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## **RSV: Respiratory Syncytial Virus**

[www.kidsgrowth.com](http://www.kidsgrowth.com)

Respiratory Syncytial Virus, or RSV, is a major cause of respiratory illness in young children. The virus causes predominantly wintertime ailments, usually occurring between November and March. In the United States, almost 100,000 children are hospitalized yearly with RSV while over 4,500 infants die due to complications of their infection.

The virus invades the cells lining the respiratory tract, producing large amounts of mucus and airway swelling. Since infants and toddlers have small bronchiole tubes, the virus can cause serious illness if swelling plugs their tiny airways. In the worst cases, the infant's breathing tubes can collapse from the intense effort it takes to breathe around the swelling. The virus is especially dangerous when the child is less than 1 year old or has asthma. Those born prematurely, those with other lung disorders (such as cystic fibrosis) and those with congenital heart disease are also at risk should they develop an RSV infection. Rarely will the virus cause problems in the first six weeks of a child's life, due to the presence of antibodies from their mothers.

The time from exposure to the onset of symptoms is usually about four days. The highest rates of RSV illness occur in youngsters less than 1 year of age. The virus is often carried home by a school-aged child and passed onto a younger sibling, especially an infant. RSV is spread by airborne particles dispersed when someone infected coughs, or when the child touches someone or something (such as a toy or pacifier) infected with the RSV. Once one child in a daycare or preschool is infected, RSV can quickly spread to others since a child is infectious before symptoms appear. Furthermore, an infected child can remain contagious one to three weeks after their symptoms disappear.

A small child infected with RSV will first develop a runny nose and a red throat, which gradually progresses to include a cough, wheezing and sometimes a fever. In most babies, this is as severe as RSV gets and symptoms usually last 5 to 12 days. Unfortunately, some will get worse and exhibit fast respirations (> 40 per minute), difficulty breathing and listlessness. This required immediate medical attention. Other danger signs include a bluish discoloration of the skin around the mouth, nasal flaring, retractions between the ribs, and reduced fluid intake to the point of dehydration.

RSV is diagnosed by checking for antibodies to the virus in nasal washing, or growing the virus from a nose swab. Treatment is designed to make the child feel comfortable until his or her own antibodies control the virus. Using a cool-mist vaporizer to humidify the air will soothe irritated breathing passages and relieve coughing. Giving plenty of fluids helps loosen secretions so the child can clear them more easily. Fever is best treated with acetaminophen and ibuprofen. If the child is too young to blow his or her nose, a nasal aspirator and salt-water nose drops can be used to remove the thick nasal secretions. Medications that dilate the bronchiole tubes are occasionally prescribed to help relieve chest congestion and wheezing.

Children who are sick enough to see a physician because of RSV have a 33 to 50 percent chance of developing recurrent wheezing (asthma) later in life. This is even more likely if the child has eczema or if there is a history of asthma in the family. It is not known whether the virus damages the respiratory system and causes the asthma, or if it is the child's susceptibility to asthma that predisposes them to severe RSV.

The following are some measures that parents can take to minimize the chances that their child will get sick from RSV:

- No smoking in the home of a child suspected of an RSV infection. The majority of children hospitalized with RSV come from a home where someone smokes.
- Whenever a school-age child comes down with a "cold," keep him or her away from an infant brother or sister until the infection passes.
- The best way to prevent RSV is good hand washing, particularly just before handling susceptible infants. Siblings, parents and daycare providers should use a tissue when they cough or sneeze.
- Toys should be washed, especially if other children have played with them.
- RSV is rampant in day care centers. If possible, having a child in a home setting can decrease the infection risk.