

## 'Tis the season for respiratory virus

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There may be something in the air this holiday season, and it's not snow. It's something much less festive – respiratory syncytial virus, or RSV. Baylor College of Medicine expert Dr. Pedro A. Piedra breaks down the dangers of this common virus.

"RSV is the most important respiratory virus of infants and young children," said Piedra, professor of molecular virology and microbiology and of pediatrics at Baylor. "Nearly all infants and young children will have been infected at least once by the time they reach two years of age, and individuals will be reinfected throughout life."

The virus is the No. 1 cause of hospitalization for infants under 1 year of age and is associated with between 60,000 and 200,000 deaths annually worldwide in children under 5 years of age, Piedra said. It also can affect older adults and is probably second to influenza in causing respiratory mortality.

RSV occurs in the fall and winter months, with onset in Texas around October and conclusion by the end of March.

Respiratory distress associated with RSV is the main reason parents bring their infants to the ER; rapid breathing, coughing, not eating well and throwing up when coughing, especially when trying to eat, are common symptoms of respiratory distress.

If infants tire out from these symptoms, they may have to be admitted to the ICU and possibly intubated. Infants with underlying health

conditions, such as those born prematurely or who have chronic lung disease, [congenital heart disease](#), neuromuscular disease or immunodeficiency, are at greater risk for severe disease and more likely to be admitted to the ICU. Children who had severe RSV infection when they were under 3 years of age have a strong likelihood of recurrent wheezing during the first decade of life and potential for chronic [obstructive pulmonary disease](#) later in life, especially in smokers.

In adults, the virus is almost indistinguishable from the flu, Piedra said. Symptoms include significant [respiratory distress](#), wheezing and sometimes fever, but often the virus does not cause a fever.

"The problem is that RSV is difficult to diagnose in adults because there is no distinguishing clinical feature other than [respiratory symptoms](#)," Piedra said. "In infants, bronchiolitis is the major cause of hospitalization, and RSV is the main virus causing bronchiolitis."

Adults and children can be tested for RSV; the quantitative PCR is the best test for both age groups.

There is no specific antiviral treatment for RSV, but physicians are able to treat the symptoms in children and adults. Piedra, who also is with Texas Children's Hospital, said it's important to help prevent spread of the virus by staying home if you have respiratory symptoms such as running nose, coughing or sneezing, even if you don't have a fever. Parents should pull [children](#) from daycare if they have respiratory illness so that they don't spread the virus to other individuals.

Using good respiratory hygiene etiquette, such as covering your mouth when you cough or sneeze, washing hands with soap and water or using hand sanitizer, are important ways to help prevent the spread of the [virus](#). In addition, cleaning toys and countertops with soap and water help in infection control.

"RSV during the wintertime is all around us and is rampant right now," Piedra said. "A lot of times, people confuse RSV and the flu. There are several respiratory viruses that are co-circulating right now, and many of these viruses mimic each other. Don't assume that it's a breakthrough infection of the flu if you have been vaccinated."

There is a preventive therapy (monoclonal antibody) administered once a month during the RSV season for a select group of high-risk [infants](#), and active vaccines and antivirals are in development. Currently, the only phase III clinical trial is in maternal immunization and is studying the effectiveness of a vaccine given to a pregnant woman to see if it is protective in newborns during their first few months of life. Baylor is one of the sites for this worldwide trial. There are other vaccine candidates, monoclonal antibody and antiviral drugs in earlier stages of clinical development.

Provided by Baylor College of Medicine

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