

Choosing an Antibiotic for Your Child's Ear, Nose, or Throat Infection



New research findings can help you and your child's clinician figure out the best option for treating your child's infection.

When bacteria cause your child's ear, nose, or throat infection, your clinician will suggest one of two kinds of antibiotics. One kind is **narrow-spectrum antibiotics**. These medicines fight just the bacteria that are most likely causing your child's ear, nose, or throat infection. Examples are amoxicillin or Amoxil®. The other kind is **broad-spectrum antibiotics**. These medicines fight many kinds of bacteria at the same time. Examples are azithromycin or Z-Pak®.



FINDINGS FROM A RECENT STUDY FUNDED BY PCORI

In this large study, narrow-spectrum antibiotics worked just as well as broad-spectrum antibiotics at killing the bacteria within three days. But children taking narrow-spectrum antibiotics had fewer side effects like diarrhea and vomiting than children taking broad-spectrum antibiotics.

Do these findings apply to my child?

Yes, if your child

- Has strep throat that has been checked by a rapid strep test or throat culture
- Has an ear or nose infection caused by bacteria
- Is between the ages of 6 months and 12 years

No, if your child

- Is allergic to penicillin or amoxicillin
- Has an infection caused by a virus. Antibiotics do not treat viruses.
- Is under 6 months old or over age 12. The study didn't look at treatment for infants or teens.

Why does it matter which kind of antibiotic my child takes?

- Broad-spectrum antibiotics may cause more side effects than narrow-spectrum ones. The most common side effects are upset stomach, vomiting, and diarrhea.
- Broad-spectrum antibiotics target all sorts of bacteria, not just the ones that are most likely to cause your child's illness. When someone uses a broad-spectrum antibiotic, some of these bacteria can get used to the medicine and may become resistant to it. In the future, the broad-spectrum antibiotic might not work on those bacteria when your child needs it.

Choosing the right antibiotic

- Your child's clinician will prescribe an antibiotic for your child's ear, nose, or throat infection. Talk with your clinician if you have questions about the type of antibiotic that is best for your child.

About the study

This study looked at the medical records of more than 30,000 children between the ages of 6 months and 12 years. The children visited one of 31 pediatric primary care practices in Pennsylvania and New Jersey. All children had an ear, nose, or throat infection and were prescribed an oral antibiotic between January 2015 and April 2016. The study looked at how well the children recovered from the infection and whether they had side effects from their treatment.



NOT THE SAME

Amoxicillin is a common narrow-spectrum antibiotic. Amoxicillin-clavulanate sounds like the same medicine but it is different. Amoxicillin-clavulanate, which is sold under brand names such as Augmentin®, is a broad-spectrum antibiotic.

NOTES:

SOURCE

1. Gerber, J. S., Ross, R. K., Bryan, M., et al. Association of Broad-vs Narrow-Spectrum Antibiotics with Treatment Failure, Adverse Events, and Quality of Life in Children with Acute Respiratory Tract Infections. *JAMA*, 2017; 318(23), 2325-2336.

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