



## A CUP OF HEALTH WITH CDC

### *Battling the Bugs*

Get Smart About Antibiotics Week - November 15-21, 2010

Recorded: November 16, 2010; posted: December 2, 2010

[Announcer] This podcast is presented by the Centers for Disease Control and Prevention. CDC — safer, healthier people.

[Dr. Gaynes] Welcome to *A Cup of Health with CDC*, a weekly feature of the *MMWR*, the Morbidity and Mortality Weekly Report. I'm your host, Dr. Robert Gaynes.

One of the most important medical developments in modern times is the discovery of antibiotics to fight infections. Unfortunately, the bugs they are designed to fight have learned to fight back. Many forms of bacteria are becoming resistant to certain antibiotics.

Dr. Lauri Hicks is a researcher with CDC's National Center for Immunization and Respiratory Diseases. She's joining us today to discuss the dangers associated with overuse of antibiotics. Welcome to the show, Lauri.

[Dr. Hicks] Thanks, Bob. It's great to be here today.

[Dr. Gaynes] Lauri, what are the most common uses of antibiotics?

[Dr. Hicks] Antibiotics are, without a doubt, the most important tool we have to combat life-threatening bacterial diseases. Antibiotics can cure bacterial infections, but not viral infections. Some examples of infections that are usually caused by bacteria include pneumonia, meningitis, bloodstream infections, and skin infections.

[Dr. Gaynes] How do bacteria become resistant to antibiotics?

[Dr. Hicks] Antibiotic resistance occurs when bacteria change in a way that reduces or eliminates the effectiveness of antibiotics. One simple way to think of it is that many bacteria are capable of developing a coat of armor to shield them from the antibiotic. Each time you or I take an antibiotic, it is more likely that we, or those around us, will develop a resistant infection.

[Dr. Gaynes] What are the risks associated with antibiotic-resistant bacteria?

[Dr. Hicks] Antibiotic resistance is definitely one of the world's most pressing public health threats. Antibiotic resistant bacteria can quickly spread through a community, introducing a new strain of infectious disease that is more difficult to cure and more expensive to treat. Infections with resistant bacteria have become more common and many bacteria have become resistant to more than one type, or class, of antibiotic. And we are rapidly running out of the tools we need to treat bacterial infections.

[Dr. Gaynes] Lauri, why are antibiotics being overused?

[Dr. Hicks] Bob, antibiotics are overused because we want to feel better and health care providers want to make their patients happy. There is a perception that antibiotics are always the answer when we get an infection, and most infections are actually caused by viruses. Prescribing antibiotics for viral infections, like colds, is the *most* common misuse of these drugs. Four out of 10 children who present to an outpatient provider with a common cold receive an antibiotic. These infections will resolve on their own without antibiotic treatment. When a health care provider perceives that the patient or parent expects an antibiotic, they are much more likely to prescribe, even when it's inappropriate. And providers also cite diagnostic uncertainty, fear of lawsuits, and time limitations as reasons for overprescribing.

[Dr. Gaynes] Well how can a health care provider determine if an antibiotic is really necessary?

[Dr. Hicks] Well, your health care provider needs to take a number of factors into consideration. The first is how sick are you? Have you had persistent high fevers, a long duration of illness, or are you so sick that you're feeling confused or disoriented? On exam, your provider will look for signs of infection, perhaps sounds in your lungs that indicate you might have pneumonia, and finally, your provider may order diagnostic tests, such as blood work or x-rays that can reveal the source for the infection and then help them decide how to treat it.

[Dr. Gaynes] How can patients help with this problem?

[Dr. Hicks] Well patients shouldn't insist upon getting an antibiotic. Remember that the best care is really the right care. If you have a nasty cold, take steps to improve your symptoms - rest, drink plenty of fluids, talk to your health care provider or pharmacist about over-the-counter products that might help – don't be afraid to ask questions. Realize that patients and health care providers must work as a team to identify effective strategies to improve antibiotic use.

[Dr. Gaynes] Lauri, where can listeners get more information about antibiotic-resistance?

[Dr. Hicks] So, I encourage listeners to visit the *Get Smart: Know When Antibiotics Work* website at [www.cdc.gov/getsmart](http://www.cdc.gov/getsmart).

[Dr. Gaynes] Thanks, Lauri. I've been talking today with CDC's Dr. Lauri Hicks about the dangers of antibiotic-resistant infections.

Remember, to slow the advancement of drug-resistant bugs, scaling back the use of antibiotics is critical. Both patients and providers should seriously consider the necessity of an antibiotic before it's prescribed or consumed.

Until next time, be well. This is Dr. Robert Gaynes for *A Cup of Health with CDC*.

[Announcer] For the most accurate health information, visit [www.cdc.gov](http://www.cdc.gov) or call 1-800-CDC-INFO, 24/7.