Choosing Wisely®

An initiative of the ABIM Foundation

Consumer Reports Health

IDSA Infectious Diseases Society of America

ABIM Foundation

Colds, flu, and other respiratory illnesses in adults:

When you need antibiotics—and when you don't

If you have a sore throat, cough, or sinus pain, you might expect to take antibiotics. After all, you feel bad, and you want to get better fast. But antibiotics don't help most respiratory infections, and they can even be harmful. Here's why.

Antibiotics kill bacteria, not viruses.
Antibiotics fight infections caused by bacteria. But most respiratory infections are caused by viruses. Antibiotics can't cure a virus.

Viruses cause:

- All colds and flu.
- Almost all sinus infections.
- Most bronchitis (chest colds).
- Most sore throats, especially with a cough, runny nose, hoarse voice, or mouth sores.

Antibiotics have risks.
Antibiotics can upset the body's natural balance of good and bad bacteria. Antibiotics can cause:

- Nausea, vomiting, and severe diarrhea.
- Vaginal infections.
- Nerve damage.
- Torn tendons.
- Life-threatening allergic reactions.

Many adults go to emergency rooms because of antibiotic side effects.

Overuse of antibiotics is a serious problem.
Wide use of antibiotics breeds "superbugs." These are bacteria that become resistant to antibiotics. They can cause drug-resistant infections, even disability or death. The resistant bacteria—the superbugs—can also spread to family members and others.

Overuse of antibiotics leads to high costs. Drug-resistant infections usually need more costly drugs and extra medical care. And sometimes you need a hospital stay. In the U.S., this costs us over $20 billion a year.

You may need an antibiotic if you have one of the infections listed below.

You have a sinus infection that doesn't get better in 10 days. Or it gets better and then suddenly gets worse.

You have a fever of 102° F, or fever over 100.6° F for 3 days or more, green or yellow mucus, or face pain for three or more days in a row.

You have bacterial pneumonia.

- Symptoms can include cough with colored mucus, fever of at least 100.6° F, chills, shortness of breath, and chest pain when you take a deep breath.
- The diagnosis is made with a physical exam and a chest x-ray.

You have whooping cough (pertussis).

- The main symptoms are fits of severe, rapid coughing. They may end with a "whoop" sound.
- The diagnosis should be checked with a swab of the throat.
- Your family may need antibiotics also.

You have strep throat.

- Symptoms include sudden throat pain, pain when swallowing, a fever of at least 100.6 F, and swollen glands.
- The diagnosis should be done with a rapid strep test, which uses a swab of the throat.

If your doctor does prescribe antibiotics, follow the directions carefully and take all your pills. This helps prevent the growth of superbugs.

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.

© 2015 Consumer Reports. Developed in cooperation with the Infectious Diseases Society of America for Choosing Wisely, a project of the ABIM Foundation. To learn more about the sources used in this report and terms and conditions of use, please visit ConsumerHealthChoices.org/about-us/.

9/2015

Advice from Consumer Reports

How to manage respiratory infections

Try to avoid them.
Wash your hands often and well with plain soap and water. And get these vaccines:

- **Flu (influenza) vaccine.** Get this once a year. October or November is best.
- **Pneumonia vaccine.** When you turn 65, get two shots, a year apart. If you are younger and have heart, lung, or liver disease, diabetes, problems with alcohol, or you smoke, ask your doctor if you should get the shots.
- **Tdap vaccine** for tetanus, diphtheria, and pertussis (whooping cough). All adults should get this once. Then get a tetanus-diphtheria booster shot every 10 years. Pregnant women should get a Tdap shot during their third trimester.

Relieve symptoms.

- Get plenty of rest and drink lots of fluids.
- Use a humidifier and clean it daily.
- **Ease pain and reduce fever** with: *Acetaminophen* (Tylenol and generic) *Ibuprofen* (Advil and generic)
- **For nasal discomfort** use saline (salt water) drops or spray.
- **To soothe a sore throat**, gargle with salt water, drink warm beverages, or eat or drink something cool.
- **To ease a cough**, breathe steam from a kettle or shower. For mild, short-term relief, try an over-the-counter cough medicine that has *dextromethorphan*. See a doctor if coughing lasts three days or more.

Choosing Wisely®

An initiative of the ABIM Foundation

ConsumerReports®Health

ABIM FOUNDATION

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.

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

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:

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

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

Pinkeye

American Academy of Ophthalmology

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

Consider antibiotics for bacterial pinkeye if:

- You have a weak immune system.
- Pinkeye 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: Surgical wounds 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.

Advice from Consumer Reports

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.