

5 Ways Diseases are Spread

To effectively control and prevent the spread of disease in your hospital, it's important to understand the various ways pathogens are transmitted.



Direct contact transmission

Occurs through direct contact with the tissues or fluids of an infected individual.

- Microorganisms enter through mucous membranes (e.g., eyes, mouth), open wounds, or abraded skin.
- Direct inoculation can occur from bites or scratches.
- The most common and highest risk route of pathogen transmission.

Disease examples: rabies, *Microsporium*, *Leptospira spp*, and methicillin-resistant *Staphylococcus spp*.



Fomite transmission

Occurs when inanimate objects contaminated by an infected individual come into contact with a susceptible animal or person.

- Inanimate objects can include exam tables, cages, kennels, medical equipment, environmental surfaces, clothing, and more.

Disease examples: canine parvovirus and feline calicivirus infections.



Aerosol (airborne) transmission

Pathogens are transferred via tiny particles or droplet nuclei.

- Infected individuals can release aerosol particles into the environment by breathing, coughing, sneezing, or vocalizing. Particles can also be released during medical procedures, like suctioning, bronchoscopy, dentistry, or inhalation anesthesia.
- Aerosol particles can be inhaled by a susceptible host or deposited onto mucous membranes or environmental surfaces.

Disease examples: *Bordetella bronchiseptica*, canine influenza, and canine distemper virus



Oral (ingestion) transmission

Occurs when contaminated food or water is ingested. Can also occur when contaminated objects are licked or chewed.

- Environmental contamination is most commonly due to exudates, feces, urine, or saliva.

Disease examples: feline panleukopenia and infections caused by *Campylobacter*, *Salmonella*, *Escherichia coli*, and *Leptospira spp.*

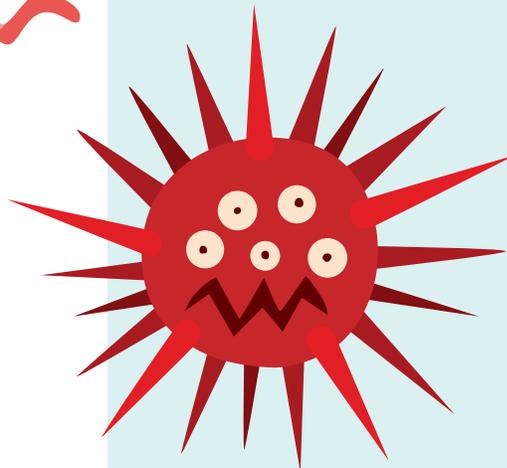


Vector-borne transmission

Vectors are living organisms—mosquitoes, fleas, ticks, rodents, other vermin, etc.—that can transfer pathogenic microorganism to other animals or locations.

- This route is of particular concern in climates where vectors exist year-round.

Disease examples: heartworm disease, *Bartonella* infection, Lyme disease, and plague



Learn how to control and prevent the spread of disease in your practice. The *2018 AAHA Infection Control, Prevention, and Biosecurity Guidelines* can help. Visit aaha.org/biosecurity.

