



The Common Cold

INTRODUCTION — The common cold is the most common illness in the United States. Infants and children are affected more often and experience more prolonged symptoms than adults. The common cold accounts for approximately 22 million missed days of school and 20 million absences from work, including time away from work caring for ill children.

CAUSES — The common cold is a group of symptoms caused by a number of different viruses. There are more than 100 different varieties of rhinovirus, the type of virus responsible for the greatest number of colds. Other viruses that cause colds include enteroviruses (echovirus and coxsackieviruses) and coronavirus. In most cases, a specific virus causes a person to be ill only once, after which they are immune to that virus. However, because there are so many viruses that cause the symptoms of the common cold, people may have multiple colds each year and dozens over a lifetime.

Children under six years average **six to eight colds per year (up to one per month, September through April)**, with symptoms lasting an average of **14 days**. This means that a child could be ill with intermittent cold symptoms for nearly **half of their life in this time period**, without cause for concern. Young children in daycare appear to suffer from more colds than children cared for at home. However, when day-care children enter school, they catch fewer colds, presumably because they are immune to a larger number.

Seasonal patterns — The common cold may occur at any time of year, although the greatest number of colds occur during the fall and winter months, regardless of the geographic location. Colds are not caused by cold climates or being exposed to cold air.

Transmission — Colds are transmitted from person-to-person, either by direct contact or by contact with the virus in the environment. Colds are most contagious during the first two to four days.

Direct contact — People with colds typically carry the cold virus on their hands, where it is capable of infecting another person for at least two hours. If a child with a cold touches another child or adult, who then touches their eye, nose, or mouth, the virus can later infect that person.

Infection from particles on surfaces — Some cold viruses can live on surfaces (such as countertops, door handles, or toys) for several days.

Inhaling viral particles — Droplets containing viral particles can be exhaled into the air by breathing, coughing, or sneezing. Rhinoviruses are not usually transmitted as a result of contact with infected droplets, although influenza virus and coronavirus can be transmitted via small droplets. Cold viruses are not usually spread through saliva.

SYMPTOMS — The signs and symptoms of a cold usually begin one to two days after exposure. In children, nasal congestion is the most prominent symptom. Children can also have clear, yellow, or

green-colored nasal discharge; fever (temperature greater than 100.4° F or 38° C) is common during the first three days of the illness. Table 1 describes how to take a child's temperature.

Other symptoms may include sore throat, cough, irritability, difficulty sleeping, and decreased appetite. The lining of the nose may become red and swollen, and the lymph nodes (glands) in the neck may become slightly enlarged.

The symptoms of a cold are usually worst during the first 10 days. However, some children continue to have a runny nose, congestion, and a cough beyond 10 days. In addition, it is not unusual for a child to develop a second cold as the symptoms of the first cold are resolving; this can make it seem as if the child has a single cold that lasts for weeks or even months, especially during the fall and winter. This is not a cause for concern, unless the child has any of the more serious symptoms, discussed below.

Symptoms of allergies (allergic rhinitis) are slightly different than those of a cold, and may include bothersome itching of the nose and eyes.

COMPLICATIONS — Most children who have colds do not develop complications. However, parents should be aware of the signs and symptoms of potential complications.

Ear infection — Between 5 and 15 percent of children with a cold develop a bacterial or viral ear infection. If a child develops a fever (temperature greater than 100.4° F or 38° C) after the first three days of cold symptoms, an ear infection may be to blame.

Asthma — Colds can cause wheezing in children who have not wheezed before, or worsening of asthma in children who have a history of this condition.

Sinusitis — Children who have nasal congestion that does not improve over the course of 14 days may have a bacterial sinus infection.

Pneumonia — Children who develop a fever after the first three days of cold symptoms may have bacterial pneumonia, especially if the child also has a cough and is breathing rapidly.

TREATMENT

Symptomatic treatment — The treatment of an infant or child with a cold is different than treatment recommended for adults. Antihistamines, decongestants, cough medicines, and expectorants, alone and in combinations, are all marketed for the symptoms of a cold. However, there have been few clinical trials of these products in infants and children, and there are no studies that demonstrate any benefit in infants or children.

In January 2008, the United States Food and Drug Administration (FDA) issued a public health advisory recommending that over-the-counter cough and cold medicines not be used to treat children younger than 2 years [1]. In October 2007, the FDA advisory panel voted to recommend that these products not be used for children between 2 and 6 years of age [1]. We do not recommend the use of cough or cold medicines in infants and children under 6 years because these medications are not proven to be effective and have the potential risk of dangerous side effects.

The only exception is that one type of antihistamine ([diphenhydramine](#) [Benadryl®]) may provide a small benefit (drowsiness) to a child with a cold who is older than 12 months. However, there are

other potential side effects of this antihistamine, including excitability, slowed breathing, and hallucinations. Thus, after consulting a healthcare provider, a parent may consider giving diphenhydramine to a child who is older than 12 months with the understanding that the benefit is small and that other side effects are possible.

Parents may give [acetaminophen](#) (Tylenol®) to treat a child who is uncomfortable because of fever during the first few days of a cold. [Ibuprofen](#) (Motrin, Advil) can be given to children greater than six months of age. [Aspirin](#) should not be given to any child under age 18 years. There is no benefit of these medications if the child is comfortable and does not have a fever greater than 100.4° F (38° C), and it is not necessary for all children to be treated for fever. Parents should speak with their child's healthcare provider about when and how to treat fever.

