



Your Health

Antibiotic Resistance: What Is It, And How Do We Stop It? ©

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Words are explained alongside the text

Stressed syllables are underlined and in bold*

*Welcome to Your Health, provided by the medical frontier
Medical news, simplified.*

Today's medical news **is filled with** stories about cancer, mental problems and **obesity**, but there is a **category** that is very often **under-reported**; it's called antibiotic resistance. During this report we **aim** to show you what antibiotics are, what antibiotic resistance is, why is it a problem and what we're doing to stop it.

Antibiotics have been used for around 70 years and are used to clear many infectious diseases. **Penicillin** and other antibiotics are very important for curing **life-threatening diseases** like **pneumonia**, a very serious **lung** infection. They work by killing the bacteria that cause disease in two ways: either they kill the bacteria by breaking its **cell walls** (these are called bactericidal antibiotics) or they can stop the **bacteria** from **multiplying** so that your immune system can kill them (these are called bacteriostatic antibiotics).

The biggest problem today is that these antibiotics have been so successful in the past that they are **over-prescribed** by doctors. Very often they are given for illnesses that don't need antibiotics to clear the infection. The most common example is **a cold**. A cold is a virus and not bacteria, so antibiotics cannot kill the cold virus and won't make you feel better at all. Giving people antibiotics for diseases that don't need them can cause antibiotic resistance.

So how does antibiotic resistance happen, and why is it a problem?

When you take an antibiotic – it kills the harmful bacteria inside you, which makes you feel better. Doctors will put you on a **course** of antibiotics, which means that you have to take your pills for a certain amount of time to make sure that all the

to be filled with (exp.) to be full of

under-reported (adj.) not written about enough in the media

to aim (vb.) to have as an objective

life-threatening diseases (adj.n.) serious diseases from which the person could die

lung(s) (n.) the two organs of the body in the chest which take in air

cell walls (n.n.) the exterior of the cell

over-prescribed (adj.) too often used by doctors to treat patients

a cold (n.) a mild illness with symptoms like a runny nose, a cough and sneezing

bacteria have been killed. What often happens is that people start to feel better **half way through** the course and stop taking them. If you don't finish your course, this can leave some bacteria still alive. These bacteria will start to multiply and grow in numbers, making you sick again. But this time, the bacteria have been exposed to antibiotics and know how it works. As a result, the bacteria have changed the way they grow so that *that* antibiotic can no longer kill it! These bacteria are now antibiotic-resistant and the antibiotic you were taking **no longer works**.

A way to get around antibiotic resistance is to give a different antibiotic, but the problem is that if you catch an antibiotic resistant bacteria, you have to try lots of different antibiotics to see which one will kill it. This unfortunately caused a new **generation** of bacteria groups called **superbugs**. These superbugs are resistant to many antibiotics and in some cases – all of them. You may have heard of MRSA in hospitals, the superbug that has become resistant to lots of antibiotics!

So how do we stop the problem?

Hospitals and doctors are trying to stop multiple resistant bacteria through several methods. The main method that's been around for many years is to keep a special antibiotic that is used only for multiple resistant bacteria. This means that the bacteria hasn't seen this antibiotic before and can be killed.

New antibiotics are also being researched to try and create an antibiotic that can kill **harmful** bacteria but protect the good bacteria that we all have in our bodies.

Finally, the most exciting **developments** that may save us from superbugs are **mechanisms** that are completely different to antibiotics! Research is being made into enzymes (proteins) that can attack specific bacteria and **vaccinations** against superbugs. With these methods we won't have to **worry** about the bacteria becoming resistant.

This week's **advice**: Always remember to finish your course of antibiotics.

Thanks for listening to Your Health on EnglishWaves, provided by www.themedicalfrontier.com: Medical news, simplified.

half way through (exp.) in the middle of

no longer works (exp.) does not have an effect any more

a way to get around (exp.) a manner of avoiding

bugs (n.) bacteria

superbugs (n.) bacteria that are resistant to all antibiotics

harmful (adj.) dangerous, that can do damage

to worry (vb.) to be concerned about

advice (n.) recommendation, suggestion

***Tip!** Four syllable words can have their stress on the first, second or third syllable.

Words with stress on their first syllable: **category**, **multiplying**, **mechanisms**

Words with stress on their second syllable: **obesity**, **pneumonia**, **bacteria**, **developments**

Words with stress on their third syllable: **penicillin**, **generation**, **vaccinations**