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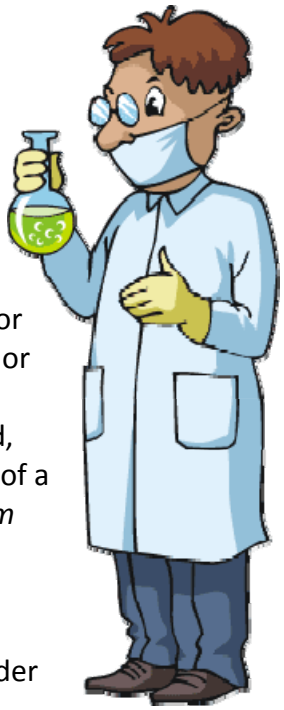

Antiobiotics

What They Are and How They work

Before antibiotics were discovered, doctors pretty much only had two options for treating an infection. They could wait and see if the infection got better on its own, or they could cut it out of your body. But in 1928, researcher Alexander Fleming discovered penicillin—by accident. After having been away from his lab all weekend, he returned to find that a mold called *Penicillium notatum* had stopped the growth of a bacteria called Staphylococcus in his petri dishes. Intrigued, Fleming tried *Penicillium notatum* against other bacteria, including Streptococcus, Meningococcus and Diphtheria. The *Penicillium notatum* defeated the bacteria every time.

You have probably taken antibiotics before. Antibiotics work against bacterial infections (they have no effect on illnesses caused by a virus) like strep throat, bladder infections, and many skin infections. All antibiotics will kill or stop the growth of bacteria, but different antibiotics are needed to fight different kinds of bacteria, and antibiotics fight bacteria in different ways. They can keep the bacteria from being able to repair damage to its DNA. They can prevent the bacteria from getting what it needs to grow new cells, or they can make the bacteria's cell wall so weak that it bursts.

Antibiotics can be either broad spectrum or narrow spectrum. Broad spectrum antibiotics are effective against a lot of different types of bacteria; narrow spectrum antibiotics are only effective against a particular group of bacteria.

1. How were antibiotics discovered?

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2. What are the three different ways that antibiotics work?

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3. Which kind of antibiotic is effective against a lot of different types of bacteria?

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