SBCC Student Health Services

When to Use Antibiotics

What are bacteria and viruses?

Bacteria are single-celled organisms usually found all over the inside and outside of our bodies, except in the blood and spinal fluid. Many bacteria are not harmful. In fact, some are actually beneficial. However, disease-causing bacteria trigger illnesses, such as strep throat and some ear infections. Viruses are even smaller than bacteria. Viruses are non-living organisms that cause disease by invading healthy host cells and reproducing. As virus particles multiply, the host cells burst, allowing the viruses to infect other cells. A virus cannot survive outside the body's cells. It causes illnesses by invading healthy cells and reproducing.

Antibiotics- How do they work?

Antibiotics kill or inhibit the growth of susceptible bacteria. If bacteria make it past our immune systems, they cause disease. **Antibiotics do not work on viruses** because viruses are not “living” organisms. With a virus there is nothing to "kill", so antibiotics don't work on it.

What is antibiotic resistance?

Antibiotic resistance is the ability of bacteria or other microbes to resist the effects of an antibiotic. Antibiotic resistance occurs when bacteria change in some way that reduces or eliminates the effectiveness of drugs designed to cure or prevent infections. The bacteria survive and continue to multiply causing more harm.

Why not take antibiotics for viral infections?

Antibiotic use promotes development of antibiotic-resistant bacteria. Every time a person takes antibiotics, sensitive bacteria are killed, but resistant germs may be left to grow and multiply. The hearty bacteria may then multiply and change in ways that allow them to resist antibiotics down the road. Antibiotic-resistant strains of infections have become increasingly prevalent over the past few years, including methicillin-resistant Staphylococcus aureus (MRSA). Repeated and improper uses of antibiotics are primary causes of the increase in drug-resistant bacteria. **Antibiotics do not work on viruses.**

How can I prevent antibiotic-resistant infections?

It is important to understand that, although they are very useful drugs, antibiotics designed for bacterial infections are not useful for viral infections such as a cold, cough, most bronchitis, or the flu. Some useful tips to remember are:

1. Talk with your healthcare provider about antibiotic resistance: Ask whether an antibiotic is likely to be beneficial for your illness. Ask what else you can do to feel better sooner.
2. Do not take an antibiotic for a viral infection like a cold or the flu.
3. Do not save some of your antibiotic for the next time you get sick. Discard any leftover medication once you have completed your prescribed course of treatment.
4. Take an antibiotic exactly as the healthcare provider tells you. Do not skip doses. Complete the prescribed course of treatment even if you are feeling better. If treatment stops too soon, some bacteria may survive and re-infect.
5. Do not take antibiotics prescribed for someone else. The antibiotic may not be appropriate for your illness.
6. If your healthcare provider determines that you do not have a bacterial infection, ask about ways to help relieve your symptoms. **Do not pressure your provider to prescribe an antibiotic.**
7. Most viral infections are self-limiting and you will feel better in several days.

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