitigate the risk of such diseases.
46. **Emotions** such as stress, worry, or sadness affect not just your mind but your body too:
- Long-term stress weakens the immune system, making it easier for you to fall sick.
 - It can cause headaches, stomach problems, trouble sleeping, or lead to unhealthy habits (like bad eating or skipping exercise).
 - Staying positive and managing stress helps keep both your body and mind healthy.
47. Yes. **Climate change** can cause new types of diseases or make old ones more common. For example:
- Warmer temperatures can help disease-carrying insects like mosquitoes (that spread dengue or malaria) survive in new places.
 - Changing weather can create more floods or droughts, which can contaminate water and lead to more infections.
 - Plants, animals, and microbes may behave differently, introducing **new health risks** to people.

48. Three communicable diseases are:

- i. **Typhoid** - transmitted through the consumption of **contaminated food or water**, caused by the bacterium *Salmonella typhi*.
- ii. **Influenza** - spreads through **droplet infection** when an infected person coughs, sneezes, or talks; caused by the influenza virus.
- iii. **Malaria** - transmitted through the bite of an infected mosquito (vector-borne), caused by the protozoan *Plasmodium*.

These diseases involve pathogens such as bacteria, viruses, or protozoa. **They can lead to outbreaks if proper hygiene, sanitation, and preventive measures like vaccination or mosquito control are not followed.**

49. Communicable diseases are caused by pathogens like bacteria, viruses, or fungi, and can spread from one person to another through air, food, water, direct contact, or vectors. These diseases can lead to epidemics if not controlled promptly. Non-communicable diseases are not caused by pathogens and cannot be transmitted between individuals. They usually arise due to lifestyle factors, genetics, or environmental influences and include conditions like diabetes, cancer, heart diseases, and chronic respiratory problems. Early detection and healthy habits play an important role in preventing and managing both types of diseases.

50. Vaccines and antibiotics play **complementary roles** in disease prevention and management:

i. **Vaccines:**

- Help the body **develop immunity** against specific pathogens before infection occurs.
- Prevent the onset of diseases such as polio, measles, and influenza.
- Reduce the spread of infections in the community (herd immunity).
- **Encourage long-term protection**, reducing the need for repeated medical interventions and hospitalizations.

ii. **Antibiotics:**

- Treat **bacterial infections** after they occur, such as typhoid or tuberculosis.
- Help eliminate pathogens from the body, reducing severity and complications.
- **Support recovery** and prevent further spread of disease to others.

Complementary Role:

- Prevention + Treatment: Vaccines prevent infections, while antibiotics treat infections that do occur.
- Together, they reduce disease burden, prevent complications, and save lives.

51. The World Health Organization defines health as a state of complete physical, mental, and social well-being, and not merely the absence of disease. This definition emphasizes the importance of balancing these three aspects to achieve overall well-being. Health is not simply about avoiding illness but also about feeling good physically, maintaining a positive mindset, and enjoying healthy relationships with others.

52. Modern challenges to achieving Ayurvedic balance include hectic lifestyles, processed foods, sedentary habits, and environmental pollution. Time constraints often hinder the practice of regular routines like yoga or mindful eating. Technology's pervasive presence may increase screen time, reducing sleep quality and social interactions. Modern life often values productivity over well-being, conflicting with holistic health practices. Evaluating these challenges underlines the need to adapt Ayurvedic principles to contemporary living effectively.

53. State whether the given statement is True or False:

- (a) **(a) True**

Explanation:

A disease affects the normal functioning of the body or mind when organs or systems malfunction.

- (b) **(b) False**

Explanation:

Malaria is caused by a protozoa and transmitted by mosquitoes.

- (c) **(b)** False

Explanation:

Vaccines are preventive, not curative.

- (d) **(a)** True

Explanation:

Health includes a positive mindset and social well-being.

54. a. Fever is a sign of illness. A sign can be measured or observed by others (like fever with a thermometer), while a symptom is felt only by the patient (like pain or tiredness).
b. Symptoms are experiences felt by the patient, such as pain or tiredness. Signs are observable or measurable conditions, such as fever or rashes. For example, dizziness is a symptom, while high body temperature is a sign.
c. Doctors need both symptoms and signs because symptoms reveal what the patient feels internally, while signs provide observable or measurable evidence of illness. For instance, a patient may feel tired (symptom) and show high blood pressure (sign). Together, these help doctors understand the complete condition and decide the right treatment.

OR

Symptoms and signs together provide a more accurate diagnosis. A patient may complain of dizziness and body ache (symptoms), but when examined, the doctor finds a rash and fever (signs). Without both, the doctor may miss important details. Symptoms describe how the patient feels, while signs confirm the condition objectively.

55. a. Diabetes is a non-communicable disease. It does not spread from one person to another, unlike communicable diseases such as malaria or tuberculosis, which are caused by infectious agents and can spread.
b. Communicable diseases are caused by pathogens and spread from person to person, like malaria or tuberculosis. Non-communicable diseases are not infectious and usually result from lifestyle or diet, such as diabetes, cancer, or asthma.
c. Communicable diseases spread through air, water, contaminated food, direct contact, or insect vectors like mosquitoes and flies. Preventive measures include maintaining hygiene, vaccination, avoiding sharing personal items, eating safe food, drinking clean water, and using mosquito nets. By practicing these habits, we can reduce infection risks and protect communities from outbreaks.

