We are all connected

The health of animals, people and our environment are all connected. Drug-resistant bacteria that have emerged in animals and the environment can also infect people. Because many of the antibiotics we use for animals and plants are similar to the antibiotics we use for ourselves, the same precautions for using them wisely apply.

What can I do?

The World Health Organization recommends a number of steps we can take to slow the spread of drug-resistant bacteria.

Hygiene and vaccines

We can slow the spread of bacteria and other microbes by following good personal hygiene and food handling practices. Using antibacterial soaps and cleaning products can lead to more drug-resistant bacteria. In most households, washing thoroughly with regular soap and water is just as effective at reducing the chance of infection.

The best protection against some of the most serious infectious diseases is to stay up to date with vaccinations.

Use medicines carefully and don't share

We need to use antibiotics to treat some bacterial infections. In these situations, it is important to follow professional advice from your doctor on how to use antibiotics wisely. Only take antibiotics when prescribed and never share your prescription with others. Complete your prescribed course according to your doctor's advice, and do not use leftover antibiotics. Never demand antibiotics if your doctor thinks they are unnecessary. Antibiotics cannot treat viral infections such as cold and flu, and these illnesses usually resolve without any need for medical attention. However, if you have a worrying illness you should see a doctor to check. Talk to your doctor about whether you have a bacterial or viral infection.

For further information contact

info@royalsociety.org.nz

Or visit

royalsociety.org.nz/antimicrobial

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Drug-resistant infections are hard to treat

What you need to know

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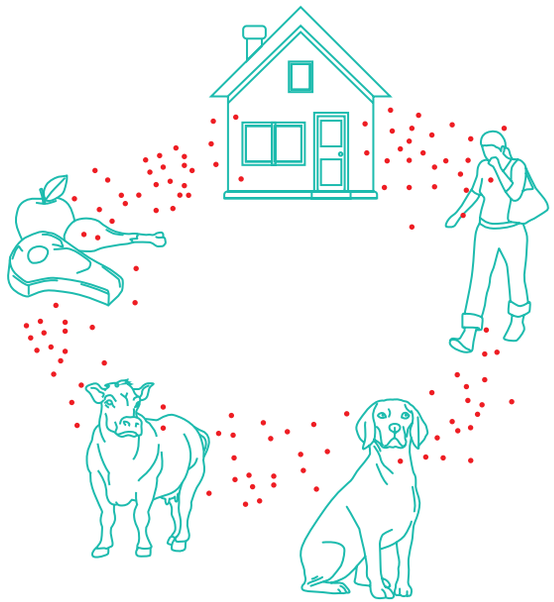
A future where medicines can't cure infections?

Bacteria are found everywhere. Most are usually harmless or beneficial to us, but some will cause infections. Infections can be deadly, but medicines can usually treat them. Antibiotics are used to treat bacterial infections, and other medicines treat infections caused by viruses, fungi or parasites.

These medicines may not work as well in future because the bacteria and other microbes that cause infectious diseases are becoming resistant to these medicines. Without urgent action drug-resistant infections could kill 10 million people globally per year by 2050. In New Zealand, this will mean more people get sick and some will die from drug-resistant infections in our communities.



Drug-resistant infections are spreading

Drug-resistant infections spread in the same ways as other infectious disease. Drug-resistant bacteria can reside on surfaces both inside and outside our homes. They can spread through contact between people, food, animals and our environment. Some drug-resistant bacteria enter New Zealand in our intestines or on our skin when we return from overseas.

Unfortunately, our widespread use of antibiotics in New Zealand creates conditions that allow drug-resistant bacteria to flourish.

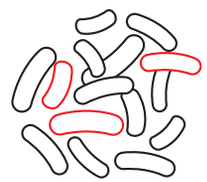
Drug-resistant infections are harder to treat

If you catch a drug-resistant infection, it may take much longer to treat than other infections. You may require expensive antibiotics with harsh side effects, or require surgery to remove infected areas. In the worst-case scenario, people have died from infections caused by bacteria that are resistant to all available antibiotics.

How antibiotic resistance emerges and spreads in bacteria

Some bacteria develop antibiotic resistance through changes in their genes

Some bacteria acquire resistance by gene transfer from other bacteria



When exposed to antibiotics the bacteria that lack resistance genes will be killed or grow very slowly, while antibiotic-resistant bacteria will flourish

Continued exposure to antibiotics results in antibiotic-resistant bacteria becoming much more common