



## ANTIBIOTICS FOR COMMON EAR & NOSE INFECTIONS

We as pediatric providers are trying to reduce unnecessary antibiotic prescriptions for common childhood ENT infections. The information on this sheet is intended to help you work with your health care provider in achieving this goal, but should not substitute for individual consultation with a qualified medical professional.

### **What are the consequences of unnecessary antibiotics?**

Unnecessary antibiotics can promote resistant bacteria (germs) that may not respond properly to future therapy. Every time your child takes an antibiotic, sensitive bacteria are killed. But resistant ones may be left to grow and multiply. These resistant bacteria can also be spread to others in the family and community. Frequent antibiotics use may also cause rash, diarrhea, upset stomach, allergic reactions, yeast infections, or other side effects.

### **Do all children with ear and sinus infections benefit from antibiotics?**

Although doctors in many countries, including the United States, give antibiotics *routinely* for acute middle-ear infections and acute sinus infections, the collected evidence suggests that some children can fight the infections just as well on their own. On average, about 8 out of 10 children with these infections in medical studies get better *without* antibiotics. In comparison, if all 10 children took antibiotics only about 1 extra child would get better, and there is no way of knowing in advance who would benefit. Antibiotics do not reduce pain or fever in the first 24 hours and have no impact on the likelihood of future infections.

### **If the benefit from antibiotics for ear infections is so small, why use them at all?**

Some medical studies excluded children who were very ill or young, which prevents us from applying results to this group. In fact, one study showed that children with severe ear infections were 4 times more likely to benefit from antibiotics than those with mild illness. Also, children less than age 2 may benefit more from antibiotics because of a higher risk of complications. Before antibiotics were available, about 2 out of 10 children with middle-ear infections developed serious complications. The Netherlands, however, has an official government policy of giving antibiotics only to children whose symptoms persist or worsen after 3 days. A recent government report concluded that complications with this approach are not higher, provided that antibiotics are started if the initial symptoms persist or worsen. (Agency for Healthcare Research and Quality, 2000). Now we routinely provide watchful waiting as an approach to ear infections and nose/sinus

infections with the use of antibiotics only if symptoms fail to improve over time (Agency for Healthcare Research and Quality, 2004).

**Which children should receive antibiotics and which should be observed?**

Your doctor will discuss this on an individual basis, but the following guidelines may be helpful. Initial antibiotics are usually appropriate for infants, young children, or if severe symptoms or high fever are present. A period of watchful waiting for up to 3 days is most appropriate for older children with milder illness, particularly when the diagnosis of bacterial infection is uncertain. Although a true ear infection has fluid or pus behind the eardrum, diagnosing middle-ear fluid in children can be very difficult. The same is true for sinus infections. Some degree of uncertainty almost always exists when making the diagnosis.

**Are there any other ways to reduce antibiotic use other than withholding antibiotics?**

Yes. Ask your doctor to consider a 5-day course of antibiotic therapy instead of the usual 7-10 days. Recent studies show nearly equal outcomes with both approaches in older children, but young children do better with a full 10 days. Finally, most children who have middle-ear fluid *without* active infection do not benefit from antibiotics. Similarly, children with a runny nose without fever or other manifestations of illness do not need antibiotics. Be sure that your doctor is giving medication for a true infection, not just a build-up of fluid without other symptoms (otitis media with effusion) or a runny nose. Additional information on antibiotics and your child is available from the American Academy of Pediatrics at [www.aap.org](http://www.aap.org).

**PLEASE CALL IF YOU HAVE ANY QUESTIONS!**

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