



University of Michigan  
C.S. Mott Children's Hospital

# Respiratory Syncytial Virus (RSV)

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## **What is Respiratory syncytial virus (RSV)?**

Respiratory syncytial virus (RSV) is a common virus that infects the linings of the airways - the nose, throat, windpipe, bronchi and bronchioles (the air passages of the lungs). RSV is found in the community year-round but in Michigan infections are more common between November and April. RSV is found in both cold and warm climates in the United States and worldwide. The virus infects adults and children, but children often have more severe disease with RSV than adults. The virus is so widespread that almost all children have had a RSV infection by the time they are 2-3 years old.

## **How does RSV spread?**

RSV is carried on secretions or droplets. It is easy to catch and easy to spread. Typically, RSV enters your body when infected droplets or secretions come in contact with your nose, mouth, or eyes. Infected droplets are spread through the air when an infected person sneezes or coughs. If you are close enough (less than 6 feet) the droplets may reach your nose, mouth or eyes. RSV can also be spread by direct contact such as kissing, touching, or shaking hands with an infected person. RSV can even live for hours on a telephone, a countertop or on a used tissue. If an adult or child touches the telephone or countertop and then touches his mouth, eyes or nose, he may become infected with RSV.

Once an adult or older child is infected with RSV, he/she can spread the disease to others for 3 to 8 days. Small infants with RSV may spread the infection for up to 4 weeks. An adult or child may have a mild RSV infection and not know it, but still spread the virus to others. A child may begin spreading the

infection even before he/she feels sick, and can still be spreading the infection when he/she feels recovered.

### **What are the symptoms of RSV?**

Usually RSV causes only cold-like symptoms such as sneezing, coughing, and nasal discharge in adults and older children. It takes about 4 days after a child is exposed to RSV before he/she might become sick. Not all children who are exposed to RSV get sick.

The first signs of infection are usually a runny nose (clear or cloudy drainage) and a red throat. Over the next couple of days the child becomes sicker. He/she may get a cough, wheezing (a whistling noise) and sometimes a low-grade fever or an ear infection. There may be a lot of nasal drainage. In most children this is as severe as the RSV infection will get. The infection usually lasts 5 to 12 days. Most children will get better by themselves.

Some babies and young children who have RSV will get sicker - this can happen quickly.

Contact your doctor if your infant or child has the following symptoms:

- Breathing that becomes faster (more than 40-60 breaths minute)
- Trouble breathing or having to work hard to breathe. You may notice retractions (tugging of the skin between the ribs) if the child has difficulty breathing
- Irritability or restlessness
- Child appears tired, less playful and less interested in food

If you see your infant having breathing pauses of 10-15 seconds or longer, **take your baby to the Emergency Room.**

### **How can I prevent my child from getting RSV?**

RSV is so widespread in the community that it is difficult to prevent infections. There is no vaccine for RSV yet. The best thing you can do to protect yourself and your children from RSV infections is to wash your hands often with soap and water. Try to wash your hands just before you handle your baby or young child. Use a tissue when you cough or sneeze and wash your hands after you do this. Older children should follow this advice as well. If you are coughing and sneezing or your nose is running, it may help to wear a paper mask (sometimes called a surgical mask) over your nose and mouth when you are caring for your infant. You can purchase paper masks at the drug store. Throw out the mask when it becomes damp.

If you have a baby less than 6 months of age, a premature infant, or a child younger than 24 months of age with chronic lung or heart disease, keep this child away from crowded places during the peak RSV season (November to April.) Avoid having people who have a cold or other respiratory infection visit your home. Their infections may be due to RSV.

If you need to use daycare for your child, try to pick a daycare setting with only a small number of children. The daycare staff should wash their hands often. This may lower the number of infections your child will catch. Give this pamphlet to your daycare staff to read.

Do not allow smoking in your home and avoid other places where there is smoking. If a child is exposed to environmental tobacco smoke in the home, he is more likely to get a severe RSV infection.

Sometimes doctors give a preventative medicine called palivizumab (brand name Synagis®) to high risk children. This medicine may reduce the likelihood of severe complications of **RSV** for high risk children. Children who receive

Synagis may still get RSV but are less likely to get sick enough to be hospitalized. For children who get hospitalized, Synagis does not reduce ventilator use or length of stay.

High risk children include infants and children 2 years or younger with

1. Chronic lung disease
2. History of preterm birth (less than 35 weeks' gestation),
3. Congenital heart disease.

Synagis® must be given as a shot once a month during the peak RSV season, and the medicine is expensive.

The decision to prescribe Synagis® is made on a case-by-case basis. The doctor will consider a number of factors including the child's individual health situation and guidelines from the American Academy of Pediatrics.

### **What is the treatment for RSV?**

Children with mild RSV infection may feel better with medicines to help with the cough, fever and other symptoms. Check with your child's doctor for advice on what medicines would be safe to use. Antibiotics are not helpful except when a child gets a bacterial infection on top of the RSV infection.

Children with severe RSV infections usually need to be admitted to the hospital. In the hospital they are will be treated with IV fluids, oxygen, and humidified air. Medicines called bronchodilators may be used, but they are not helpful in every case. Some children with extremely severe disease may need to be placed on a mechanical ventilator to help them breathe.

### **Is it possible to get RSV again?**

Adults and children who get a RSV infection may get RSV again. If a child gets a second RSV infection, it will usually be much less severe than the first infection.

### **Are there long term effects of having RSV?**

Most people have had RSV as children and most people do not have long term side effects. Children who get RSV and become sick enough to need medical care may have respiratory problems, such as cough, asthma, or recurrent wheezing, later on in life. It is not known whether this is due to the RSV infection or something in the child's makeup that was there since birth.

### **Summary**

RSV is a common respiratory infection that causes a range of respiratory symptoms from very mild to severe. Parents of infants with high risk conditions should discuss RSV with their health care provider.

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