



Pharmaceutical
Society of Australia



Antibiotics

Antibiotics are medicines used to treat infections caused by bacteria. Unfortunately many bacteria have become resistant to commonly used antibiotics and infections caused by these resistant bacteria are difficult to treat. Wise use of antibiotics can help to slow the development of antibiotic resistance.

Microorganisms that cause infections in the human body include bacteria, viruses, fungi and parasites. Antibiotics interfere with the growth and function of bacteria, but do not affect viruses or other microorganisms.

Antibiotic resistance

Bacteria can develop resistance to antibiotics and some bacteria have now become resistant to most of the antibiotics available. Examples of resistant bacteria are methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococci (VRE) and multi-drug-resistant *Mycobacterium tuberculosis* (MDR-TB). Infections of these resistant bacteria are very difficult to treat.

Why is appropriate use of antibiotics important?

Frequent and unnecessary use of antibiotics increases the development of bacteria that are resistant to antibiotics. Bacterial resistance to available antibiotics is increasing and we face the possibility of a future without effective antibiotics.

While antibiotics are effective against bacteria and should be used to treat bacterial infections, they are not effective against viral infections such as the common cold, most sore throats, most sinus infections, most coughs, acute bronchitis and the 'flu'. Unfortunately, every year in Australia millions of prescriptions for antibiotics are written as a treatment for these kinds of viral illnesses, even though antibiotics do not affect viruses.

Viruses and bacteria are completely different types of microorganisms. If an antibiotic is taken for a viral infection it:



- Has no effect against the viral infection; and
- Increases the chance of an antibiotic-resistant bacterial infection developing at a later time.

If an antibiotic-resistant bacterial infection develops this may result in more visits to the doctor, prolonged illness, the need for more toxic antibiotics or, in some cases, death.

Self care

There are a number of simple things that you can do to help reduce the threat of antibiotic resistance.

Use antibiotics appropriately:

- Do not put pressure on your doctor to prescribe antibiotics. Remember that most coughs, colds, sore throats and runny noses are caused by viruses, which cannot be killed by antibiotics. Many minor bacterial infections will also clear up on their own and do not require antibiotics
- Take antibiotics exactly as prescribed. Follow instructions on how many times a day and for



how long to take them. Do not stop treatment early if you feel better, as a shortened course of antibiotics may allow partly resistant bacteria to flourish

- Never share antibiotics with family or friends
- Do not use antibiotics left over from a previous infection or old prescriptions for antibiotics without a doctor's instruction.

Protect against the spread of infection:

- Wash your hands thoroughly with soap and water before eating or handling food, treating a cut or wound or handling contact lenses
- Wash your hands thoroughly with soap and water after going to the toilet, changing a nappy, handling food, blowing nose, coughing, sneezing, handling garbage or tending to someone who is ill
- Cover nose and mouth when coughing and sneezing, preferably with bend of elbow and not the hand
- Use tissues to wipe or blow your nose and dispose of tissues in rubbish or toilet
- Do not spit
- Do not share drink containers or eating utensils

Important

Antibiotic resistance can affect us all. Help limit the development of antibiotic resistance by working with your doctor and pharmacist to use antibiotics appropriately.

Your **Self Care** Pharmacist

- Stay at home when ill and keep your children at home when they are ill
- Keep your immunisations and your children's immunisations up-to-date. Immunisations *prevent* infection. The elderly and those with chronic illnesses, in particular, should seek immunisation against influenza and pneumonia.

Use antibacterial and disinfectant cleaning products appropriately:

Do not use antibacterial, antimicrobial or disinfectant cleaning products (e.g., sponges, soaps, hand wash lotions, surface sprays, household cleaners) unless advised to do so by a health professional. If used frequently, many of these products can contribute to the development of resistant bacteria. In most situations, washing with non-bactericidal soap/detergent, rinsing with running water and thorough drying is effective cleaning and is cheaper.

Related fact cards

- *Childhood Immunisation*
- *Colds and Flu*
- *Sinus Problems*

For more information

HEALTHInsite – website www.healthinsite.gov.au

National Prescribing Service (NPS) – 'Common colds need common sense' campaign – website www.nps.org.au

Consumer Medicine Information (CMI) leaflets – your pharmacist can advise on availability.

NPS Medicines Line – phone 1300 888 763 Monday to Friday, 9am to 6pm EST.

The Poisons Information Centre – in case of poisoning phone 131 126 from anywhere in Australia.

Pharmacists are medicines experts. Ask a pharmacist for advice when choosing a medicine.