Humidified air can improve symptoms of nasal congestion and runny nose. For infants, parents can try saline nose drops to thin the mucus, followed by bulb suction to temporarily remove nasal secretions ([show figure 2](#)). An older child may try using a saline nose spray before blowing the nose.

Parents should encourage their child to drink an adequate amount of fluids; it is not necessary to drink extra fluids. Children often have a reduced appetite during a cold, and may eat less than usual. If an infant or child completely refuses to eat or drink for a prolonged period, the parent should contact their child's healthcare provider.

Antibiotics — Antibiotics are not effective in treating colds. They may be necessary if the cold is complicated by a bacterial infection, like an ear infection, pneumonia, or sinusitis. Parents who think their child has developed one of these infections should contact their child's healthcare provider.

Inappropriate use of antibiotics can lead to the development of antibiotic resistance, and can possibly lead to side effects, such as an allergic reaction.

Herbal and alternative treatments — A number of alternative products, including zinc, [vitamin C](#), and herbal products such as [echinacea](#), are advertised to treat or prevent the common cold. None of these treatments has been proven to be effective in clinical trials; their use is not recommended.

PREVENTION — Simple hygiene measures can help to prevent infection with the viruses that cause colds. These measures include:

- Hand washing is an essential and highly effective way to prevent the spread of infection. Hands should be wet with water and plain soap, and rubbed together for 15 to 30 seconds. It is not necessary to use antibacterial hand soap. Teach children to wash their hands before and after eating and after coughing or sneezing.
- Alcohol-based hand rubs are a good alternative for disinfecting hands if a sink is not available. Hand rubs should be spread over the entire surface of hands, fingers, and wrists until dry, and may be used several times. These rubs can be used repeatedly without skin irritation or loss of effectiveness.
- It may be difficult or impossible to completely avoid people who are ill, although parents should try to limit direct contact. In addition, infants or children who are sick should not be sent to day care or school as this can cause others to become ill.
- Using a household cleaner that kills viruses (such as [phenol](#)/alcohol) may help to reduce viral transmission.

WHEN TO SEEK HELP — If a child develops any of the following features, the parent should call their healthcare provider, regardless of the time of day or night.

- Refusing to drink anything for a prolonged period

- Behavior changes, including irritability or lethargy; this usually requires immediate medical attention.
- Difficulty breathing, working hard to breathe, or breathing rapidly; this usually requires immediate medical attention.

Parents should call the healthcare provider if the following symptoms develop, or if there are general concerns about the child:

- Fever greater than 101°F (38.4°C) lasts more than three days
- Nasal congestion does not improve or worsens over the course of 14 days
- The eyes become red or develop yellow discharge
- There are signs or symptoms of an ear infection (pain, ear pulling, fussiness)

SUMMARY

- The common cold is a group of symptoms caused by a number of different viruses. Children under six years average six to eight colds per year (up to one per month, September through April), with symptoms lasting an average of 14 days. This means that a child could be ill with intermittent cold symptoms for nearly half of the days in this time period, without cause for concern.
- Colds are most contagious during the first two to four days. People with colds typically carry the cold virus on their hands, where it is capable of infecting another person for at least two hours. Some cold viruses can live on surfaces (such as countertops, door handles, or toys) for several days. Droplets containing viral particles can be exhaled into the air by breathing, coughing, or sneezing.
- The signs and symptoms of a cold usually begin one to two days after exposure. In children, nasal congestion is the most prominent symptom. Children can also have clear, yellow, or green-colored nasal discharge, and fever (temperature greater than 100.4° F or 38° C) is common during the first three days of the illness. Other symptoms may include sore throat, cough, irritability, difficulty sleeping, and decreased appetite.
- Most children who have colds do not develop complications. However, parents should be aware of the signs and symptoms of potential complications, including ear infections, asthma, sinusitis, and pneumonia.
- There have been few clinical trials of cold medications (Antihistamines, decongestants, cough medicines, and expectorants) in infants and children, and there are no studies that demonstrate any benefit in infants or children. We do not recommend their use in infants and children because of the lack of proven efficacy and the potential risk of dangerous side effects.
- Parents may give [acetaminophen](#) (Tylenol®) (or [ibuprofen](#) (Motrin, Advil) for children greater than six months of age) to treat fever during the first few days. Humidified air can improve symptoms of nasal congestion and runny nose. Parents should encourage their child to drink an adequate amount of fluids; it is not necessary to drink extra fluids.
- Antibiotics are not effective in treating colds. They may be necessary if the cold is complicated by a bacterial infection, like an ear infection, pneumonia, or sinusitis. Parents who think their child has developed one of these infections should contact their child's healthcare provider. Inappropriate use of antibiotics can lead to the development of antibiotic resistance, and can possibly lead to side effects, such as an allergic reaction.
- A number of alternative products, including zinc, [vitamin C](#), and herbal products such as [echinacea](#), are advertised to treat or prevent the common cold. None of these treatments has been proven to be effective in clinical trials; their use is not recommended.
- Simple hygiene measures can help to prevent infection with the viruses that cause colds, including hand washing or use of an alcohol-based hand rub and limiting contact with others who are ill.