

Antibiotics: Preventing Unnecessary Use

Antibiotics are strong medicines that can kill bacteria. Antibiotics have saved many lives and prevented many serious complications. However, antibiotics have no impact on viral infections. One of the more important decisions made daily by every health care provider is whether a child's infection is viral or bacterial. Parents can learn to make some of these decisions themselves.

Viral Infections

Viruses cause most infections in children including:

- All colds
- All croup
- 99% of coughs
- 95% of fevers
- 90% of sore throats
- 99% of diarrhea and vomiting.

Bacterial Infections

Bacterial infections are much less common than viral infections. Bacteria cause:

- Most ear infections
- Most sinus infections
- 10% of sore throats (Strep throat)
- Whooping cough (pertussis)
- Some pneumonia (lung infection).

Common Myths about Symptoms

These symptoms are sometimes misused as signs of a bacterial infection:

- Yellow nasal discharge. Yellow discharge is more likely to be a normal part of the recovery from a cold than a clue to a sinus infection.
- Yellow phlegm (sputum). This is a normal part of a viral tracheitis or bronchitis, not necessarily a sign of pneumonia.
- High fevers. A fever can be caused by a virus or bacteria.

Reasons Not to Overuse Antibiotics

Some people think that children with colds need antibiotics to prevent ear or sinus infections. Following a cold, about 10% of children will develop an ear infection and 1%

will develop a sinus infection. Giving antibiotics to the other 89% who don't need them can cause the bacteria to become more resistant and your child to have unnecessary side effects. It is better to wait and give antibiotics to children who really have a bacterial infection.

Bacterial Resistance

When bacteria become resistant to an antibiotic, that medicine can no longer kill that type of bacteria. The more antibiotics that are used, the more bacteria become more resistant to the medicine. Research shows that half of the prescriptions for antibiotics are not necessary. This makes future treatment of bacterial infections more difficult. Many bacteria are now resistant to antibiotics that used to control them. When we turn to newer and more expensive antibiotics, bacteria develop resistance to them as well. In the battle between antibiotics and bacteria, the bacteria seem to be winning.

Side Effects

All antibiotics have side effects. Unless your child really needs an antibiotic, there is no reason to risk the side effects of the medicine. Some children taking antibiotics develop diarrhea, nausea, vomiting, or a rash. The diarrhea is often caused because the antibiotic has caused your child to lose some healthy intestinal bacteria. If your child gets a rash, your provider must decide if the rash is an allergic reaction to the drug or if it is an unrelated viral rash (such as roseola). Because it's difficult to be sure, your child may be considered allergic to a family of antibiotics when he really isn't. Then your child can't take that type of antibiotics again.

Summary

If your child has a viral illness, an antibiotic will not shorten the course of the fever or help the other symptoms. Antibiotics will not get your child back to school or you back to work sooner. If your child develops side effects from the antibiotic, he will feel worse instead of better.

Antibiotics should be used for ear infections, sinus infections, Strep throat and other bacterial infections. When your child has yellow nasal discharge, yellow phlegm, high fevers and other normal symptoms associated with coughs and colds, treat your child with over-the-counter medicines or home remedies. Fortunately, the body's normal antibodies, once produced, can kill future viruses. Call your health care provider if your child develops any new signs that suggest a bacterial illness.

Source: *University of Michigan Health System*
<http://www.med.umich.edu/1libr/pa/pa_antiprev_hhg.htm>