



Recovering from disease

A DISEASE is an illness brought on by something going wrong with the cells in the body.

Our bodies are made of trillions of tiny building blocks called **CELLS**. The body works in such a delicate balance that even a few cells working wrongly can cause severe health problems.

Infectious diseases

Infectious diseases are the most common illnesses. They occur when tiny creatures called **MICROBES** (mainly **BACTERIA** and **VIRUSES**) destroy cells. Disease-causing microbes are known as germs, and the illness you get from them is called an infectious disease.

Infectious diseases are carried between one person and another in the air, in

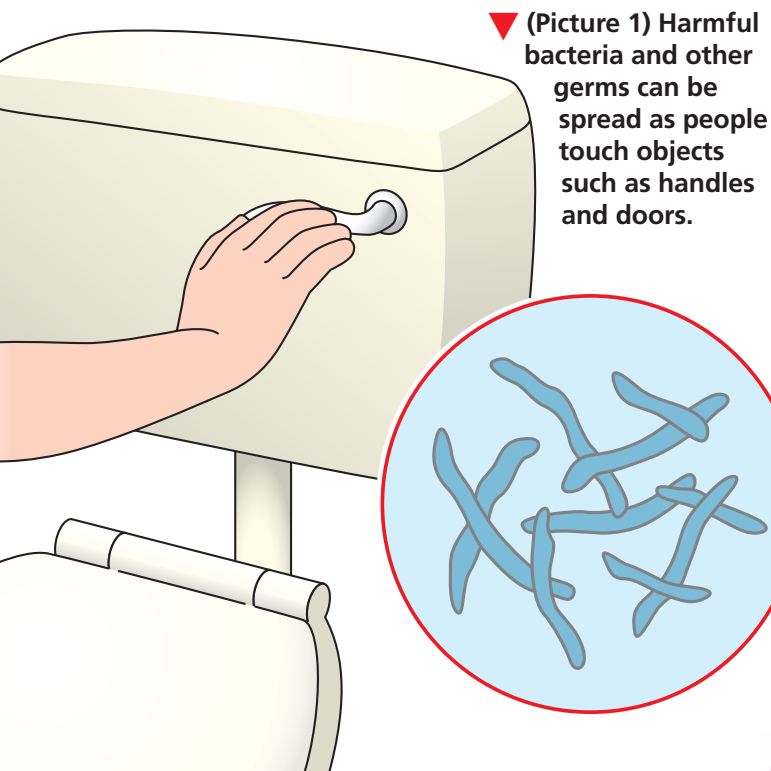
water or by touch (Picture 1). For example, germs are spread when someone sneezes, or in food that has not been cooked properly or on crockery and cutlery that has not been washed thoroughly.

Because your hands are frequently touching things that other people have handled, infection can enter the body when you put your fingers into your mouth or rub your eyes. This is particularly the case when people visit the toilet and then do not wash their hands properly.

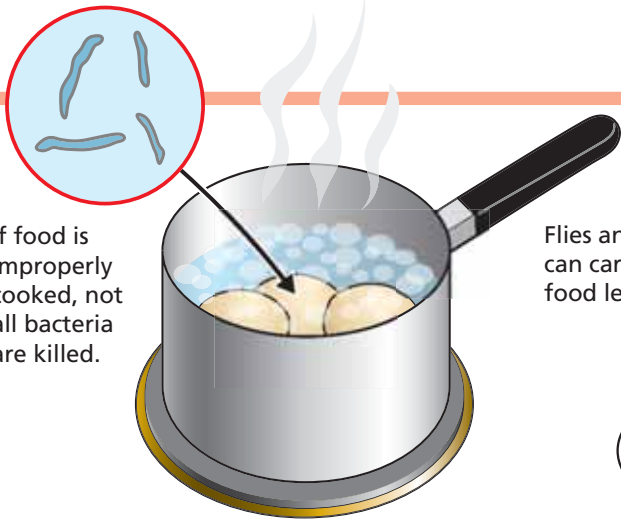
Bacteria are the main cause of diseases such as **FOOD POISONING** (Picture 2) and tuberculosis. The common cold and influenza are examples of diseases produced by viruses.

How the body copes with disease


The body has its own defences to cope with infectious diseases. Since most bacteria can only live within a small range of temperatures, the body often fights bacteria by developing a fever, sending the temperature far above that at which bacteria can thrive. Special cells called white blood cells also travel through the blood looking for bacteria. They then capture the bacteria and destroy it (Picture 3). Doctors can also help with



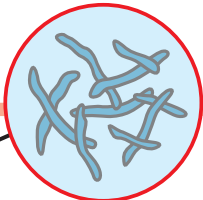
▼ (Picture 1) Harmful bacteria and other germs can be spread as people touch objects such as handles and doors.



