



Proper Use of Antibiotics

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- What are antibiotics?
- Are there any risks in taking antibiotics?
- What are the side effects of taking antibiotics?
- What are antimicrobial resistance bacteria?
- What causes antimicrobial resistance (AMR) ?
- Can AMR affect me?
- What are the precautions when taking antibiotics?
- Frequently Asked Questions (FAQs)
- Summary

What are antibiotics ?

- Antibiotics are drugs for treating bacterial infections
 - either by killing the bacteria or stopping them from growing
- Antibiotics are not effective in curing viral infections
 - cannot treat common cold and influenza (flu)
 - cannot make recovery faster

Are there any risks in taking antibiotics?

- Yes
- Potential risks include-:
 - Side effects and allergic reactions
 - Resistant bacterial infections

What are the side effects of taking antibiotics?

- Each antibiotic has its own specific side effects
- General side effects include
 - Nausea
 - Vomiting
 - Constipation or diarrhoea
 - Headache
 - Consult your doctor if persist or worsen
- Allergic reactions
 - Rash / Itchiness / Breathlessness
 - Consult your doctor immediately if this should occur

What are Antimicrobial Resistance Bacteria?

- Bacteria change in ways to become resistant to the antibiotics which they are previously sensitive to
- These resistant bacteria are sometimes referred to as 'superbugs'
- When the bacteria become resistant to most commonly used antibiotics, they are referred to as 'multi-drug resistant organisms' (or MDROs)

What causes antimicrobial resistance (AMR)?

- AMR occurs naturally over time, usually through genetic changes
- Resistant bacteria are often acquired through ingestion or contact from colonised or infected animals, food or humans, or their contaminated environment
- AMR has no respect for borders and direction and can be transmitted in a bi-directional manner from animals to humans and vice versa
- While antibiotics wipe out the bacteria causing the disease, they also affect the normal bacteria living inside your body and increase the risk of acquiring resistant bacteria
- Resistance develops more rapidly through the misuse and overuse of antibiotics

Can antimicrobial resistance affect me?

■ Yes

- Infections due to resistant bacteria are more difficult to treat
- May even be fatal in severe cases
- Without effective antimicrobials for prevention and treatment of infections, medical procedures such as organ transplantation, cancer chemotherapy, diabetes management and major surgery become very risky
- Infections caused by resistant bacteria can spread to people around you and impose huge threats to community and population health

What are the precautions when taking antibiotics?

To protect the health of you and your family while taking antibiotics:

- Personal hygiene
 - Practise frequent hand hygiene
 - Eat or drink only thoroughly cooked and boiled items
 - Disinfect and cover all wounds
 - Wear a mask if you have respiratory symptoms
 - Young children with symptoms of infections should minimise contact with other children
- Follow your doctor's advice when taking antibiotics
- Do not stop taking antibiotics by yourselves even if you are feeling better
- Ask your doctor or pharmacist if in doubt

Frequently Asked Questions (1)

- **What are the differences between bacteria and virus?**
 - Bacteria are tiny microorganisms that can reproduce independently
 - Viruses are even much smaller than bacteria and can only reproduce by entering living cells
 - They have different properties and can cause different diseases

What are the differences between bacteria and virus?

- Examples of bacteria and viruses and the diseases they cause

		Disease example(s)
Bacteria	<i>Escherichia coli (E.coli)</i>	Urinary tract infection Diarrhoeal disease
	<i>Streptococcus pneumoniae</i>	Chest infection Middle ear infection
	<i>Staphylococcus aureus</i>	Skin and soft tissue infection
Viruses	Rhinovirus	Cold
	Influenza virus, e.g. H1N1, H3N2	Influenza
	Varicella-zoster virus	Chickenpox
	Enterovirus	Hand, foot and mouth disease

Frequently Asked Questions (2)

- **Are antibiotics miracle drugs that cure all kinds of inflammation?**
 - No
 - Antibiotics are drugs for treating bacterial infections
 - Anti-inflammatory drug is a general term referring to a group of drugs which can reduce inflammation and relieve pain, such as non-steroidal anti-inflammatory drugs like aspirin. Their actions are different from those of antibiotics
 - If you have questions about the drugs you are taking, you should consult your doctor

Frequently Asked Questions (3)

■ Do I always need antibiotics if I have fever ?

- No
- Fever is a common presenting symptom of infection which may or may not be caused by bacterial infections
- Follow your doctor's advice for the use of antibiotics
- Do not demand antibiotics from your doctor
- Do not self-purchase antibiotics without a prescription

Frequently Asked Questions (4)

■ Do I always need antibiotics if I have cold or flu?

- 90% of upper respiratory tract infections (URTI) do not require antibiotic treatment (URTI such as common cold and influenza that are of viral origin)
- If you have a cold or flu, adopt the following measures:
 - ◆ Have adequate rest and drink plenty of water
(If symptoms persist, consult your doctor)
 - ◆ Follow your doctor's advice on the use of drugs
 - ◆ Do not demand antibiotics from your doctor
 - ◆ Do not self-purchase antibiotics without a prescription

Frequently Asked Questions (5)

- **If I am having a cold or flu and my nasal discharge changes to yellow or green, do I need antibiotics ?**
 - It is quite common for the discharge to become thick and change to yellow or green during a cold or flu
 - Changes in the appearance of nasal discharge alone do not justify the use of antibiotics
 - Always consult your doctor for the use of antibiotics

Summary

- Antibiotics are drugs used for treating bacterial infections and are not effective in curing viral infections such as common cold and influenza (flu) and cannot make recovery faster
- While taking antibiotic which is necessary to cure your infection, the antibiotic also kills the normal bacteria in your body and predisposes you to acquire more resistant bacteria
- Resistant bacteria (superbugs) develops more rapidly through the misuse and overuse of antibiotics
- Resistant bacteria are more difficult to treat and may even be fatal in severe cases
- Antibiotics should be prescribed by doctors. Do not self-purchase antibiotics; follow your doctor's advice when taking antibiotics and do not stop taking antibiotics by yourselves even if you are feeling better
- Pay attention to personal hygiene when taking antibiotics

End of Presentation