



Respiratory Syncytial Virus Infection (RSV)

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www.cdc.gov/rsv
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Infection and Incidence

RSV can cause upper respiratory infections (such as colds) and lower respiratory tract infections (such as bronchiolitis and pneumonia). In children under 1 year of age, RSV is the most important cause of bronchiolitis, an inflammation of the small airways in the lung.

Almost all children will have had an RSV infection by their second birthday. When infants and children are exposed to RSV for the first time, 25% to 40% of them have signs or symptoms of bronchiolitis or pneumonia, and 0.5% to 2% will require hospitalization. Most children hospitalized for RSV infection are under 6 months of age.

Infants and children infected with RSV usually show symptoms within 4 to 6 days of infection. Most will recover in 1 to 2 weeks. However, even after recovery, infants and children can continue to spread the virus for 1 to 3 weeks.

People of any age can get another RSV, but later infections are generally less severe. The elderly and adults with chronic heart or lung disease or with immune systems weakened by medical conditions or treatments remain at high risk for developing severe RSV disease if reinfected.

In temperate climates, RSV infections generally occur during fall, winter, and early spring. The timing and severity of RSV circulation in a given community can vary from year to year.

Symptoms and Care

Illness usually begins 4 to 6 days after exposure (range: 2 to 8 days) with a runny nose and decrease in appetite. Coughing, sneezing, and fever typically develop 1 to 3 days later. Wheezing may also occur. In very young infants, irritability, decreased activity, and breathing difficulties may be the only symptoms of infection. Most otherwise healthy infants infected with RSV do not require hospitalization. In most cases, including among those who need to be hospitalized, full recovery from illness occurs in about 1 to 2 weeks.

Visits to a healthcare provider for an RSV infection are very common. During such visits, the healthcare provider will assess the severity of disease to determine if the patient should be hospitalized. In the most severe cases of disease, infants may require supplemental oxygen, suctioning of mucus from the airways, or intubation (have breathing tubes inserted) with mechanical ventilation.

There is no specific treatment for RSV infection.

Transmission and Prevention

Transmission

People infected with RSV are usually contagious for 3 to 8 days. However, some infants and people with weakened immune systems can be contagious for as long as 4 weeks. RSV is often introduced into the home by school-aged children who are infected with RSV and have a mild upper respiratory tract infection, such as a cold. RSV can be rapidly transmitted to other members of the family, often infecting about 50% of other household members.

RSV can be spread when droplets containing the virus are sneezed or coughed into the air by an infected person. Such droplets can linger briefly in the air, and if someone inhales the particles or the particles contact their nose, mouth, or eye, they can become infected.

Infection can also result from direct and indirect contact with nasal or oral secretions from infected persons. Direct contact with the virus can occur, for example, by kissing the face of a child with RSV. Indirect contact can occur if the virus gets on an environmental surface, such as a doorknob, that is then touched by other people. Direct and indirect transmissions of virus usually occur when people touch an infectious secretion and then rub their eyes or nose. RSV can survive on hard surfaces such as tables and crib rails for many hours. RSV typically lives on soft surfaces such as tissues and hands for shorter amounts of time.

Prevention

Frequent handwashing and wiping of hard surfaces with soap and water or disinfectant may help stop infection and spread of RSV. Also, persons with RSV illness should not share cups or eating utensils with others.

Ideally, persons with cold-like symptoms should not interact with high-risk children. If this is not possible, these persons should cover their mouth and nose when coughing or sneezing and then wash their hands before providing any care. They should also refrain from kissing high-risk children while they have cold-like symptoms. When possible, limiting the time that high-risk children spend in child-care centers or other potentially contagious settings may help prevent infection and spread of the virus during the RSV season.

A drug called palivizumab (say "pah-lih-VIH-zu-mahb") is available to prevent severe RSV illness in certain infants and children who are at high risk. The drug can help prevent development of serious RSV disease, but it cannot help cure or treat children already suffering from serious RSV disease and it cannot prevent infection with RSV. If your child is at high risk for severe RSV disease, talk to your healthcare provider to see if palivizumab can be used as a preventive measure. Researchers are working to develop RSV vaccines, but none is available yet.