

Chapter 5 – Health, Disease and Hygiene

Subject - Science

Class V

Communicable Diseases

A communicable disease is one that is spread from one person to another through a variety of ways that include: contact with blood and bodily fluids; breathing in an airborne virus; or by being bitten by an insect.

Communicable diseases spread from one person to another or from an animal to a person. The spread often happens via airborne viruses or bacteria, but also through blood or other bodily fluid. The terms infectious and contagious are also used to describe communicable disease.

Some examples of reportable communicable disease include **Covid19**, hepatitis A, B and C, measles, salmonella, mumps, and blood-borne illnesses. Most common forms of spread include fecal-oral, food, insect bites, droplets, or skin contact.

Communicable disease

Name of Disease	Mode of Spread
1. Cholera	Food and Water
2. Typhoid	Food and Water
3. Hepatitis(jaundice)	Food and Water
4. Influenza (Flu)	Air
5. Tuberculosis (T.B)	Air
6. Malaria	Mosquito
7. Tetanus	Bite Wound exposed to dust or rusted item

Spread of communicable disease

Direct contact

Infectious diseases are often spread through direct contact. Types of direct contact include:

1. Person-to-person contact

Infectious diseases are commonly transmitted through direct person-to-person contact. Transmission occurs when an infected person touches or exchanges body fluids with someone else. This can happen before an infected person is aware of the illness.

2. Droplet spread

The spray of droplets during coughing and sneezing can spread an infectious disease. You can even infect another person through droplets created when you speak. Since droplets fall to the ground within a few feet, this type of transmission requires close proximity.

Indirect contact

Infectious diseases can also be spread indirectly through the air and other mechanisms. For example:

1. Airborne transmission

Some infectious agents can travel long distances and remain suspended in the air for an extended period of time. You can catch a disease like measles by entering a room after someone with measles has departed.

2. Contaminated objects

Some organisms can live on objects for a short time. If you touch an object, such as a doorknob, soon after an infected person, you might be exposed to infection. Transmission occurs when you touch your mouth, nose, or eyes before thoroughly washing your hands.

Germs can also be spread through contaminated blood products and medical supplies.

3. Food and drinking water

Infectious diseases can be transmitted via contaminated food and water. *E. coli* is often transmitted through improperly handled produce or undercooked meat. Improperly canned foods can create an environment ripe for *Clostridium botulinum*, which can lead to botulism.

4. Animal-to-person contact

Some infectious diseases can be transmitted from an animal to a person. This can happen when an infected animal bites or scratches you or when you handle animal waste.

5. Animal reservoirs

Animal-to-animal disease transmission can sometimes transfer to humans. For example:

- anthrax (from sheep)
- rabies (from rodents and other mammals)
- West Nile virus (from birds)
- plague (from rodents)

6. Insect bites (vector-borne disease)

Some zoonotic infectious agents are transmitted by insects, especially those that suck blood. These include mosquitos, fleas, /and ticks. The insects become infected when they feed on infected hosts, such as birds, animals, and humans. The disease is then transmitted when the insect bites a new host. Malaria, West Nile virus, and Lyme disease are all spread this way.

7. Environmental reservoirs

Soil, water, and vegetation containing infectious organisms can also be transferred to people. Hookworm, for example, is transmitted through contaminated soil. Legionnaires' disease is an example of a disease that can be spread by water that supplies cooling towers and evaporative condensers.

Prevention of spread of communicable disease

1. Handle & Prepare Food Safely

Food can carry germs. Wash hands, utensils, and surfaces often when preparing any food, especially raw meat. Always wash fruits and vegetables. Cook and keep foods at proper temperatures. Don't leave food out - refrigerate promptly.

s2. Wash Hands Often



3. Clean & Disinfect Commonly Used Surfaces

Germ can live on surfaces. Cleaning with soap and water is usually enough. However, you should disinfect your bathroom and kitchen regularly. Disinfect other areas if someone in the house is ill. You can use disinfectant such as: bleach solution, or rubbing alcohol.

4. Cough & Sneeze Into Your Sleeve

5. Don't Share Personal Items

Avoid sharing personal items that can't be disinfected, like toothbrushes and razors, or sharing towels between washes. Needles should never be shared, should only be used once, and then thrown away properly.

6. Get Vaccinated

Vaccines can prevent many infectious diseases. There are vaccines for children and adults designed to provide protection against many communicable diseases. There are also vaccines that are recommended or required for travel to certain parts of the world. Our Immunization Program can advise you on immunizations and clinics where you to get needed shots.

7. Avoid Touching Wild Animals

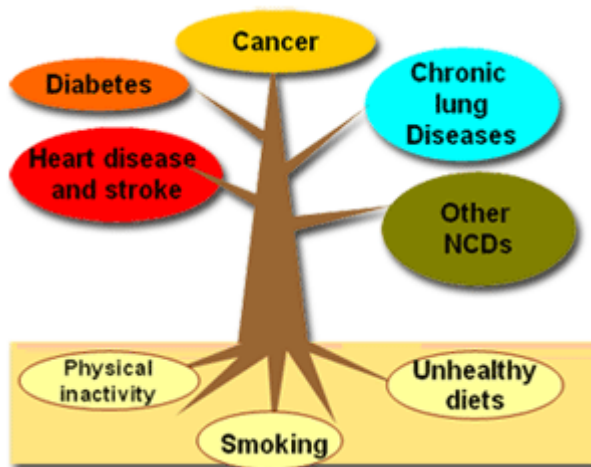
Be cautious around wild animals as they can spread infectious diseases to you and your pets.

