

## Antibiotic Resistance: How Misuse of Antibiotics Could Threaten Your Health



Chances are if you've ever had an infection caused by bacteria - like an ear infection, strep throat, or the common childhood skin infection impetigo - your doctor probably prescribed you an antibiotic.

Antibiotics are medicines used for treating infections caused by bacteria, and are available in many forms including ointments, pills and liquid medicine. Also known as antimicrobial drugs, antibiotics have saved countless lives but misuse and overuse of these medicines, have contributed to a phenomenon known as antibiotic resistance. This resistance develops when potentially harmful

bacteria change in a way that reduces or eliminates the effectiveness of antibiotics.

### A Global Public Health Concern

Antibiotic resistance is a growing public health concern worldwide. When a person is infected with an antibiotic-resistant bacterium, not only is treatment of that patient more difficult, but the antibiotic-resistant bacterium may spread to other people.

When antibiotics don't work, the result can be

- longer illnesses
- more complicated illnesses
- more doctor visits
- the use of stronger and more expensive medicines
- more deaths caused by bacterial infections

Examples of the types of bacteria that have become resistant to antibiotics include the species that cause skin infections, meningitis, sexually transmitted diseases and respiratory tract infections such as pneumonia.

In cooperation with other government agencies, the Food and Drug Administration (FDA) has launched several initiatives to address antibiotic resistance.

FDA has issued drug labeling regulations, emphasizing the careful use of antibiotics. The regulations encourage health care professionals to prescribe antibiotics only when medically necessary, and to counsel patients

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about the proper use of such medicines and the importance of taking them as directed. FDA has also encouraged the development of new medicines, vaccines, and improved tests for infectious diseases.

#### **Antibiotics Fight Bacteria, Not Viruses**

Antibiotics are meant to be used against bacterial infections. For example, they are used to treat strep throat, which is caused by streptococcal (strep) bacteria, and skin infections caused by staphylococcal bacteria.

Although antibiotics kill bacteria, they are not effective against viruses. They are not effective against viral infections such as colds, most coughs, many types of sore throat, and influenza (flu).

Using antibiotics against viral infections

- will not cure the infection
- will not keep other individuals from catching the virus
- will not help a person feel better
- may cause unnecessary, harmful side effects
- may contribute to the development of antibiotic-resistant bacteria

Patients and health care professionals can all play an important role in combating antibiotic resistance. Patients should not demand antibiotics when a health care professional says they are not needed. Health care professionals should prescribe antibiotics only for infections they believe to be caused by bacteria.

As a patient, your best approach is to ask your health care professional whether an antibiotic is likely to be effective for your condition. Also, ask what else you can do to relieve your symptoms.

#### **Follow Directions for Proper Use**

Here are tips to promote proper use of antibiotics



- **Do** complete the full course of the medicine. It's important to take all of the medication, even if you are feeling better. If treatment stops too soon, the medicine may not kill all the bacteria. You may become sick again, and the remaining bacteria may become resistant to the antibiotic that you've taken.
- **Do not** skip doses. Antibiotics are most effective when they are taken regularly.
- **Do not** save antibiotics. You might think that you can save an antibiotic for the next time you get sick, but an antibiotic is meant for your particular infection at the time. Never take leftover medicine. Taking the wrong medicine can delay getting the appropriate treatment and may allow your condition to worsen.
- **Do not** take antibiotics prescribed for someone else. These may not be appropriate for your illness, may delay correct treatment, and may allow your condition to worsen.

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- **Do** talk with your health care professional about your treatment plan. Ask questions, especially if you are uncertain about when an antibiotic is appropriate or how to take it.

It's important that you let your health care professional know if your symptoms get worse or do not improve. Consumers and health care professionals can also report adverse events to FDA's MedWatch program at 1-800-FDA-1088 or online at [www.fda.gov/medwatch/report.htm](http://www.fda.gov/medwatch/report.htm).

**What FDA is Doing**

Efforts to combat antibiotic resistance include agency-wide cooperation and development of an FDA Task Force on Antimicrobial Resistance. FDA activities include

- Labeling regulations addressing proper use of antibiotics. Antibiotic labeling contains required statements in several places advising health care professionals that these medicines should be used only to treat infections that are believed to be caused by bacteria. Labeling also encourages health care professionals to counsel patients about proper use.
- Partnering to promote public awareness. FDA has partnered with the Centers for Disease Control and Prevention (CDC) on "Get Smart: Know When Antibiotics Work," a campaign that offers Web pages, brochures, fact sheets, and other information sources aimed at helping the public learn about preventing antibiotic-resistant infections.
- Encouraging the development of new antibiotics. FDA is actively engaged in developing guidance for industry on the types of clinical studies that could be performed to evaluate how an antibacterial drug works for the treatment of different types of infections.

