

RSV (Bronchiolitis)

Bronchiolitis is a lower respiratory tract infection that occurs in children younger than two years old. It is usually caused by a virus. The virus causes inflammation of the small airways (bronchioles). The inflammation partially or completely blocks the airways, which causes wheezing (a whistling sound heard as the child breathes out). This means that less oxygen enters the lungs, potentially causing a decrease in the blood level of oxygen.

Bronchiolitis is a common cause of illness and is the leading cause of hospitalization in infants and young children. Treatment includes measures to ensure that the child consumes adequate fluids and is able to breathe without significant difficulty. Most children begin to improve two to five days after first developing breathing difficulties, but wheezing can last for a week or longer. Bronchiolitis can cause serious illness in some children. Infants who are very young, born early, have lung or heart disease, or have difficulty fighting infections or handling oral secretions are more likely to have severe disease with bronchiolitis. It is important to be aware of the signs and symptoms that require evaluation and treatment.

SYMPTOMS

Bronchiolitis usually develops following one to three days of common cold symptoms, including the following:

- Nasal congestion and discharge.
- A mild cough.
- Fever (temperature higher than 100.4°F or 38°C). The table describes how to take a child's temperature
- Decreased appetite.

As the infection progresses and the lower airways are affected, other symptoms may develop, including the following:

- Breathing rapidly (60 to 80 times per minute) or with mild to severe difficulty
- Wheezing, which usually lasts about seven days
- Persistent coughing, which may last for 14 or more days (persistent cough also may be caused by other serious illnesses that require medical attention)
- Difficulty feeding related to nasal congestion and rapid breathing, which can result in dehydration

Apnea (a pause in breathing for more than 15 or 20 seconds) can be the first sign of bronchiolitis in an infant. This occurs more commonly in infants born prematurely and infants who are younger than 2 months.

Signs of severe bronchiolitis include retractions (sucking in of the skin around the ribs and the base of the throat), nasal flaring (when the nostrils enlarge during breathing), and grunting. The effort required to breathe faster and harder is tiring. In severe cases, a child may not be able to continue to breathe on his or her own.

Low oxygen levels (called hypoxia) and blue-tinged skin (called cyanosis) can develop as the illness progresses. Cyanosis may first be noticed in the finger and toenails; ear lobes; tip of the nose, lips, or tongue; and inside of the cheek. Any of these signs or symptoms requires immediate medical evaluation.

A child who is grunting, appears to be tiring, stops breathing, or has cyanosis needs urgent medical attention.

Contagiousness — The most common cause of bronchiolitis, respiratory syncytial virus (RSV), is transmitted through droplets that contain viral particles; these are exhaled into the air by breathing, coughing, or sneezing. These droplets can be carried on the hands, where they survive and can spread infection for several hours. If someone with RSV on his or her hands touches a child's eye, nose, or mouth, the virus can infect the child. Adults infected with RSV can easily transmit the virus to the child or other adults.

Individuals should wash their hands or use an alcohol-based hand sanitizer before handling an infant.



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A child with bronchiolitis should be kept away from other infants and individuals susceptible to severe respiratory infection (eg, those with chronic heart or lung diseases, those with a weakened immune system) until the wheezing and fever are gone.

BRONCHIOLITIS TREATMENT

Emergency care — Parents should seek medical attention if the child seems to be worsening. A child who is grunting, appears to be tiring, stops breathing, or has blue-colored skin (cyanosis) needs urgent medical attention. Emergency medical services should be called, available in most areas of the United States by dialing 911.

Symptomatic care — There is no cure for bronchiolitis, so treatment is aimed at the symptoms (eg, difficulty breathing, fever). Treatment at home usually includes making sure the child drinks enough and saline nose drops (with bulb suctioning for infants).

Monitoring — Monitoring at home involves observing the child periodically for signs or symptoms of worsening. Specifically, this includes monitoring for an increased rate of breathing, worsening chest retractions, nasal flaring, cyanosis, a decreased ability to feed or decreased urine output. Parents should contact their child's healthcare provider to determine if and when an office visit is needed, or if there are any other questions or concerns.

Fever control — Parents may give acetaminophen (sample brand names: Tempra, Tylenol) to treat fever if the child is uncomfortable. Ibuprofen (sample brand names: Advil, Motrin) can be given to children greater than six months of age. Aspirin should not be given to any child under age 18 years. Parents should speak with their child's healthcare provider about when and how to treat fever.

Encourage fluids — 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, and may eat less than usual. If an infant or child completely refuses to eat or drink for a prolonged period, urinates less often, or has vomiting episodes with cough, the parent should contact their child's healthcare provider.

Other therapies — Other therapies, such as antibiotics, cough medicines, decongestants, and sedatives, are not recommended. Cough medicines and decongestants have not been proven to be helpful, and sedatives can mask symptoms of low blood oxygen and difficulty breathing.

Coughing is one way for the body to clear the lungs, and normally does not need to be treated. As the lungs heal, the coughing caused by the virus resolves. Smoking in the home or around the child should be avoided because it can worsen a child's cough.

Antibiotics are not effective in treating bronchiolitis because it is usually caused by a virus. However, antibiotics may be necessary if the bronchiolitis is complicated by a bacterial infection, like an ear infection (common) or bacterial pneumonia (very uncommon).

Sometimes, keeping the child's head elevated can reduce the work of breathing. A child may be propped up in bed with an extra pillow. Pillows should not be used with infants younger than 12 months of age.