

Antibiotics are not always the answer

July 7 2017



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The discovery of penicillin in 1928 was heralded as a medical miracle. As one of the first antibiotics, it could cure patients of potentially deadly

bacterial illnesses, such as scarlet fever, typhoid and pneumonia.

Unfortunately, overuse of penicillin and other antibiotics can cause other problems for both individual patients and the general population. That's why it's important to take antibiotics only for true bacterial infections, including whooping cough, strep throat and [urinary tract infections](#).

Antibiotics don't kill viruses

According to the U.S. Centers for Disease Control and Prevention, up to one-third of antibiotic use in humans is either unnecessary or inappropriate. Antibiotics do not fight viral infections such as colds, flu, bronchitis and most sore throats. Still, many patients expect [health care professionals](#) to prescribe antibiotics to "cure" minor illnesses.

"Some parents who hate to see their child suffer will contact the doctor's office at the first sign of an [ear infection](#), hoping for a prescription for antibiotics to quickly end the child's suffering," said Barbara Cole, a nurse practitioner with Penn State Medical Group. "But the painful condition is usually caused by a virus."

Although antibiotics kill most [bacteria](#) at first, some of the microbes survive and eventually become resistant to that particular drug. As a result, new, stronger antibiotics are developed to fight the [resistant bacteria](#), and then the bacteria become resistant to them, as well. The CDC says virtually all bacterial infections have become resistant to the [antibiotic treatment](#) of choice.

Bacteria also become resistant when antibiotics are overused in food production and by farmers, as in with cows and chickens.

"Just as in humans, antibiotics are essential in treating some diseases in animals, but using antibiotics just to promote the animal's growth leads

to resistance," Cole said.

When a person is infected with an antibiotic-resistant [infection](#), medical professionals must resort to stronger, more toxic antibiotics to fight it and help that individual get well again. Illnesses last longer and, in more cases, lead to death. According to the CDC, every year more than 23,000 people in the United States die from bacterial infections that are resistant to antibiotics.

Relieve symptoms without antibiotics

"Antibiotics are not the answer for every cold, flu or ear infection," Cole said. "Often, a few days of rest and at-home remedies will cure a minor illness." She recommends:

- Cold or flu: drink fluids, get plenty of rest
- Comfort for a sick young child: Simply sit and rock him or her
- Ear infections: Apply warm compresses
- Runny nose: Use saline drops or sprays, run a cool-mist vaporizer, elevate the head, such as by putting an infant in a car seat
- Sore throat: Soothe with cool drinks, cough drops (for older children), or honey (for children at least 1 year old)

When an antibiotic is prescribed, patients should be sure to take it correctly:

- Take each dose at the appropriate time to maximize the effectiveness of the drug.
- Take the antibiotic for as long as prescribed, even if symptoms are gone. Otherwise, some bacteria can survive and become resistant.
- Don't take "leftover" antibiotics or those prescribed for someone

else. They might not be appropriate for current symptoms and could allow bacteria to multiply.

"Remember, don't demand [antibiotics](#) when a [health care](#) professional says they're not necessary. An antibiotic offers no benefits in treating a viral infection," Cole said. "Taking an unnecessary antibiotic increases the chances that a resistant infection will arise later."

Moreover, an antibiotic can kill the "good" bacteria in the human body, causing intestinal and other problems.

Antibiotics can save lives. Anyone with a bacterial infection should take the prescribed antibiotic. On the other hand, when an illness is mild and probably caused by a virus, it's better to treat the symptoms and let time be the cure.

Provided by Pennsylvania State University

Citation: Antibiotics are not always the answer (2017, July 7) retrieved 26 April 2024 from <https://medicalxpress.com/news/2017-07-antibiotics.html>

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