

Why antibiotics can't be used to treat your cold or flu

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It's



Taking antibiotics when you don't need them can help antibiotic resistant bacteria to evolve.

It's understandable that when you're sick, or when someone you're caring for is sick, all you want is a medicine that will make everything better.

Unfortunately when it comes to viruses like those that cause colds or influenza (flu), antibiotic medicines don't work. In fact, taking antibiotics to try and treat viral illnesses might make us all sicker in the future.

How antibiotics work

Antibiotics were discovered by a scientist called Alexander Fleming in 1928, and are widely credited as one of the most important medical discoveries in human history.

Antibiotics are used to treat infections caused by bacteria. Bacteria are very small organisms, and billions of them live in and on your body. Most of the time these bacteria are harmless or even helpful for your body, like those that help you to digest food, but some bacteria can cause diseases.

There are two types of antibiotics that work to stop bacterial infections. Some slow down the growth of bacteria and damage their ability to reproduce and spread, while others kill the bacteria by destroying the bacteria cell walls. The choice of antibiotic depends on the type of bacteria.

Why don't antibiotics work on viruses?

Viruses are different to bacteria; they have a different structure and a different way of surviving. Viruses don't have cell walls that can be attacked by antibiotics; instead they are surrounded by a protective protein coat.

Unlike bacteria, which attack your body's cells from the outside, viruses actually move into, live in and make copies of themselves in your body's cells. Viruses can't reproduce on their own, like bacteria do, instead they attach themselves to healthy cells and reprogram those cells to make new viruses. It is because of all of these differences that antibiotics don't work on viruses.



How can we treat a cold or flu virus?

You might have heard the phrase that a virus has to 'run its course'. This means waiting for your body's immune system to fight off the viral infection by itself by activating an immune response. If you have a cold or the flu, during this time you might experience symptoms like:

- a runny or blocked nose
- sore throat
- headache
- fever
- cough
- and muscle aches.

Resting in bed, drinking plenty of fluids (particularly water) and taking over-the-counter medication

to relieve symptoms will help you recover from a virus. This is generally enough for otherwise healthy people. In some cases, your GP may prescribe antiviral medications to help reduce the severity and length of your illness.

Most importantly, you can help protect yourself from catching the flu by getting a [flu vaccine](#)¹. The flu vaccine changes every year, so it is important to get a new one before winter each year.

If you have a cold or the flu, you should visit your GP or call 13 HEALTH (13 43 25 84) for further advice if you experience any of the following symptoms:

- shortness of breath or trouble breathing
- chest pain
- a really sore throat that hurts to swallow
- a cough that doesn't go away after a few weeks
- a headache or sinus pain that won't go away
- persistent vomiting which means you can't keep any fluids down
- have a high temperature (38°C or higher)
- feeling confused or disoriented
- or coughing up coloured phlegm.

What's wrong with taking antibiotics 'just in case'?

Like any living organism, bacteria can evolve and adapt to changing environments. This means that bacteria can become '[resistant](#)' to antibiotics², if exposed to them enough. The video below explains how this can happen.

Natural Selection



As bacteria become resistant to antibiotics, the risk grows that harmful infections caused by bacteria can no longer be treated because we don't have any tools left to fight them. Taking antibiotics when they aren't needed can increase this risk for everyone and make antibiotics less effective overall.

Taking antibiotics when you don't need them is a waste and puts you at risk of side effects, like a rash, upset stomach or diarrhoea. It can also mean that they won't work when you really need them for a serious infection.