

INFORMATION FOR FAMILIES

What causes infections?

Infection prevention and control in early childhood education and care services

INFECTION PREVENTION AND CONTROL

Infections are common in children and often lead to illness. Children first enter early childhood education and care services at a time when their immune systems are still developing. They may not have been exposed to many common germs that cause infections and they may be too young to be vaccinated against some diseases.

The way that children play in care services means that diseases can quickly spread in a variety of ways.

This fact sheet provides you with information on what causes disease and how diseases spread.

WHAT CAUSES INFECTION?

Microscopic living things (known as germs) are all around us. Some of these germs can cause disease in people. There are four major types of germs:

Bacteria

Bacteria are found almost everywhere, including in and on the human body. Most bacteria live in close contact with us and our environment without causing any

harm. However, some bacteria can infect the body and cause disease. Examples of bacterial diseases include streptococcal sore throat, pertussis (whooping cough) and meningococcal disease.

Viruses

Viruses can only grow and reproduce inside other living cells, called their host. Most viruses cannot survive very long outside their host cell. When viruses enter our bodies, they can multiply and cause illness. Viruses cause diseases such as the common cold, gastroenteritis, varicella (chicken pox), measles and influenza (the flu).

Fungi

Fungi are a group of organisms that includes yeasts, moulds and mushrooms. They prefer to live in damp, warm places. Many fungi—such as edible mushrooms and baker's yeast—are not dangerous, but some can cause disease. Examples of fungal diseases include tinea corporis (ringworm), tinea pedis (athlete's foot) and candida (thrush).

Protozoa

Protozoa are microscopic living things that thrive on moisture and often spread diseases through water. Some protozoa cause intestinal infections that lead to diarrhoea, nausea and stomach upsets. Examples include *Cryptosporidium* and *Giardia*, which can spread through contaminated drinking water.

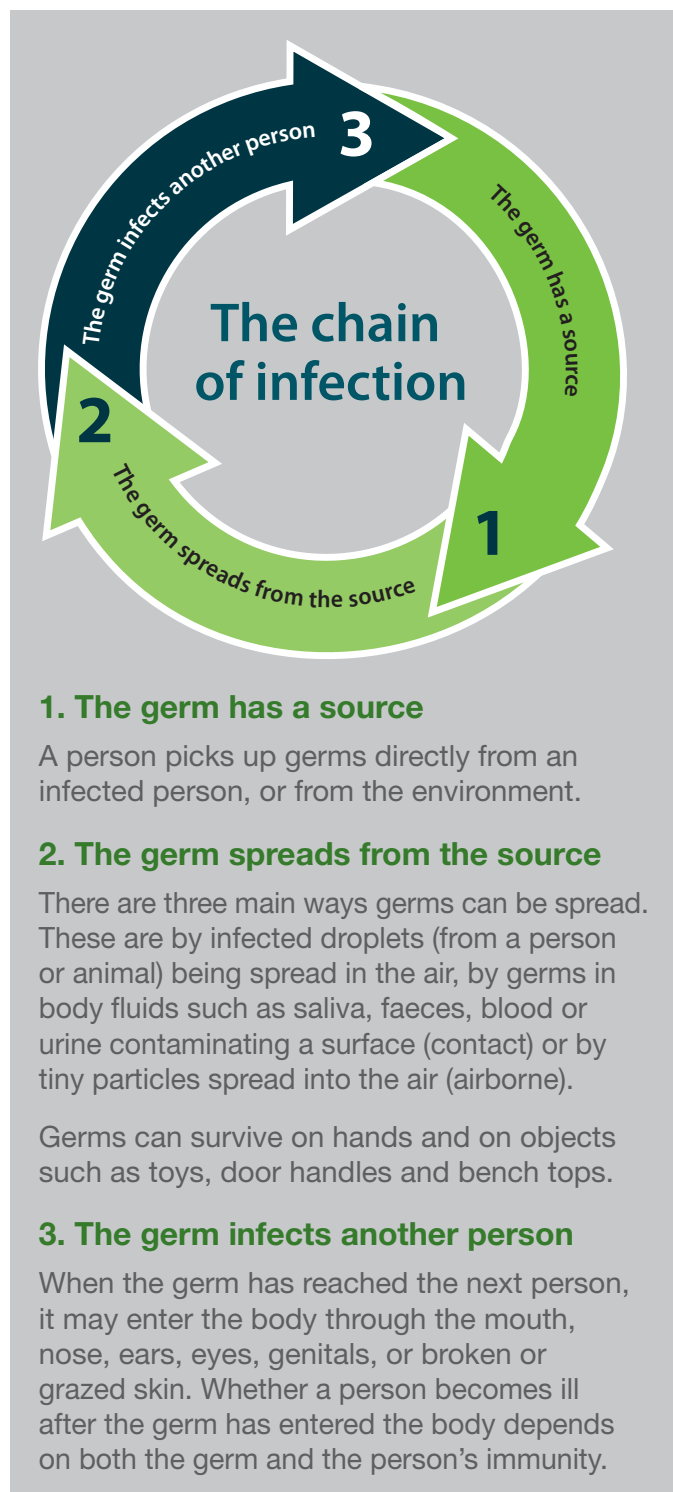
Other causes of infection

These four types of germs are responsible for many human infections. However, infections can also be caused by parasites (such as roundworm and hookworm). Mites (such as scabies) and insects (such as head lice) can cause infestation and scratching which may lead to secondary infections.



HOW DO INFECTIONS SPREAD?

The chain of infection refers to the way in which germs spread (see diagram). All the steps in the chain need to occur for germs to spread from one person to another. By breaking the chain, you can prevent and control infections. You can break the chain at any stage.



GERMS CAN BE SPREAD IN DIFFERENT WAYS

Droplet: germs are spread when an infectious person coughs or sneezes. The tiny droplets are spread into the air and onto surrounding surfaces. A sneeze can spread droplets as far as two metres away. Droplets can be breathed in directly by another person.

Airborne: the germs are in even smaller particles than droplets. These particles are spread when an infectious person breathes, talks, coughs or sneezes. The particles can be carried on air currents and through ventilation or air conditioning systems.

Contact: surfaces such as benches, tables, door handles, toys, bedding and toilets can be contaminated when a person with an infectious disease touches them, or coughs or sneezes on them. If a person touches a contaminated surface and then touches their mouth, eyes, nose or broken skin, they can become infected.

HOW CAN YOU STOP INFECTIONS?

There are many things you can do at home to stop the spread of infection:

- ▶ perform hand hygiene
- ▶ keep up to date with your immunisation
- ▶ remember cough and sneeze etiquette
- ▶ clean surfaces regularly
- ▶ keep unwell children at home as much as possible.

These are explained in the brochures:

- ▶ Breaking the chain of infection
- ▶ Exclusion periods explained

For a list of common childhood diseases that your child might come across in education and care services, please see Part 5 *Staying healthy – Preventing infectious diseases in early childhood education and care services*.

References

NHMRC (2012) *Staying healthy – Preventing infectious diseases in early childhood education and care services* found at www.nhmrc.gov.au/guidelines/publications/ch55

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