What are infections?

We have billions of germs inside and on the outside of our bodies and lots of them help us to keep healthy in many ways. These germs belong in us or on us and do not make us sick.

Infections are caused by germs which do not belong in our bodies and sometimes infections can make us quite sick.

Our immune system starts fighting the germs soon after they enter our body but sometimes it can take quite a few days before the infection is beaten. Sometimes the immune system needs some extra help to get rid of these germs. Our topic The immune system will tell you more about how this works.

Types of infections

There are 4 common types of infections - viral, bacterial, fungal and parasites.

Viral infections (say vie-ral)

Viruses are very tiny germs which infect cells of our body. Sometimes the effects of a viral infection are mostly in one part of the body (such as an infection around the eyes – called conjunctivitis say con-junk-tiv-eye-tus). Others cause problems in many parts of the body (such as measles which causes a rash, cough, fever, runny nose and headache).

Bacterial infections

These are caused by many different types of bacteria say bak-tear-ee-a and they can cause lots of different problems. For example you could get an ear infection, ‘school sores’ or pneumonia say new-mow-nee-a which is an infection in the lungs. These can be caused by different bacteria.

Fungal infections

These are caused by fungi say fun-gee. Tinea is a common fungal infection of the skin – often around the toes. You can find out more about this and other fungi in the topic Fungal infections.

Viruses, bacteria and fungi are all extremely small – you need a very powerful microscope to see them.

Parasites

Some much larger creatures that are just big enough for you to see can also cause health problems such as head lice, and scabies say skay-biz on your skin, and threadworms in your intestine.

How infections move around

Some of the ways that infections can be spread around are:

> Through the air when someone coughs or sneezes on you.
Touching something a sick person has touched if they had the germs on their fingers – perhaps if they did not wash their hands after going to the toilet. Your fingers can carry these germs to your mouth, nose or eyes.

Eating food after a sick person has handled it.

Through water that has germs in it. In Australia tap water is specially treated so that it does not have germs in it. Water from tanks always has germs in it.

Touching the fluid in sores that a person has, such as school sores or chicken pox sores.

Using someone else’s comb if that person has headlice.

When your body needs some help

Your immune system fights germs but sometimes you get better more quickly if it has some help.

If you have an infection caused by bacteria it might be helpful to have special chemicals called antibiotics. Antibiotics damage bacteria so that your immune system can kill them more easily. Your doctor might give you antibiotics when you have an ear infection or skin infection for example. However your immune system might be able to get rid of these infections without this help and your doctor might decide that you don’t need antibiotics.

Special treatments might help too if you have a fungal infection like tinea (say tin-ee-a) or a parasite like head lice.

Antibiotics do not work if you have a viral infection. The immune system can be helped to fight some viral infections by immunisation. The immunisation is given before you get the infection so that the immune system learns to fight that infection. You could look at the topic ‘Immunisation – keeping safe from diseases’ if you want to know more about this.

If you have an illness caused by an infection then resting, drinking plenty of water and staying away from others will help you feel better and you won’t be spreading the infection to your friends and family.

Help fight infections

Make sure that you have all of your immunisations.

Wash your hands before eating, when they are dirty and after you go to the toilet.

Handle food with clean hands, clean cutlery and cutting boards, and clean up in the kitchen.

Store food away from heat and in clean containers.

Stay away from others when you are unwell.

Use a tissue if you have a cold or you sneeze, then put it in a bin or flush it down the toilet.

Put your hand in front of your mouth when you cough and wash your hands afterwards.

Boil water unless you know that it is safe.

Don’t go swimming in pools if you have gastro – the germs from your gut will get into the water and other people can catch the infection.
If your doctor has given you some antibiotics, make sure that you take all of them. Don’t stop them just because you are starting to feel well again.

Dr Kate says

Lots of germs can make you feel a bit feverish or unwell, and sometimes you can become very sick.

Often resting and drinking extra water will help you get better. If you have a fever, a headache or pain where the infection is (maybe an earache) your parent or carer might give you some medicine to help you feel more comfortable.

But you need to see a doctor if:

- you have a fever which is not getting better
- you have a bad headache
- you are feeling unwell
- you are vomiting or have runny poo (diarrhoea)
- you have a rash
- you have a sore which is getting bigger or more painful.

Your doctor might be able to help your immune system to fight that germ.