



Choosing Wisely[®]

An initiative of the ABIM Foundation

ConsumerReports[®]Health



Antibiotics
When you
need them—
and when
you don't

A guide to when
and how to use
antibiotics to
help you and your
loved ones avoid
drug resistance

Dear Friends,

February 2014



For 75 years, Consumer Reports has published information that helps consumers make better choices about the things they buy and use. Our readers expect us to tell them what works and what does not, no matter if it's refrigerators, TVs, or health care products.

The information in this article is about a health product that almost all of us have used—antibiotics. Antibiotics have saved millions of lives. But in the future, they might not work, because we are using them far too much. When we use an antibiotic, it kills most bacteria. However, a few bacteria survive—they “resist” the antibiotic and take over and multiply. When this happens, antibiotics don't work. This article explains when you need antibiotics—and when you don't.

All of us—patients and doctors—are using too many antibiotics. There is a lot of pressure to use them, from friends, family, and advertising. In my own practice, I am sad to say, I gave antibiotics to some patients even though I knew that they probably would not work. They wanted antibiotics, and I did not want to disappoint them.

It is especially important for hospitals to use antibiotics carefully. When hospitals overuse them, it can quickly lead to life-threatening antibiotic-resistant infections.

Farms, restaurants, and grocery stores play an important role too. Most of the antibiotics sold in the U.S. are used by the meat industry on animals that aren't even sick. Consumers Union is working to stop the routine use of antibiotics on healthy livestock.

As part of the ABIM Foundation's campaign, Choosing Wisely, Consumer Reports is bringing attention to the overuse of health care services and products, including antibiotics. Please join us, over 50 physician professional societies, and millions of consumers in realizing that more medicine, antibiotics included, is not always better.

Sincerely,

A handwritten signature in black ink, appearing to read "John Santa". The signature is fluid and cursive, with a large initial "J" and "S".

John Santa, MD MPH
Director

Consumer Reports Health

www.ConsumerHealthChoices.org/Choosing

Choosing Wisely[®]

An initiative of the ABIM Foundation

ConsumerReports[®]Health



Antibiotics

When you need them—and when you don't

Antibiotics are strong medicines that can kill bacteria. But we have overused antibiotics for many years. As a result, we now have bacteria that resist antibiotics. Resistant bacteria cause infections that are harder to cure and more costly to treat.

Antibiotic-resistant infections can strike anyone.

They can be passed on to others. For example, more and more healthy young people are getting skin infections from MRSA, a

bacteria that resists many common antibiotics. MRSA is spreading in households, daycare, schools, camps, dorms, gyms, team sports, and the military.

Try to protect yourself and your loved ones. Here's what you need to know to help prevent resistance:

Drug-resistant infections kill at least 23,000 children and adults in the U.S. every year.

Taking antibiotics makes you more likely to get a resistant infection in the future.

Sometimes you need antibiotics to prevent or treat an infection. But half of antibiotics prescriptions are not needed.

It is normal to have bacteria on your skin and in your body. Many bacteria are harmless. They can even keep you healthy. When you use an antibiotic, it kills most bacteria, including the friendly ones. But a few bacteria survive. These resistant bacteria can multiply and take over.

Antibiotics have side effects.

Each year, 14,000 Americans die from severe diarrhea caused by antibiotics. Other side effects include vaginal infections, nausea and vomiting. Serious allergic reactions include blistering rashes, swelling of the face and throat, and breathing problems. Some antibiotics can cause permanent nerve damage and torn tendons.

Resistant infections cost a lot.

Resistant infections usually need more costly drugs, more medical care or longer hospital stays. It costs over \$40,000 extra to treat a resistant bloodstream infection in one hospital patient. Resistant infections cost \$20 billion each year.



Do You Need Antibiotics?

People use antibiotics incorrectly for many common conditions. Medical organizations are alarmed about this problem and have listed some of these conditions below.

RESPIRATORY INFECTIONS

Children's sore throat, cough, runny nose

American Academy of Pediatrics

The problem: Different conditions need different treatments:

- Colds, flu and most other respiratory infections are caused by a virus. Antibiotics don't kill viruses.
- Bronchitis is usually caused by a virus or an irritant in the air like cigarette smoke.
- Strep throat is caused by bacteria. Symptoms include fever, redness and trouble swallowing. But most children with those symptoms do not have strep throat. Your child should get a strep test before taking antibiotics.

