

Respiratory Syncytial Virus (RSV) Infection in Babies and Children

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) that lasts 1 to 2 weeks. In some children, 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 can also cause serious respiratory illness in older adults. For more about RSV Infection in Adults see fact sheet at www.thoracic.org/patients.



RSV is the most common cause of bronchiolitis and pneumonia in children under 1 year of age. It is also the most common reason for young infants to be hospitalized during the RSV season. Most children do not get a severe illness. The RSV season in the United States is typically from November to April. However, the timing of the RSV season can vary in some parts of the country.

How is RSV infection spread?

RSV spreads easily from person to person. The virus gets into your body through your nose, mouth or eyes. When an infected person coughs or sneezes, virus-containing droplets get in the air. 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.

Which babies/children are 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 children who are at higher risk. These include:

- Premature infants born before 29 weeks of pregnancy (gestation).
- Infants and children who are less than 24 months of age and have bronchopulmonary dysplasia (BPD, a lung disease from extreme prematurity).
- Some children with congenital heart defects or some other chronic lung diseases are also at higher risk.
- Children who have compromised (weakened) immune systems due to a medical condition or medical treatment.
- American Indian or Alaska Native children.

Half of all babies hospitalized for RSV infection do not have any of the high risk conditions listed above. This is why all healthy babies are being offered RSV prevention.

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 2 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 healthcare 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 months of age and has a fever
- Shows signs of dehydration, such as a dry mouth, crying without tears, and urinating less often

What can you do to prevent RSV infection?

Steps you can take to help reduce your 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 or vaping 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 high risk people.

What else can be done for babies and young children at high risk of severe RSV infection?

Babies

There are two FDA approved monoclonal antibody therapies that can be used to help prevent severe RSV infection in newborns and high risk babies. Palivizumab (brand name Synagis) is given as a shot (injection) with monthly doses during RSV season. Nirsevimab-alip (brand name Beyfortus) is a shot that is given once to newborns and young infants during their first RSV season. These therapies may also be given to some children who are at high risk of severe RSV in their second RSV season who are less than 2 years of age. As there is currently a limited supply of Beyfortus, doses should be prioritized to infants at highest risk of severe RSV infection. Synagis requires more than one dose, so be sure your baby can get all doses for full protection. For more about RSV Prevention in Babies and Children see fact sheet at www.thoracic.org/patients.

During Pregnancy

There is an RSV vaccine (brand name ABRYVO) that can be given during 32 to 36 weeks of pregnancy. Infants born to mothers who have received a maternal RSV vaccine are protected from severe infection by antibodies they have received from their mother while in the womb.

Babies and Young Children

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

What can you do to treat RSV infection in a baby or young child?

- There is no effective treatment for RSV infection, just supportive care.
- Cold-like symptoms in an infant 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 baby drinks enough breast milk, formula or fluids to prevent dehydration. Ask your healthcare provider how much is needed. Signs of dehydration can include lack of tears, dry mouth, and few or no wet diapers.

Key Points

- Ask your healthcare provider if your baby is a candidate for an RSV antibody preventive therapy or if you are a candidate for an RSV vaccine.
- Find out when RSV season starts and ends in your area.
- If getting Synagis, do not skip doses or your baby may not be protected.

Healthcare Provider's Contact Number:

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Resources:

American Thoracic Society

- <http://www.thoracic.org/patients>
 - What is Bronchopulmonary Dysplasia (BPD)
 - How Vaccines Work
 - Monoclonal Antibodies
 - RSV in Adults
 - RSV Prevention in Infants and Children

Centers for Disease Control and Prevention:

- <https://www.cdc.gov/rsv/>

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/rsv-when-its-more-than-just-a-cold.aspx>

Kids Health from Nemours Foundation

- <http://kidshealth.org/parent/infections/lung/rsv.html>
- http://kidshealth.org/parent/en_espanol/infecciones/rsv_esp.html

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