

## When Your Child Does Not Need Antibiotics

**During childhood, most children get many colds, infections, and minor illnesses. Infections in childhood are typically caused by viruses or bacteria.**

### Viruses

Viruses cause most colds, most sore throats, most cases of pneumonia, and most cases of diarrhea, and it is the most common cause of vomiting in children. Antibiotics do not help to kill viruses, but they can cause adverse effects if your child unnecessarily takes an antibiotic during a viral infection.

### Bacteria

Bacteria can cause ear infections, sinus infections, some sore throats, and pneumonia. Antibiotics are strong medicines that are designed to kill bacteria, but they have no salutary effect on a viral infection. During a visit to your pediatrician, he or she will want to know the history of your child's symptoms, to do a physical examination of your child, and to evaluate whether or not the infection is viral or bacterial.

A green or yellow nasal discharge and green or yellow phlegm are symptoms that are sometimes mistaken for a bacterial infection. It is important for parents to know that green or yellow discharge is usually a normal part of recovery from a cold, rather than a clue to a sinus infection, and that green or yellow phlegm is a normal part of viral bronchitis. High fevers (even in patients with a temperature  $>40^{\circ}\text{C}$ ) can be caused either by a virus or by bacteria.

### What Parents Can Do

- Use antibiotics for diagnosed bacterial infections, when your child can benefit from them.
- Do not pressure your child's pediatrician for a prescription for an antibiotic.
- Treat your child's cold symptoms with traditional remedies, such as rest and fluids.
- Remember that fever is a natural response by the body to illness and helps your child fight the virus.

### Frequently Asked Questions

My child's pediatrician told me that my child does not need antibiotics, but my child is really feverish and sick. What can I do?

Children can become quite sick from viruses, with symptoms that include a high fever, listlessness, and a cough. The severity of illness does not mean that it is caused by bacteria. Parents can help their children get better by providing a quiet place to rest, and encouraging rest by reading books or listening to calm music. Parents can also help by making sure their child stays hydrated by offering liquids.

My child had a cold that my child's pediatrician said was caused by a virus. My child seemed to get better, but then my child developed a new fever and says his ear hurts. Is this still the same virus? This is a situation in which there may be a new bacterial infection after a virus. Sometimes a viral infection can lead to lots of nasal



drainage and mucus. This can put a child at risk for what is called "a secondary infection," meaning an infection that takes place after the first one is resolving. Signs of a secondary infection are developing a new fever that occurs when the viral infection is getting better or developing new symptoms (ear pain or cough) that get worse as the viral infection is getting better. The secondary infection may be caused by either a bacteria or a virus, and it is a good time to see your child's pediatrician.

### FOR MORE INFORMATION

<http://www.healthychildren.org/English/tips-tools/Symptom-Checker/Pages/Antibiotics-When-Do-They-Help.aspx>

To find this and other Advice for Patients articles, go to the Advice for Patients link on the *JAMA Pediatrics* website at [jamapediatrics.com](http://jamapediatrics.com).

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