OR

Non-communicable diseases are increasing in India due to lifestyle changes, such as eating processed food, lack of physical activity, and longer life expectancy. Conditions like diabetes, heart disease, and cancer have become common. Poor diet, stress, and pollution also contribute. Awareness, healthy routines, and preventive care are essential to control their growing impact.

56. a. Measles can be prevented by vaccination. Vaccination helps the body build immunity by preparing it to fight the disease-causing germs without causing the actual illness.
b. Vaccines prepare the immune system to recognize and fight harmful germs. They provide acquired immunity, reducing the risk of serious infections like polio, measles, and hepatitis. Vaccines are preventive, not curative, and protect both individuals and communities.
c. Antibiotic resistance develops when bacteria adapt and survive despite treatment. To prevent this, antibiotics should only be taken when prescribed by doctors, in the correct dose and duration. Avoiding unnecessary use, completing prescribed courses, and spreading awareness help maintain antibiotic effectiveness. Responsible usage ensures that antibiotics remain effective for future generations.

OR

Prevention reduces the chances of falling ill, saving time, cost, and effort compared to treatment. Measures like sanitation, vaccination, and hygiene stop diseases before they spread. Cure often involves medicines, long recovery, or complications, while prevention builds stronger immunity and healthier lifestyles. Hence, focusing on prevention is more effective and sustainable for individuals and society.

57. A disease is a condition that impedes the normal functioning of the body or mind, affecting one or more organs or organ systems. "Communicable diseases" are caused by pathogens such as bacteria, viruses, fungi, and spread from one person to another. Examples include influenza, tuberculosis, and chickenpox, which can be transmitted through air, contact, or contaminated food and water. ****Non-communicable diseases**** are not spread by pathogens but linked to lifestyle, diet, and environment. They include conditions such as cancer, diabetes, and asthma. These diseases generally do not spread from person to person and are often influenced by factors like poor nutrition and lack of exercise.
58. Hygiene and environmental cleanliness are crucial in controlling disease spread. **Personal hygiene**, such as regular hand washing, bathing, and oral care, limits germ transmission, particularly in crowded places. A clean environment reduces health risks associated with exposure to pollutants, contaminated water, and pathogens. Proper waste disposal, sanitized surroundings, and clean drinking water prevent breeding sites for disease-carrying vectors like mosquitoes and flies. Regular cleaning of homes, public spaces, and food preparation areas further supports community health. Therefore, prioritizing these factors is fundamental to **safeguarding individual and public health**.
59. Yoga and pranayama have profound impacts on physical health and emotional balance. They improve flexibility, strength, and posture, reducing injury risk and physical discomfort. Breathing exercises in pranayama increase lung capacity, enhance respiratory function, and provide greater energy levels. Yoga's meditative aspects promote mindfulness, leading to reduced anxiety and mental clarity. Together, they reduce stress, enhance mood stability, and improve focus. Regular practice can lead to lower blood pressure and better stress hormone regulation. These practices, rooted in ancient traditions, foster a holistic health approach, integrating mind-body connectivity to achieve optimal health and well-being. Hence, incorporating yoga and pranayama offers comprehensive benefits that extend beyond conventional fitness routines.
60. The reduction in infectious diseases such as smallpox and polio can be attributed to advancements in vaccinations, sanitation, and public health measures. In contrast, lifestyle changes, increased life expectancy, and urbanization have contributed to the rise in chronic diseases. Modern sedentary lifestyles, poor dietary choices, pollution, and stress are risk factors for conditions like diabetes and heart problems. Moreover, genetic predispositions and lack of physical activity play significant roles. Societal changes and increased access to healthcare have shifted the focus from combating infectious diseases to managing and preventing chronic illnesses.
61. When the body encounters a common cold virus, it triggers an immune response. The first line of defense includes physical barriers like the skin and mucous membranes. Once the virus invades, white blood cells, primarily lymphocytes and phagocytes, become active. The body may develop a fever, as increased temperature can inhibit viral replication. Symptoms such as a runny nose and sore throat arise as the body produces mucus to trap the virus and inflammatory responses are heightened. These reactions are crucial for eliminating the pathogen and returning the body to health. Proper hydration, rest, and nutrition support the body's efforts to overcome the infection.
62. Pathogens are microorganisms that cause diseases in humans and animals. They include bacteria, viruses, fungi, protozoa, and worms, each responsible for specific ailments. Pathogens contribute to communicable diseases by infiltrating the host's body through various means, such as air, contaminated water, or food, and directly impacting the body's normal functions. For instance, the virus responsible for influenza spreads through airborne droplets when infected individuals sneeze or cough. Similarly, bacteria causing typhoid fever are transmitted through ingestion of contaminated food or water, leading to severe gastrointestinal symptoms. Effective management of communicable diseases requires understanding these pathogens and implementing preventive measures to inhibit their spread.
63. Fill in the blanks:
- (a) Acquired
 - (b) sign
 - (c) Scurvy
 - (d) communicable
 - (e) Edward Jenner
 - (f) resistance
 - (g) immunity

- (h) antibiotics
- (i) symptom
- (j) vaccine

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