Consider antibiotics if:

- A cough doesn't get better in 14 days.
- The doctor diagnoses a bacterial illness, like strep throat.

Sinus infections (sinusitis)

*American Academy of Allergy, Asthma & Immunology
American Academy of Family Physicians*

The problem: Sinusitis is almost always caused by a virus. Symptoms include a stuffed-up feeling, a runny nose and pain in the face. Even when bacteria are the cause, the infections usually clear up on their own in about a week.

Consider antibiotics only if:

- You don't get better after 10 days.
- You get better and then worse again.
- You have a high fever and thick, colored mucus for three or more days in a row.

EAR INFECTIONS

Children's ear infections

American Academy of Family Physicians

The problem: Most ear infections improve on their own in two or three days, especially in children age two or older. Give your child over-the-counter pain relievers for a few days, and avoid antibiotics. Take your child to a doctor if symptoms aren't better in two to three days or they get worse at any time.

Get antibiotics right away for:

- Babies age six months or younger.
- Children from six months to two years old with moderate to severe ear pain.
- Children age two or older with severe symptoms.

Children with ear tubes

American Academy of Otolaryngology-Head & Neck Surgery

The problem: For children with ear tubes, antibiotic eardrops work better than oral antibiotics. Drops go straight through the ear tube into the middle ear—where most children's ear infections are. Drops are also less likely to cause resistant bacteria.

Consider oral antibiotics if the child:

- Is very ill.
- Needs antibiotics for another reason.
- Doesn't get better with eardrops.

Swimmer's ear

American Academy of Otolaryngology-Head & Neck Surgery

The problem: Swimmer's ear is caused by water trapped in the ear canal. Usually, over-the-counter eardrops help as much as antibiotics, and they don't cause resistance. But if you have a hole or tube in your eardrum, check with your doctor first. Non-prescription eardrops could damage your hearing.

If you do need antibiotics:

- Antibiotic eardrops work better than oral antibiotics against swimmer's ear.
- Consider oral antibiotics if the infection spreads beyond the ear or you have other conditions, such as diabetes, that increase the risk of complications.



EYE INFECTIONS

Pink eye

American Academy of Ophthalmology

The problem: Pink eye is usually caused by a virus or allergy, so antibiotics don't help. Even bacterial pink eye usually goes away on its own within 10 days.

Consider antibiotics for bacterial pink eye if:

- You have a weak immune system.
- Pink eye doesn't get better in a week without treatment.
- The eye is very swollen or painful or develops a thick, pus-like discharge.

Eye injections

American Academy of Ophthalmology

The problem: Injections are a common treatment for some eye diseases. After the injection, doctors often prescribe antibiotic eye drops to prevent infection. But the risk of infection is very low, because the eye is cleaned with a germ-killing solution before the injection. Antibiotics don't lower the risk, and they can irritate the eye.

Consider antibiotics if:

You have a bacterial eye infection with signs like redness, swelling, tearing, pus, and vision that is getting worse. Don't get an injection until the infection clears up.

URINARY TRACT INFECTIONS

Urinary tract infections in older people

American Geriatrics Society

The problem: Doctors often find bacteria in a routine urine test and prescribe antibiotics to people

with no symptoms of a urinary tract infection (UTI). But older people often have bacteria in their urine, with no UTI. The drugs are not helpful in those cases.

Consider antibiotics if:

- An older person has UTI symptoms, like pain or burning in urinating or a strong urge to go often.
- Older people without UTI symptoms should only be tested and treated for bacteria in their urine before certain procedures. These include prostate surgery or some procedures to remove kidney stones or bladder tumors.

SKIN INFECTIONS

Eczema

American Academy of Dermatology

The problem: Eczema causes dry, itchy, red skin. Doctors may try to control it with antibiotics. But antibiotics don't help the itching, redness, or severity. To control eczema, moisturize your skin and avoid things that irritate it. Ask your doctor about a medicated cream or ointment to relieve itching and swelling.

