

Ways infectious diseases spread



Germs can spread through:

- the [air as small droplets](#) (droplet spread) or tiny [aerosol particles](#) (airborne spread)
- contact with [faeces \(poo\) and then with the mouth](#) (faeco-oral spread)
- contact with the [skin or mucus membranes](#) (the thin moist lining of many parts of the body such as the nose, mouth, throat and genitals) (contact spread)
- [blood or other body fluids](#) (for example, urine, saliva, breastmilk, semen and vaginal secretions).

Germs can spread:

- directly from person to person or
- indirectly from an infected person to the environment (for example toys, door handles, bench tops, bedding and toilets) and then to another person who comes in contact with the contaminated environmental source.

Germs can enter the body through the:

- mouth
- respiratory tract
- eyes
- genitals
- broken skin.

Some infections can be spread in several different ways.

There are other ways of describing how germs are spread that are commonly used. Germs can be spread through [sexual contact](#), which is usually through semen and vaginal secretions (body fluids), but can also occur through contact with mucus membranes. Germs can spread through [food or water](#). Many but not all the germs spread in this way are through contact with faeces and then with the mouth (faeco-oral). Germs can also spread from a [mother to her unborn child](#), usually through blood (body fluids) but also through contact with skin or mucous membranes during delivery.

Adapted from National Health and Medical Research Council - [Staying Healthy: preventing infectious disease in early childhood education and care services](#), 5th Edition 2012.

Spread through the air by droplets

Some infections are spread when an infected person talks, coughs or sneezes small droplets containing infectious agents into the air. Due to their size, these droplets in the air travel only a short distance (around a metre) from the infected person before falling. The droplets in the air may be breathed in by those nearby. Spread can also occur by touching the nose or mouth with droplet contaminated hands.

Examples of droplet spread diseases:

- [common cold](#)
- [flu](#)
- [meningococcal disease](#)
- [rubella](#).

Spread through the air by aerosol

Some infections are spread when an infected person talks, breathes, coughs or sneezes tiny particles containing infectious agents into the air. These are called small particle aerosols. Due to their tiny size, small particle aerosols can travel long distances on air currents and remain suspended in the air for minutes to hours. These small particle aerosols may be breathed in by another person.

Examples of airborne spread diseases:

- [chickenpox](#)
- [measles](#)
- [tuberculosis \(TB\)](#)

Spread through faeces and then the mouth (faecal-oral spread)

Some infections are spread when microscopic amounts of faeces (poo) from an infected person with symptoms or an infected person without symptoms (a carrier) are taken in by another person by mouth. The faeces may be passed:

- directly from soiled hands to the mouth
- indirectly by way of objects, surfaces, food or water soiled with faeces.

Examples of diseases spread from faeces:

- [Campylobacter infection](#)
- [Cryptosporidium infection](#)
- [Giardia infection](#)
- [hand, foot and mouth disease](#)

- [hepatitis A](#)
- [meningitis \(viral\)](#)
- [rotavirus infection](#)
- [Salmonella infection](#)
- [Shigella infection](#)
- [thrush](#)
- [viral gastroenteritis](#)
- [worms](#)
- [Yersinia infection.](#)

Spread by skin or mucous membrane contact

Some infections are spread **directly** when skin or mucous membrane (the thin moist lining of many parts of the body such as the nose, mouth, throat and genitals) comes into contact with the skin or mucous membrane of another person. Infections are spread **indirectly** when skin or mucous membrane comes in contact with contaminated objects or surfaces.

Examples of diseases spread by skin or mucous membrane contact:

- [chickenpox](#)
- [cold sores \(herpes simplex infection\)](#)
- [conjunctivitis](#)
- [hand, foot and mouth disease](#)
- [head lice](#)
- [molluscum contagiosum](#)
- [ringworm](#)
- [scabies](#)
- [school sores \(impetigo\)](#)
- [Staphylococcus aureus infection](#)
- [warts.](#)

Spread through blood or other body fluids

Some infections are spread when blood or other body fluids (for example for example, urine, saliva, breastmilk, semen and vaginal secretions) from an infected person comes into contact with:

- the mucous membranes (the thin moist lining of many parts of the body such as the nose, mouth, throat and genitals), such as through kissing, breast-feeding or sexual contact or
- the bloodstream of an uninfected person, such as through a needle stick injury or a break in the skin.

Examples of diseases spread through blood or other body fluids:

- [hepatitis B](#) - blood, saliva, semen and vaginal fluids
- [hepatitis C](#) - blood
- [human immunodeficiency virus \(HIV\) infection](#) - blood, semen and vaginal fluids, breastmilk
- [cytomegalovirus \(CMV\) infection](#) - saliva, breastmilk, semen and vaginal fluids, urine
- [glandular fever](#) - saliva

Other ways of describing how infectious diseases are spread

Spread through sexual contact (sexually transmitted infections)

These infections are most commonly transmitted by sexual contact. Sexual contact means:

- genital to genital
- oral to genital
- genital to anal.

Examples of sexually transmitted infections:

- [Chlamydia infection](#)
- [genital herpes](#)
- [genital warts](#)
- [gonorrhoea](#)
- [hepatitis B](#)
- [human immunodeficiency virus \(HIV\) infection](#)
- [non-specific urethritis \(NSU\)](#)
- [pubic lice \(crabs\)](#)
- [syphilis](#)
- [trichomoniasis](#).

Spread through food or water

These diseases result from ingestion of water or a wide variety of foods contaminated with disease-causing germs or their toxins. Often these infections are also spread by the faecal-oral route.

Examples of food or waterborne diseases:

- botulism
- [Campylobacter infection](#)

- [cholera](#)
- [Cryptosporidium infection](#)
- [haemolytic uraemic syndrome](#)
- [Listeria infection](#)
- [Salmonella infection](#)
- [Shigella infection](#)
- [typhoid and paratyphoid](#)
- [Yersinia infection.](#)

Spread from a mother to her unborn child

Some infections can be spread through the placenta from a mother to her unborn child or during delivery, or both.

Examples of diseases spread from a mother to child in this way:

- [chickenpox](#)
- [hepatitis B](#)
- [rubella.](#)

Diseases where person-to-person spread occurs rarely, if ever

Some infectious diseases are almost never spread by contact with an infected person. These diseases are usually spread by contact with an environmental source such as animals, insects, water or soil.

Examples of diseases spread by **contact with animals**:

- [cat-scratch disease](#)
- [hydatid disease](#)
- [psittacosis](#)
- [Q fever](#)
- [rabies](#)
- [toxoplasmosis.](#)

Examples of diseases **spread by insects**, and in the examples listed below, specifically by mosquitoes:

- [Barmah Forest virus infection](#)
- [dengue fever](#)
- [malaria](#)
- [Ross River virus infection.](#)

Examples of diseases spread by **contact with water or soil**:

- [amoebic meningitis](#)
- legionella infection - [Legionella pneumophila](#) and [Legionella longbeachae](#)
- [tetanus](#).

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