

What Is Respiratory Syncytial Virus (RSV)?

Respiratory syncytial (sin-SI-shul) virus, or RSV, is a common respiratory virus that infects the lungs and breathing passages. It usually causes a mild cold-like illness (upper respiratory infection). In some people, RSV infection moves down into the lungs causing acute bronchiolitis (an inflammation of the airways) or pneumonia. Very young infants are at higher risk of having a lung infection rather than just a cold.



RSV is the one of the most common causes of bronchiolitis and pneumonia in children under 1 year of age in the United States. It is a common reason for young infants to be hospitalized during the RSV season. RSV can also cause serious respiratory illness in older adults. Most healthy people recover from RSV infection in 1 to 2 weeks. However, infection can be severe in a few, usually among those who are at higher risk for some reason. Almost all children are infected with the virus by age 2 years, but not all develop a bad infection. RSV infections occur all around the world. The RSV season in the United States is typically from November to April. However, the timing of the RSV season may differ based on geography.

How is RSV infection spread?

RSV spreads easily from person to person. The infection gets into your body through your nose, mouth or eyes. When an infected person coughs or sneezes, virus-containing droplets get in the air. If you are close enough, you can breathe in these droplets or they can land on your mouth, nose, or eye. You can also get the infection if you get infected nose or mouth secretions on your hands and then rub your eyes or nose. RSV can survive on hard surfaces such as tables, doorknobs, toys, and crib rails for many hours. RSV typically lives on soft surfaces such as tissues and hands for shorter amounts of time. For example, the season often starts earlier in southern Florida.

Who is at higher risk of severe RSV infection?

Not everyone gets a bad infection from RSV. However, RSV can lead to serious lung infection, breathing problems and hospitalization for some people who are at higher risk. These include:

- Premature infants born before 29 weeks of pregnancy (gestation). Premature infants are born before they can get enough infection-fighting antibodies against RSV from their mothers.

- Infants and children who are less than 24 months of age and have bronchopulmonary dysplasia (BPD, a lung disease from extreme prematurity). For more information on BPD go to ATS Patient Information Series "What is Bronchopulmonary Dysplasia" at www.thoracic.org/patients.
- Some children with congenital heart defects or some other chronic lung diseases are also at higher risk.
- Children and adults who have compromised (weakened) immune systems due to a medical condition or medical treatment.
- Adults aged 65 years and older.

What are the symptoms of RSV infection?

Symptoms of RSV infection are similar to other respiratory infections.

Some common symptoms of RSV disease include:

- Runny nose
- Coughing
- Sneezing
- A fever (especially if it is greater than 100.4°F in infants under 3 months of age)

In very young infants, irritability, decreased activity, and breathing difficulty may be the only symptoms of infection.

Some signs and symptoms of severe RSV disease include:

- Wheezing
- Fast breathing
- A bluish color around the mouth or fingernails
- Spread-out nostrils (nasal flaring) and/or sucking or caving in of the chest (retractions) when trying to breathe
- Gasping for breath

Contact your health care provider right away if your baby or child:

- Has breathing difficulty

- Is irritable and cannot or will not take a bottle
- Is younger than 2 or 3 months of age and has a fever
- Shows signs of dehydration, such as a dry mouth, crying without tears, and urinating less often

In most cases, those who need to be in the hospital stay only have to stay for a few days. Rarely, someone gets very ill. Full recovery from the infection usually occurs in about 1 to 2 weeks.

What can you do to prevent RSV infection?

Steps you can take to help reduce you and your child's risk of RSV and keeping it from spreading to others include:

- Wash your hands well and have others wash hands before holding or touching your baby.
- Avoid touching your eyes, nose and mouth.
- Clean surfaces that may be contaminated with virus such as doorknobs, toys, and table tops.
- Stay at least 6 feet from someone who is sneezing or coughing if possible.
- Avoid tobacco smoke exposure which can increase risk of infection.

People who have cold-like symptoms should:

- Cover their coughs and sneezes.
- Wash their hands frequently and correctly.
- Refrain from kissing others and stay away as much as possible from higher risk people.

What else can be done for infants at high risk of severe RSV infection?

When possible, limit the time that high-risk infants spend in child-care centers or other potentially contagious settings during the RSV season. Ask others to stay away when they have a cold or are ill.

Vaccines, like the influenza shot, help your body make its own antibodies to specific germs. However, there is not a vaccine for RSV. A drug called palivizumab (pah-lih-VIH-zu-mab, brand name Synagis™) may be given to help protect certain high risk infants from severe RSV illness. It is not given to children over 2 years of age. The drug can help prevent RSV infection from moving into the lungs, but it cannot fully prevent infection with RSV. It is not used to treat an active RSV infection. Palivizumab is a shot given in a muscle. It contains specific antibodies that can help your body fight RSV.

Repeated doses of palivizumab antibodies are given monthly to assure good protection throughout the RSV season. Ask your health care provider if your baby is a candidate for palivizumab. Find out when RSV season starts and ends in your area. If your high-risk baby is born during RSV season, he or she may get the first dose before leaving the hospital. Make sure you plan ahead for your

high-risk baby's first shot as you may need to get insurance approval. Keep up with the rest of your baby's shots on a monthly schedule throughout the RSV season. Do not skip doses or your baby may not be protected.

What can you do to treat RSV infection?

There is no effective treatment used for RSV infection. Cold-like symptoms in an infant can be helped with gentle suctioning of the nose. Cold medications should not be given as they may cause side effects and are not effective in the young child. Hot-air vaporizers should be avoided because of the risk for scald burns, and cool-mist vaporizers may get contaminated with molds. Make sure your child drinks enough liquid to prevent dehydration. If you or your child develops difficulty breathing or severe symptoms, you need to contact your health care provider.

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Rx Action Steps

- ✓ Take steps to avoid exposure to viruses like RSV by washing your hands regularly and well.
- ✓ Avoid contact with ill persons and surfaces that may be contaminated.
- ✓ If you have a baby who may be at higher risk, talk with your health care provider to see if he or she should get palivizumab shots during RSV season.
- ✓ If you are at higher risk, avoid spending time in daycares and crowded areas that may increase your contact with someone infected with RSV.

Healthcare Provider's Contact Number:

Additional Resources:

Centers for Disease Control and Prevention:

<http://www.cdc.gov/rsv/about/index.html>

American Academy of Pediatrics -Healthy Children

<https://www.healthychildren.org/English/health-issues/conditions/chest-lungs/Pages/Respiratory-Syncytial-Virus-RSV.aspx>

<https://www.healthychildren.org/spanish/health-issues/conditions/chest-lungs/paginas/respiratory-syncytial-virus-rsv.aspx>

Kids Health from Nemours Foundation

For English: <http://kidshealth.org/parent/infections/lung/rsv.html>

For Spanish: http://kidshealth.org/parent/en_espanol/infecciones/rsv_esp.html

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