Consider antibiotics only if there are signs of a bacterial infection, such as:

- Bumps full of pus
- Cracks and sores that ooze pus
- Honey-colored crusting
- Very red or warm skin
- Fever

Surgical wounds

American Academy of Dermatology

The problem: Wounds from skin surgery—such as removal of a skin cancer—usually have a very low risk of infection. Antibiotics don't lower the risk. Most wounds heal just as well with petroleum jelly (Vaseline and generic).

Consider antibiotics only if:

- The wound is in an area of the body with a higher risk of infection, such as the groin.
- The wound actually shows signs of infection—such as redness, pain, swelling, warmth, pus, drainage, crusting or fever.

Steps to reduce use of antibiotics

Try to avoid infections in the first place. If you do get one, use antibiotics correctly. The following steps can help:

Wash your hands often

- Use plain soap and water.
- Wash for at least 20 seconds.
- Or use an alcohol-based hand sanitizer like Purell if soap and water are not available.
- Avoid antibacterial hand cleaners.
- Wash before preparing or eating food.
- Wash after using the bathroom, changing a diaper, sneezing, coughing, handling garbage and coming home from public places.
- Wash before and after treating a cut or wound or being near a sick person.

At home

- Don't share personal items like towels, razors, tweezers and nail clippers.
- Keep kitchen and bathrooms clean. You can clean surfaces with soap and water. Try to avoid products with added antibacterials.
- Don't put purses, diaper bags, or gym bags on the kitchen table or counter.
- Wash wounds with regular soap and water. Use over-the-counter antibiotic products such as neomycin (Neosporin and generic) or bacitracin only for cuts that look dirty.

At the gym

- Wipe exercise equipment with alcohol-based sprays or wipes.
- Put a clean towel over workout mats.
- Keep cuts and scrapes clean, dry and covered.
- Shower right after exercising, and use clean towels.

This report is for you to use when talking with your health-care provider. It is not a substitute for medical advice and treatment. Use of this report is at your own risk. © 2014 Consumer Reports. To learn more, please visit ConsumerHealthChoices.org/about-us/.

Work with your doctor

- Don't push for antibiotics with your doctor. If you don't have a bacterial infection, ask how to relieve symptoms.
- Fight it off. If symptoms are mild and complications unlikely, ask if you can delay treatment for a few days.
- Get recommended vaccines and flu shots. Ask about vaccines for pneumonia and meningitis.
- Take antibiotics as prescribed. Don't skip doses or stop the medicine early.
- Don't use leftover antibiotics to treat an infection. Taking the wrong medicine allows bacteria to multiply.

In the hospital

- Don't get shaved with a razor before surgery. The nicks can attract bacteria.
- Make sure healthcare providers and visitors wash their hands with soap and water or an alcohol-based hand sanitizer.
- Visitors shouldn't touch surgical wounds or dressings.
- Ask every day if catheters or other tubes can be removed. They can lead to urinary tract or bloodstream infections.



Consumer Reports

James A. Guest, President, Consumer Reports
Chris Meyer, Vice President, External Affairs
Tara Montgomery, Senior Director, Consumer Reports Health
John Santa, Medical Director

Health Ratings Center

Doris Peter, Director, Health Ratings Center
Kristina Mycek, Statistician
Lisa Gill, Deputy Content Editor, Best Buy Drugs
Steve Mitchell, Associate Editor, Best Buy Drugs
Teresa Carr, Associate Editor, Best Buy Drugs
Ginger Skinner, Associate Editor, Best Buy Drugs
Kathleen Person, Project Manager
Lisa Luca, Web Editorial Associate

Health Impact

Dominic Lorusso, Director, Health Partnerships Development
Lesley Greene, Associate Director, Health Impact Programs
David Ansley, Senior Analyst, Health Product Development
Beccah Rothschild, Senior Outreach Leader, Health Partner Development
Pamela Austin, Senior Marketing Associate
Lane Rasberry, Wikipedian-in-Residence
Claudia Citarella, Senior Administrative Assistant

Health and Food Content Development

Nancy Metcalf, Senior Editor
Joel Keehn, Deputy Content Editor, Health and Food

About this report

This Antibiotics report is published by Consumer Reports, the nation's expert, independent, and nonprofit consumer organization. It is part of a health communication program created by Consumer Reports, based on articles that originally appeared in Consumer Reports magazine or other Consumer Reports publications.

