

Do I Really Need an Antibiotic?

Brown Health Services Patient Education Series

What are Antibiotics?

Antibiotics are medicines that help fight infections caused by bacteria. They work by killing bacteria in the body.

Antibiotics can do a lot of good. For people with serious bacterial infections, antibiotics can save lives. But people use them far too often, even when they are not needed, causing a serious problem called antibiotic resistance. Each year in the United States, at least 2 million people become infected with bacteria that are resistant to antibiotics and at least 23,000 people die each year as a direct result of these resistant infections.

Antibiotic resistance happens when bacteria that have been exposed to an antibiotic mutate so that the antibiotic can no longer kill them. In these bacteria, the antibiotic has no effect. Because of this problem, medical providers are having a harder time treating bacterial infections. There are many bacterial infections that have developed resistance to antibiotics, such as MRSA (a form of staph) and Tuberculosis, for example.

When are Antibiotics Helpful?

Antibiotics can help people fight off infections caused by bacteria. They do NOT work on infections caused by viruses.

Some common bacterial infections that are treated with antibiotics include:

- Strep Throat
- Pneumonia
- Bladder and Kidney infections
- Chlamydia and Gonorrhea
- Some skin infections
- Bacterial causes of diarrhea (usually contracted after travel to developing countries)

When are Antibiotics NOT Helpful?

- Antibiotics do not work on infections caused by fungi and viruses.
- Antibiotics do NOT help the common cold, which is caused by one of many viruses.
- Antibiotics are NOT helpful for the flu, which is caused by one of several influenza viruses.
- Antibiotics are NOT helpful for most cases of sore throat, which is usually caused by a virus.
- Antibiotics are NOT helpful for mononucleosis, which is caused by the Epstein-Barr virus.
- Antibiotics are NOT helpful for most cases of sinusitis, as sinusitis is usually caused by viruses. If you have had sinus symptoms for less than 7-10 days, you should not take antibiotics unless you have a high fever or underlying abnormalities in your sinuses. The presence of green or yellow mucus

BEFORE 7-10 days, does not indicate you have a bacterial infection.

- Antibiotics are NOT helpful in cases of acute bronchitis (persistent cough), because most cases of bronchitis are caused by a virus. If you have bronchitis and cough up green mucus that does NOT mean you have a bacterial infection.

But antibiotics always make my cold go away!

Even though antibiotics don't work on infections caused by viruses, people sometimes believe they do. That's because they took antibiotics for a viral infection and got better. The problem is that those people would have gotten better with or without an antibiotic.

What is the harm of taking antibiotics even if they might not help?

There are many reasons you should NOT take antibiotics unless you absolutely need them.

- Antibiotics cause side effects such as nausea, vomiting and diarrhea. They can make it more likely you will get another kind of infection, such as yeast vaginitis in people with vaginas.
- Allergies to antibiotics are common. You can develop an allergy to an antibiotic, even if you have not had a problem before. Some allergic reactions can be very serious, even life threatening. It is better to avoid the risk of allergy if the antibiotic wouldn't help you anyway.
- Overuse of antibiotics leads to antibiotic resistance.

Using antibiotics when they are not needed gives all the bacteria that live in your body a chance to change or mutate, so that the

- Antibiotics are NOT helpful for most

antibiotics may not be effective later on. Antibiotic-resistant infections are much harder to treat, and people sometimes get seriously ill or die from these infections as no antibiotic will cure them.

What can I do to reduce antibiotic resistance?

- Do NOT pressure your provider for antibiotics.
- If you are prescribed antibiotics, finish all of the medicine as directed; do not stop before talking to your health care provider.
- Do NOT take antibiotics that were prescribed to someone else.
- Do NOT use powerful antibacterial soaps (such as Hibiclens, Phisoderm) unless advised by your healthcare provider.

Source:

Antimicrobial stewardship in outpatient settings
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<https://www.cdc.gov/antibiotic-use/index.html>