

Understanding RSV Each year in the United States, up to 125,000 infants are hospitalized with severe cases of respiratory syncytial virus, commonly known as RSV. This common virus causes infections in the lungs and respiratory tract.

In healthy adults and older children, RSV may be mistaken for a cold. However, in infants under six months of age and in children and adults with underlying health conditions, RSV may become serious—even life-threatening. Understanding this potentially devastating illness is often the first step to prevention.

Causes of RSV

RSV is highly contagious and enters the body through the eyes, nose, or mouth. Contact with infected secretions, such as those from a cough or sneeze, are generally the culprit. According to the American Lung Association, an infected person is most contagious during the first 72 hours after infection, although some patients may be contagious for up to two weeks after infection occurs.

Risk Factors

Most children have been exposed to RSV by the age of two. Children who attend day care or preschool and those who have older siblings who attend school are at higher risk for exposure. Children exposed to high levels of air pollution or cigarette smoke may also face an increased risk. RSV seems to be most common during the fall and winter months.

Those at risk for developing severe RSV infections include:

- Infants younger than six months of age.
- Young children who were born prematurely or who have a heart or lung condition.
- Children with weakened immune systems, such as those undergoing chemotherapy.
- Adults with congestive heart failure or chronic obstructive pulmonary disease.
- Elderly adults.

Signs and Symptoms

Symptoms of RSV infection typically appear within a week of exposure to the virus. In adults and children over age three, RSV will present similarly to a common cold, with symptoms such as congestion, runny nose, cough, headache, sore throat, and/or a low-grade fever. Most children and adults will recover in one to two weeks.

In children under the age of three, RSV infection may lead to potentially serious lower respiratory tract illnesses such as pneumonia or bronchiolitis. Signs and symptoms may include:

- High fever.
- Severe cough.
- Wheezing.
- Rapid or labored breathing.
- Bluish skin tone (resulting from decreased oxygen).

Infants are at highest risk of developing severe complications from RSV, and their symptoms may be less predictable. Breathing may be short, shallow, and rapid and may or may not be accompanied by coughing. In some cases, an infant will show few signs of a respiratory infection, but may suffer from poor appetite, irritability, and lethargy.

Diagnosis and Treatment

While anyone can contract RSV, it is especially important to seek medical treatment for those in high-risk categories. According to Dr. Emily Marcy of Saints Pediatric Associates in Oklahoma City, the diagnosis can be made in a number of ways. "The virus can be tested using a sample from a nasal swab. There is a rapid test that can be read in minutes—others take a few days to a week to come back. Doctors may first want to rule out other serious respiratory illnesses that could affect treatment." Such tests might include a chest X-ray and testing of blood oxygen levels. Dr. Marcy also notes that in mild to moderate cases of RSV, there may not be a need for a confirmatory test because the treatment is the same as for many other viruses.

Since RSV is a viral infection, in mild to moderate cases antibiotics will not be effective. Over-the-counter medications may help relieve symptoms and reduce fever, but will not make the virus run its course any

faster. A cool-mist humidifier can moisten the air and help relieve symptoms of cough and congestion. Drinking plenty of fluids is important to prevent dehydration and may help to loosen thick secretions.

Dr. Marcy explains that in more serious cases where hospitalization is necessary, "Patients may need treatment with IV fluids, oxygen, and sometimes inhaled medications. In extremely severe cases, which are rare, the patient may be admitted to the intensive care unit if they require help from machines to breathe."

Prevention

While it's impossible to avoid exposure to all illnesses, some common sense precautions may help to reduce the risk of contracting RSV. These include:

- Wash hands frequently, particularly when you are in contact with an infant.
- Don't be shy about asking others to wash their hands before touching your infant.
- Avoid exposure by limiting contact with those who have fevers or colds.
- Wash toys regularly, especially after parties or play dates.
- Keep things clean, particularly in your kitchen and bathrooms.
- Don't smoke.
- Eliminate exposure to secondhand smoke if possible.

For children under two who are at high risk, a medication called Synagis (palivizumab) can be beneficial, according to Dr. Marcy. The medication works by providing antibodies that protect against RSV. It requires a monthly injection during peak RSV season. The high cost of the medication limits its use to those at highest risk for developing complications, but infants who were premature or have other major risk factors may qualify.

Experiencing an RSV infection can be debilitating and it is especially frightening for young children or those at high risk for developing complications. Practicing regular hand washing and avoiding exposure to those who have symptoms of a cold or who have a fever are the most important preventive measures. Talk to your doctor about how to further protect yourself and your family.

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