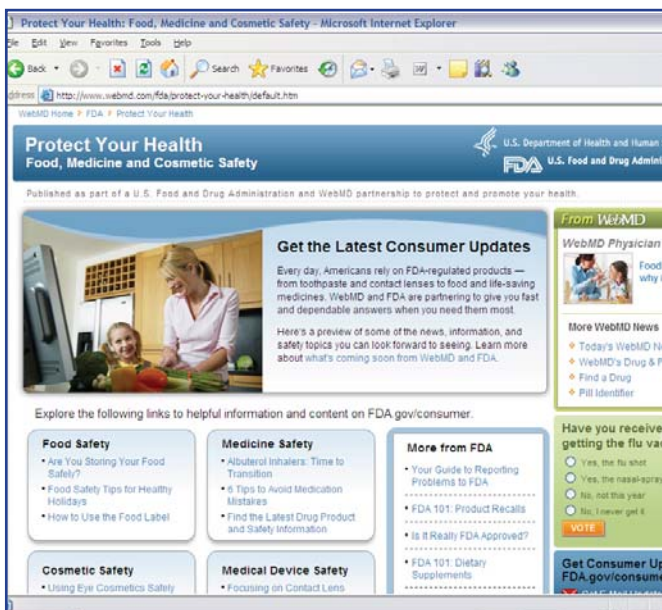
**For More Information**

**FDA: Antibiotic Resistance**

[www.fda.gov/oc/opacom/hottopics/anti\\_resist.html](http://www.fda.gov/oc/opacom/hottopics/anti_resist.html)

**CDC: Get Smart: Know When Antibiotics Work**

[www.cdc.gov/drugresistance/community/](http://www.cdc.gov/drugresistance/community/)



**Learn About It Online:  
FDA's Partnership with WebMD**

The FDA and WebMD have partnered to expand access to timely and reliable information for consumers. FDA Consumer Health Information will be featured on WebMD's site and in *WebMD The Magazine*. With more than 49 million unique visitors each month, WebMD provides timely health news and information.

**VISIT FDA at WebMD**

<http://www.webmd.com/fda/>  
**to learn more**

## Flu Season: It's Not too Late to Get Vaccinated

You may think it's too late to get a flu vaccine, but it's not!

According to the CDC, an average of five to twenty percent of the U.S. population gets seasonal influenza - commonly called "the flu," more than 200,000 people are hospitalized because of flu complications, and there are about 36,000 flu related deaths each year.

The flu is a contagious respiratory disease caused by influenza virus. This virus is spread through coughing and sneezing. Because most flu viruses can live outside the body for up to 48 hours\* you can also get it by touching things that have been touched by someone with the flu, such as telephones or door knobs, and then touching your nose or mouth.

Symptoms include fever, headache, body ache, chills, exhaustion and weakness. Most people who get the flu will recover within one or two weeks, but some develop serious complications such as pneumonia, ear infections, sinus infections and dehydration.

The flu vaccine is an important part of flu prevention, and autumn is the best time to get vaccinated since the flu season peaks during the winter months.

There are two types of vaccines:

- The flu shot which contains inactivated, or killed, influenza viruses
- The nasal-spray vaccine, commonly known by the trade name FluMist, which contains live weakened, influenza viruses and is sprayed into both nostrils.

Contrary to popular belief, you can't get the flu from a flu shot. Although you may experience some mild symptoms, such as mild fever, body aches and fatigue, they should not last more than a few days. The most common side effect is mild soreness at the injection site.

It is recommended that individuals, including young children, the elderly, and people with chronic medical conditions be vaccinated because they are at a higher risk of experiencing complications from the flu. In addition, healthcare personnel are at a higher risk of not only contracting the virus, but spreading it to their patients and should be vaccinated.

If you'd like to get vaccinated for flu, talk to your doctor. In addition to your doctor's office, the vaccine is sometimes available at your workplace or local pharmacy. Your doctor can address any concerns you may have about the vaccine.

### For More Information:

**FDA's Flu Information Web Site:**

[www.fda.gov/oc/opacom/hottopics/flu.html](http://www.fda.gov/oc/opacom/hottopics/flu.html)

\*Source: Mayo Clinic

### Did You Know?

Healthy adults who have the flu may be able to infect others a day before their symptoms appear and up to five days after they become sick.



# CALENDAR OF NATIONAL HEALTH EVENTS

February	March	April
<p><b>American Heart Month</b></p> <p>American Heart Association 7272 Greenville Avenue Dallas, TX 75231 (800) 242-8721 <a href="mailto:inquire@americanheart.org">inquire@americanheart.org</a> <a href="http://www.americanheart.org">www.americanheart.org</a></p>	<p><b>National Nutrition Month</b></p> <p>American Dietetic Association 120 South Riverside Plaza, Suite 2000 Chicago, IL 60606-6995 (800) 877-1600 x4853 <a href="mailto:knowledge@eatright.org">knowledge@eatright.org</a> <a href="http://www.eatright.org/cps/rde/xchg/ada/hs/xsl/NNM_2007_home.htm">http://www.eatright.org/cps/rde/xchg/ada/hs/xsl/NNM_2007_home.htm</a></p>	<p><b>National Youth Sports Safety Month</b></p> <p>National Youth Sports Safety Foundation One Beacon Street, Suite 3333 Boston, MA 02108 (617) 367-6677 (617) 722-9999 Fax <a href="mailto:nyssf@aol.com">nyssf@aol.com</a> <a href="http://www.nyssf.org">www.nyssf.org</a></p>
<p>Other health events that may be of interest can be found at: <a href="http://www.healthfinder.gov/nho/default.aspx">http://www.healthfinder.gov/nho/default.aspx</a></p>		

## About FDA & YOU



*FDA & YOU* is an FDA publication to inform and encourage health educators and students to learn about the latest FDA consumer news. The information published herein was current as of the date of publication.

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**Online:** <http://www.fda.gov/cdrh/fdaandyou.html>

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