Consumer Reports Health

For more than 75 years, Consumer Reports has been working for a fair, just, and safe marketplace for all consumers and empowering consumers to protect themselves. Fighting for a better health marketplace has been a significant part of that work. To maintain its independence and remain free of any conflicts of interest, Consumer Reports accepts no ads, free samples, or corporate contributions. Its income comes from the sale of its publications and from services, fees, and noncommercial contributions and grants.

As consumers become increasingly involved in their own health decisions, they need unbiased, accurate, evidence-based information to compare their options and to make appropriate choices for themselves and their families. Our trusted research, testing, and reporting on health products and services appears regularly in Consumer Reports magazine, ConsumerReports.org, Consumer Reports on Health newsletter, and our other media products. The editors at Consumer Reports have created this series of Reports to bring together our expert research and analysis, findings on consumer experiences based on our own national surveys, and independent Ratings to guide you through your options and to help you make better health decisions.

For more information about Consumer Reports Health, including our team and methodology, go to www.consumerhealthchoices.org. There you will find more advice on a broad range of health topics, from how to choose an over-the-counter pain reliever to selecting a health insurer.

Important information

This report should not be viewed as a substitute for a consultation with a medical or health professional. The information is meant to enhance communication with

your doctor, not replace it. Use of this report is also at your own risk. Consumer Reports cannot be liable for any loss, injury, or other damage related to your use of this report. You should not make any changes in your medicines without first consulting a physician. You should always consult a physician or other professional for treatment and advice.

Errors and omissions We followed a rigorous editorial process to ensure that the information in this report and on the ConsumerReports.org website is accurate and describes generally accepted clinical practices. If we find, or are alerted to, an error, we will correct it as quickly as possible. However, Consumer Reports and its authors, editors, publishers, licensors, and any suppliers cannot be responsible for medical errors or omissions, or any consequences from the use of the information on this site.

Copyright notices

This Report is published by Consumer Reports, 101 Truman Ave., Yonkers, NY 10703-1057.

Consumer Reports is a federally registered trademark in the U.S. Patent Office. Contents of this publication copyright © 2014 by Consumers Union of U.S., Inc. All rights reserved under international and Pan-American copyright conventions.

Consumer Reports[®], Consumer Reports Health[™], and Consumers Union[®] are trademarks of Consumers Union of U.S., Inc.

Terms of use The report is intended solely for personal, noncommercial use and may not be used in advertising or promotion, or for any other commercial purpose. Use of this report is subject to our User Agreement available at <http://www.consumerreports.org/cro/customer-service/user-agreement/index.htm>. Individuals, employers, and others may not modify or create derivative works from the text of the reports, however, or remove any copyright or trademark notices. All quotes from the report should cite the following source: Antibiotics, when you need them and when you don't report from Consumer Reports.

For Individuals

Individuals receiving copies of this report as part of the Consumer Reports consumer health communication program are free to download, copy, and distribute the reports for individual and family use only.

For Other Purposes

Reproduction of information from this Report in whole or in part is forbidden without prior written permission (and is never permitted for advertising purposes). Any organization interested in broader distribution of this Report as part of a communications program to educate consumers (or for any other purpose) can contact Dominic Lorusso, Director, Health Partnerships at HealthImpact@cr.consumer.org.

Print orders

Anyone who would like to discuss cost-effective printing solutions for print dissemination of this report to members/employees can contact Dominic Lorusso, Director, Health Partnerships, at HealthImpact@cr.consumer.org.

About Consumer Reports' No Commercial Use policy

At Consumer Reports, we believe that objective, impartial testing, reviews and Ratings are critically important for consumers. That is why we have a strict "No Commercial Use Policy" preventing the use of our name and information for any promotional or advertising purposes. The policy helps ensure we avoid even the appearance of endorsing a particular product or service for financial gain. The policy also guarantees that consumers have access to the full context of our information and are not hearing about our findings through the language of salesmanship.

To view the complete policy, visit <http://www.consumerreports.org/cro/aboutus/adviolation/read-the-policy/index.htm>. To report a violation, fill out the form at <http://news.consumerreports.org/report-a-violation.html>.