If food is improperly cooked, not all bacteria are killed.

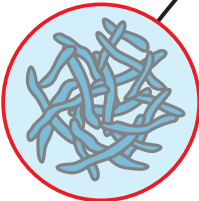


Flies and other insects can carry bacteria onto food left out.

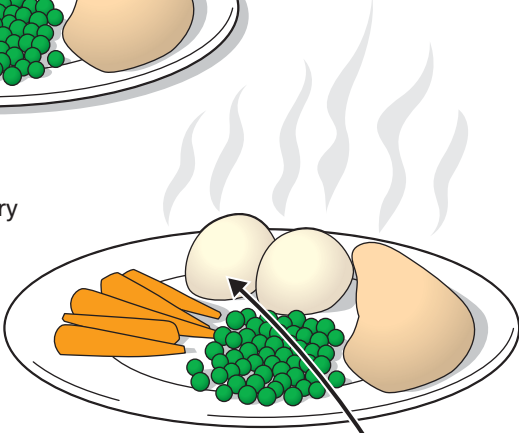


A dirty plate and cutlery harbours lots of bacteria waiting to multiply. A dirty drying up cloth or dirty hands are also sources of bacteria.

▶▶ (Picture 2) When food is cooked, the harmful bacteria are killed. But if the cooked food is left out, flies and other bacteria-carrying insects can land on it and leave bacteria behind. If the food is later reheated, the bacteria will grow and multiply quickly and when the food is eaten you may get food poisoning.



Bacteria left on food multiply very quickly.



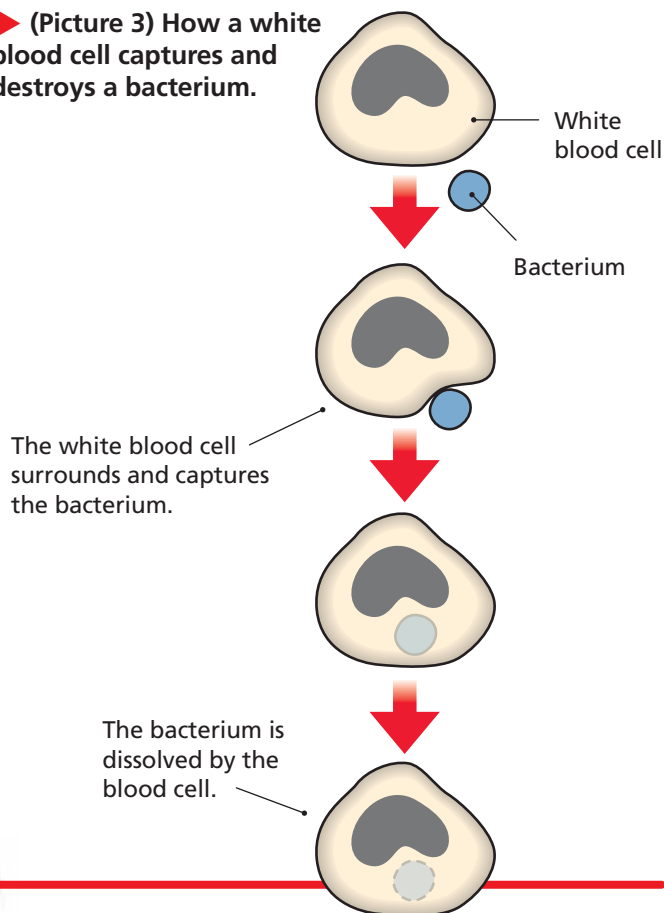
Once they have multiplied, the bacteria can cause food poisoning.

a range of medicines called antibiotics. (See page 20 for more on medicines.)

Viruses are much more difficult for the body to cope with because a virus is very tiny, and it burrows its way inside healthy cells. Very often, in a virus attack, the infection simply has to be allowed to take its course.

The most effective way to stop many virus infections is by using a **VACCINE**, which is a weakened form of the virus. The body can more easily overwhelm the weakened form and can build up the resistance to fight off a future attack by the full-strength virus.

▶ (Picture 3) How a white blood cell captures and destroys a bacterium.



Summary

- Diseases are illnesses caused by germs, often bacteria or viruses.
- Bacteria can be killed by white cells in the body, and by antibiotics.
- Viruses are often prepared for by using a vaccine.