

Understanding Infectious Diseases

GMECH GROUP

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Myth

There isn't much a person can do to avoid spreading or catching a cold or the flu.

Fact

About 80% of infectious diseases are spread by hand contact. Washing your hands with soap and water is a simple and effective way to prevent the spread of colds and the flu.

Causes of Infectious Diseases

- Also known as communicable diseases, **infectious diseases** are caused by organisms or viruses that enter and multiply within the human body.
- **Microorganisms** are organisms that can be seen only through a microscope.
- Microorganisms and viruses that cause disease are called **pathogens**.
- Pathogens can cause an infectious disease when they enter your body and multiply.

Bacteria

- **Bacteria** are simple, single-celled microorganisms. Bacteria live in air, soil, food, and in and on the bodies of plants and animals, including you.
- Some bacteria injure cells by giving off poisons called **toxins**.

Bacteria

strep throat, Lyme disease, meningitis, tuberculosis, cholera, diphtheria, pertussis, tetanus, typhoid fever, staph infection, **food poisoning ▼**

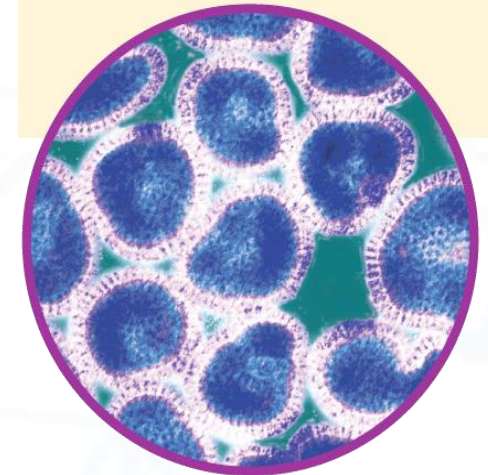


Viruses

- The smallest pathogens are **viruses**.
- A virus can multiply only after entering a living cell.
- The virus then takes over the cell's reproductive mechanisms, resulting in cell damage or death.

Viruses

common cold, hepatitis, chickenpox, measles, mononucleosis, mumps, polio, rabies, rubella, West Nile virus, influenza ▼

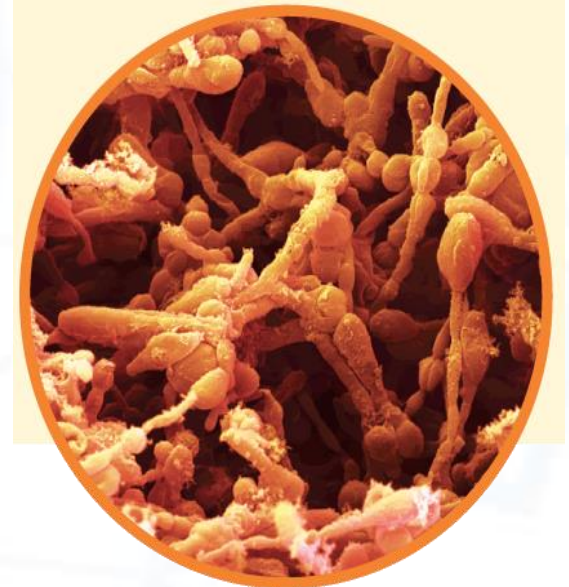


Fungi

- Organisms such as yeasts, molds, and mushrooms are known as **fungi**.
- Fungi grow best in warm, dark, moist areas.

Fungi

athlete's foot,
ringworm ▼



Protozoans

- Single-celled organisms that are much larger and more complex than bacteria are known as **protozoans** .
- Protozoans have the ability to move through fluids in search of food.

Protozoans

malaria, amebic dysentery,
African sleeping sickness ▼



Other Pathogens

Some infectious diseases are caused by animals such as mites, lice, and certain worms.

How Pathogens Are Spread

- Pathogens can spread through contact with
 - an infected person
 - an infected animal
 - contaminated objects
 - contaminated food
 - contaminated soil
 - contaminated water
- The pathogens can then enter the body through breaks in the skin or through the moist linings of the eyes, ears, nose, mouth, or other openings.

Infected People

- Many infectious diseases are spread through some form of contact with a person who has the disease.
- The contact may be direct physical contact.
- Infectious diseases can also spread through indirect contact.

Infected Person

Pathogens can be spread when you shake hands with someone.



Infected Animals

Some infectious diseases are transmitted to humans through the bites of animals.



Infected Animal

A raccoon can transmit pathogens when it bites you.

Contaminated Objects

- Some pathogens can survive for a period of time outside a person's body.
- These pathogens can be spread from person to person on objects such as
 - doorknobs
 - eating utensils
 - towels
 - needles used for body piercings and tattoos



Contaminated Object

You can pick up pathogens from an object that an infected person has touched, coughed on, or sneezed on.

Contaminated Food, Soil, or Water

- Some pathogens are naturally present in food and soil.
- Sometimes water and food become contaminated with pathogens from infected people.

Contaminated Food

Some foods have bacteria that can make you sick if the food isn't cooked or stored properly.



Vocabulary

infectious disease	A disease caused by an organism or virus that enters and multiplies within the human body.
microorganism	An organism that is so small it can only be seen through a microscope.
pathogen	A microorganism or virus that causes disease.
bacteria	Simple, single-celled microorganisms.
toxin	A poison given off by some bacteria that can injure cells.
virus	The smallest type of pathogen.
fungi	Organisms such as yeasts, molds, and mushrooms that grow best in warm, dark, moist areas.
protozoan	A large and complex single-celled organism.