**KidsHealth The Dange of Antibiotic Overuse**

<http://kidshealth.org/parent/h1n1_center/h1n1_center_treatment/antibiotic_overuse.html>

Every year, your family probably faces its share of [colds](http://kidshealth.org/parent/infections/common/cold.html), sore throats, and viruses. When you bring your child to the doctor for these illnesses, do you automatically expect a prescription for antibiotics?

Many parents do. And they're surprised, maybe even angry, if they leave the doctor's office empty-handed — after all, what parent doesn't want their kid to get well as quickly as possible? But your doctor could be doing you and your child a favor by not reaching for the prescription pad.

**How Antibiotics Work**

Antibiotics, first used in the 1940s, are certainly one of the great advances in medicine. But overprescribing them has resulted in the development of **resistant bacteria**, which are bacteria that don't respond to antibiotics that may have worked in the past. Plus, whenever kids take antibiotics they run the risk of side-effects, such as stomach upset and diarrhea or even a possible allergic reaction.

To understand how antibiotics work, it helps to know about the two major types of [germs](http://kidshealth.org/parent/general/sick/germs.html) that can make people sick: **bacteria** and **viruses**. Although certain bacteria and viruses cause diseases with similar symptoms, the ways these two organisms multiply and spread illness are different:

 **Bacteria** are *living* organisms existing as single cells. Bacteria are everywhere and most don't cause any harm, and in some cases may be beneficial. Lactobacillus, for example, lives in the intestine and help digest food.
 But some bacteria are harmful and can cause illness by invading the human body, multiplying, and interfering with normal bodily processes. Antibiotics are effective against bacteria because they work to kill these living organisms by stopping their growth and reproduction.

 **Viruses**, on the other hand, are *not* alive and cannot exist on their own — they are particles containing genetic material wrapped in a protein coat. Viruses "live," grow, and reproduce only after they've invaded other living cells. Some viruses may be fought off by the body's immune system before they cause illness, but others (colds, for example) must simply run their course. Viruses do not respond to antibiotics at all.

**Why It's Harmful to Overuse Them**

Taking antibiotics for colds and other viral illnesses not only won't work, but also has a dangerous side effect: over time, this practice helps create bacteria that have become more of a challenge to kill.

Frequent and inappropriate use of antibiotics can cause bacteria or other microbes to resist the effects of antibiotic treatment. This is called bacterial resistance or antibiotic resistance. Treating these resistant bacteria requires higher doses of medicine or stronger antibiotics. Because of antibiotic overuse, certain bacteria have become resistant to some of the most powerful antibiotics available today.

Antibiotic resistance is a widespread problem, and one that the Centers for Disease Control and Prevention (CDC) calls "one of the world's most pressing public health problems." Bacteria that were once highly responsive to antibiotics have become increasingly resistant. Among those that are becoming harder to treat are pneumococcal infections (which cause [pneumonia](http://kidshealth.org/parent/infections/lung/pneumonia.html), [ear infections](http://kidshealth.org/parent/infections/ear/otitis_media.html), sinus infections, and [meningitis](http://kidshealth.org/parent/infections/lung/meningitis.html)), skin infections, and [tuberculosis](http://kidshealth.org/parent/infections/lung/tuberculosis.html).

**Taking Antibiotics Safely**

So what should you do when your child gets sick? To minimize the risk of bacterial resistance, keep these tips in mind:

* **Treat only bacterial infections.** **Seek advice and ask questions.** Letting milder illnesses (especially those thought to be caused by viruses) run their course to avoid the development of drug-resistant germs may be a good idea — but it's still best to leave what constitutes a "mild illness" up to your doctor. Even if the symptoms don't worsen but linger, take your child to the doctor. At the office, ask questions about whether your child's illness is bacterial or viral, and discuss the risks and benefits of antibiotics. If it's a virus, don't pressure your doctor to prescribe antibiotics, but ask about ways to treat symptoms.

If your child is prescribed antibiotics be sure to:

* **Use antibiotics as prescribed.**
* **Don't save antibiotics for next time.**
* **Never use another person's prescription.**

Ask your doctor about ways to treat the symptoms that are making your child uncomfortable, such as a stuffy nose or scratchy throat, without the use of antibiotics. The key to building a good relationship with your doctor is open [communication](http://kidshealth.org/parent/general/sick/talk_doctor.html), so work together toward that goal.

Use the medication properly. Antibiotics are only effective against a bacterial infection if taken for the full amount of time prescribed by the doctor — and they take time to kick in, too, so don't expect your child to feel better after taking the first dose. Most kids take 1 to 2 days to feel a lot better. Similarly, don't let your child take antibiotics longer than prescribed.

And most important, never use antibiotics that have been lying around your home. Never take antibiotics that were prescribed for another family member or adult, either — doses for kids vary, and if your child did have an illness requiring antibiotics, you'd want to make sure you were treating it correctly.

Saving antibiotics "for the next time" is a bad idea, too. Any remaining antibiotic should be thrown out as soon as your child has taken the full course of medication.

Help fight antibiotic resistance by taking simple steps to prevent the spread of infections. Encourage [hand washing](http://kidshealth.org/parent/general/sick/hand_washing.html), make sure your kids are up to date on [immunizations](http://kidshealth.org/parent/general/body/vaccine.html), and keep kids out of school when they're sick.

Doctors are aware of increasing antibiotic resistance and are trying to solve the problem. New antibiotics might be on the horizon, but antibiotics will continue to need to be prescribed and used appropriately.

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