

# Bronchiolitis

Bronchiolitis is caused by infection and inflammation of the small airways in the lungs. It is very common in infants and toddlers and occurs most often in winter. Bronchiolitis can be a frightening illness and sometimes can become severe enough to require hospitalization of your child. Most children with bronchiolitis recover completely.

## What is bronchiolitis?

Bronchiolitis is infection and inflammation (swelling and blocking) of the very smallest breathing tubes in your child's lungs, called the bronchioles. It is caused by infection with a virus, most often the very common respiratory syncytial virus (RSV). As the small airways become narrowed or blocked, you may hear wheezing (high-pitched sounds coming from the lungs) as your child breathes.

If bronchiolitis becomes severe, your child may have difficulty getting enough air. If this happens, he or she may need to be admitted to the hospital for oxygen and other treatments.

## What does it look like?

Bronchiolitis starts off with the symptoms of a typical cold, with sneezing and a runny nose. Your child may recently have been exposed to an older child with a cold. He or she may also have a fever.

After a few days, your child may develop more severe breathing-related problems, such as:

- *Coughing or wheezing* (high-pitched sounds coming from the chest, especially when your child is breathing out).
- *Shortness of breath* (as if your infant is having trouble getting enough air).
- *Fast breathing*, which may make it difficult for your infant to nurse or feed.
- *Dehydration* (not drinking enough fluid), which may result from feeding difficulties. Symptoms of dehydration include:
  - Decreased urination.
  - *Dryness* inside the mouth.
- *Agitation or irritability* may be a sign that your child is not getting enough oxygen. Get medical help as soon as possible.
- *More severe signs* of difficulty breathing (respiratory distress). Take your child to the emergency room immediately if any of the following symptoms occur:

- Chest caves in, ribs stick out, belly goes up and down, and nostrils flare (called retractions).
- Skin turns blue (called cyanosis). This is an emergency—call 911.

## What causes bronchiolitis?

- Bronchiolitis in infants is caused by viruses, most commonly RSV. Nearly all infants have been exposed to RSV by age 2. In older children and adults, RSV usually causes a cold. Only in infants and toddlers does the infection get into the small breathing tubes, causing bronchiolitis.
- Bronchiolitis is not caused by infection with bacteria, so antibiotic treatment probably won't be prescribed. Antibiotics may be recommended if your doctor suspects that a bacterial infection is present in addition to bronchiolitis.

## What puts your child at risk of bronchiolitis?

- Bronchiolitis usually occurs in infants under 2 years of age. Severe bronchiolitis requiring hospitalization is more likely in infants under 6 months old.
- It often occurs after exposure of your infant to older children with colds.
- It mainly occurs during "cold season," that is, late fall and winter.
- Premature infants and those with other lung diseases are more likely to develop severe bronchiolitis.

## Can bronchiolitis be prevented?

- The best prevention for bronchiolitis is taking whatever steps you can to avoid spreading colds. Avoid exposing your infant to older children with colds if possible. Wash your hands frequently, especially during cold season.
- Premature infants and those with certain lung diseases may be treated with infection-fighting bodies called immunoglobulins to prevent RSV disease.

## What are some possible complications of bronchiolitis?

- Even when bronchiolitis is severe enough to require hospitalization, most children recover completely. However, it may take a couple of weeks before all of your child's symptoms clear up.

- Rarely, severe bronchiolitis can lead to respiratory failure (severe difficulty in breathing). Proper medical care can reduce this risk.
- Children who have had bronchiolitis seem more likely to develop asthma later in childhood.

### How is bronchiolitis treated?

Like colds caused by RSV and other viruses, bronchiolitis goes away on its own with time. Your child's symptoms may seem to get worse for a few days but should start to get better after a week or so.

Treatment for bronchiolitis generally aims to help get your child over the worst of his or her symptoms. If your child develops symptoms of respiratory distress, such as wheezing, difficulty breathing, or dehydration, he or she may have to be treated in the hospital.

In the hospital, your child's treatment may include:

- *Oxygen.* If your child's blood oxygen levels are low, he or she will receive additional oxygen. Oxygen is usually given through a mask placed over the child's nose and mouth or through tubes going into the nostrils. Your child will be monitored carefully to make sure that he or she is getting enough oxygen in the blood.
- Although it is very uncommon, your child may need *mechanical ventilation* if breathing problems become severe. A tube is placed in your child's airway and connected to a machine called a ventilator. The ventilator helps to make sure your child receives enough oxygen

until he or she is well enough to breathe on his or her own without difficulty.

- *Fluids.* If your infant has become dehydrated or unable to drink enough liquids, he or she may need additional fluids. Fluids may be given through a tube placed in a vein (intravenously or IV).
- *Monitoring.* Your infant may be placed on special equipment to monitor his or her breathing, oxygen level, and heart rate.
- *Medications.* Your infant may receive various medications, including bronchodilators (such as albuterol), to help open the breathing tubes; steroids, to help reduce inflammation; or antiviral drugs (such as ribavirin). However, these medications have not been found to be very helpful in most patients.

### When should I call your office?

Call our office if any of the following occurs:

- Your child has signs of difficulty breathing, rapid breathing, or increased wheezing.
- Your child seems irritable or anxious.
- Your child has signs of dehydration (decreased urination, dryness inside the mouth).

If your child has more severe signs of respiratory distress, especially cyanosis (blue skin color), call 911 or another emergency number. *This is an emergency!* 