8. Stay Home When Sick

Non- Communicable Disease

Some non communicable diseases are more common than others. The four main types of non communicable diseases include cardiovascular disease, cancer, chronic respiratory disease, and **diabetes**.

Includes Diseases: Cardiovascular disease; Diabetes



A **non-communicable disease** (NCD) is a **disease** that is not transmissible directly from one person to another. NCDs include Parkinson's **disease**, autoimmune **diseases**, strokes, most heart **diseases**, most cancers, diabetes, chronic kidney **disease**, osteoarthritis, osteoporosis, Alzheimer's **disease**, cataracts, and others.

Non-Communicable Diseases



Cardiovascular
Diseases



Diabetes



Chronic Respiratory
Diseases



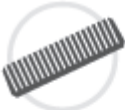
Cancer

Personal Hygiene

Are You Ready?



Put on clean clothes.



Brush your hair.



Wash your hands
and face.



Brush your teeth
and floss.

Smile! 

Everyone needs to keep clean to kill germs and avoid getting sick. Good personal hygiene also boosts confidence by dealing with problems like bad breath or body odour.

For children, the basics of good personal hygiene are:

- washing hands
- covering their mouth when they cough
- having regular baths or showers
- brushing and flossing teeth

You may have to help your child practise good personal hygiene habits. These will become even more important as they grow older and approach puberty. Being able to talk openly and honestly about keeping clean will help you manage the more difficult personal hygiene issues that are likely to come up when they are teenagers.

Washing hands

Most germs are spread through hand contact. Regularly washing hands will prevent your child and others from getting sick.

Encourage your child to wash their hands with soap and water:

- When hands look dirty
- Before eating or preparing food
- After touching raw meats, including chicken and beef
- After touching any body fluids like blood, urine or vomit
- After touching animals
- After blowing their nose, sneezing or coughing
- After going to the toilet



Showering and bathing

Children need regular baths or showers. You could encourage a bath or shower at the end of the day as part of a bedtime routine.

Make sure your child washes all of their body, including under their arms and their genital and anal areas, and that their body is thoroughly dry before they get dressed.

Clothes and shoes

We need fresh clothes every day, even if old clothes don't smell. Clean underwear every day is especially important.

Students must hang up their school uniform to air when they get home each day.

Questions and answers

Q1. Define communicable diseases. Give examples.

A1. Communicable disease is one that is spread from one person to another through a variety of ways that include: contact with blood and bodily fluids; breathing in an airborne virus; or by being bitten by an insect.

Q2. How does dengue disease spread?

A2. Dengue is spread through the bite of the female mosquito (*Aedes aegypti*). The mosquito becomes infected when it takes the blood of a person infected with the virus.

Q3. What is the cause of tuberculosis?

A3. Tuberculosis (TB) is caused by a type of bacterium called *Mycobacterium tuberculosis*. Tuberculosis is caused by bacteria that spread from person to person through microscopic droplets released into the air. This can happen when someone with the untreated, active form of tuberculosis coughs, speaks, sneezes, spits, laughs or sings. Although tuberculosis is contagious, it's not easy to catch.

Q4. Which virus is carried by dogs?

A4. Dogs are the major animal reservoirs for rabies infection. The majority of the infected patients in developing countries are infected by dog bites while, in developed countries, wild animals including raccoons, bats and foxes are the main cause for rabies transmission

Q5. What is a non-communicable disease? Give two examples.

A5. A non-communicable disease (NCD) is a disease that is not transmissible directly from one person to another. NCDs include Parkinson's disease, autoimmune diseases, strokes, most heart diseases, most cancers, diabetes

Q6. What are deficiency diseases? How can we prevent them?

A6. Deficiency diseases are diseases that are caused by the lack of certain essential nutrients, especially vitamins and minerals, in one's diet over a prolonged period of time."

Eating simple, wholesome food such as groundnut, soybean, pulses, etc. Prolonged cooking and undercooked food lose its nutritional value. Keeping cut vegetables and fruits for a

longer period also destroys its nutritional values. Avoiding this can prevent deficiency diseases.

Q7. Explain some ways to prevent communicable diseases.

A7. Healthy habits prevent germs and infectious diseases from spreading. Learn, practice, and teach healthy habits.

1. Handle & Prepare Food Safely.
2. Wash Hands Often.
3. Clean & Disinfect Commonly Used Surfaces.
4. Cough and Sneeze into a Tissue or Your Sleeve.
5. Don't Share Personal Items.
6. Get Vaccinated.
7. Avoid Touching Wild Animals.
8. Stay Home When Sick.

Q8. What kinds of diseases are caused by over nutrition? How?

A8. Over nutrition is defined as the overconsumption of nutrients and food to the point at which health is adversely affected.

Over nutrition can develop into obesity, which increases the risk of serious health conditions, including cardiovascular disease, hypertension, cancer, and type-2 diabetes.