

# The Ways Infectious Diseases Spread

Infectious diseases can spread in a variety of ways: through the air, from direct or indirect contact with another person, soiled objects, skin or mucous membrane, saliva, urine, blood and body secretions, through sexual contact, and through contaminated food and water.

## Airborne droplets from the nose and throat

Some infections are spread when an infected person sneezes or coughs out tiny airborne droplets. The droplets in the air may be breathed in directly by another person or indirectly enter another person through contact with surfaces and hands with the droplets on them.

*Examples of airborne diseases:*

- Chickenpox
- Common cold
- Diphtheria
- *Haemophilus influenzae* type b (Hib) infection
- Influenza
- Measles
- Meningitis (bacterial)
- Meningococcal disease
- Mumps
- Parvovirus infection
- Pneumococcal pneumonia
- Rubella
- Streptococcal sore throat
- Tuberculosis (TB)
- Whooping cough (pertussis).

## Saliva

Some infections are spread by direct contact with saliva (such as kissing) or indirect contact with contaminated objects (such as children sucking and sharing toys).

*Examples of diseases spread by saliva:*

- Cytomegalovirus (CMV) infection
- Glandular fever
- Hepatitis B.

## Faecal-oral

Some infections are spread when microscopic amounts of faeces 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 or indirectly by way of objects, surfaces, food or water soiled with faeces.

*Examples of diseases spread from the faeces:*

- *Campylobacter* infection
- Cryptosporidiosis
- Giardiasis
- Hand, foot and mouth disease
- Hepatitis A
- Meningitis (viral)
- Rotavirus infection
- *Salmonella* infection
- *Shigella* infection
- Thrush
- Viral gastroenteritis
- Worms
- Yersiniosis.

## Skin or mucous membrane (lining of nose and mouth) contact

Some infections are spread directly when skin or mucous membrane comes into contact with other skin or mucous membrane. Infections are spread indirectly when skin or mucous membranes come in contact with contaminated objects or surfaces.

*Examples of diseases spread by skin or mucous membrane contact:*

- Chicken pox
- Cold sores (herpes simplex)
- Conjunctivitis
- Hand, foot and mouth disease
- Head lice
- Molluscum contagiosum
- Ringworm
- Scabies
- School sores (impetigo)
- *Staphylococcus aureus* infection
- Warts.

## Blood / body fluids

Some infections are spread when blood or other body fluids from an infected person comes into contact with the mucous membranes or bloodstream of an uninfected person, such as through a needle stick or a break in the skin.

*Examples of diseases spread through blood / body secretions:*

- Hepatitis B
- Hepatitis C
- Human immunodeficiency virus (HIV/AIDS)
- Cytomegalovirus (CMV) infection.

## Sexually transmitted infections

These infections are most commonly transmitted by sexual contact. Sexual contact means genital to genital, oral to genital, oral or genital to anal contact.

*Examples of sexually transmissible diseases:*

- *Chlamydia*
- Genital herpes
- Genital warts
- Gonorrhoea
- Hepatitis B
- HIV / AIDS
- Non specific urethritis (NSU)
- Pubic lice (crabs)
- Syphilis
- Trichomoniasis.

## Food or water borne diseases

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

*Examples of food or water borne diseases:*

- Botulism
- *Campylobacter* infection
- Cholera
- *Cryptosporidium* infection
- Haemolytic uraemic syndrome
- *Listeria* infection
- *Salmonella* infection
- *Shigella* infection
- Typhoid/Paratyphoid
- *Yersinia* infection.

## Urine

Some infections are spread when urine is transferred from soiled hands or objects to the mouth.

*Example of a disease spread by urine:*

- Cytomegalovirus infection (CMV).

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

Some infectious diseases are almost without exception never spread by direct 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.

Refer to:

Department of Human Services, February 2002, Petting Zoo Infection Control Guideline for Petting Zoo Operators, Education and Childcare Services and Environmental Health Officers or

<http://www.dh.sa.gov.au/pehs/PDF-files/petting-zoos-guidelines.pdf>

#### *Examples of diseases spread by insects:*

- Barmah Forest virus infection
- Dengue fever
- Malaria
- Ross River virus infection.

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

- Amoebic meningitis
- Legionellosis
- Tetanus.

