



# Clinical Overview of RSV



Health Care Providers  
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## WHAT TO KNOW

- RSV usually causes mild symptoms, but it can cause severe illness. This is more likely in infants, some young children, people with compromised immune systems, and adults who are older or have certain risk factors.
- CDC recommends a single dose of RSV vaccine to protect all adults ages 75 and older and adults ages 50–74 who are at increased risk of severe RSV.
- To protect infants and some young children, CDC recommends the maternal RSV vaccine (Pfizer's Abrysvo) for pregnant women during weeks 32–36 of pregnancy, or a long-acting infant RSV antibody (nirsevimab or clesrovimab) for babies given after birth. Nirsevimab is recommended for some young children ages 8–19 months.

## Overview

Respiratory syncytial virus (RSV) causes respiratory illness among persons of all age groups. RSV is one of the most common causes of childhood illness and is the most common cause of hospitalization in infants. It also causes severe disease and hospitalizations in adults, especially those who are older or have certain risk factors.

In most regions of the United States, RSV season starts in the fall and peaks in the winter, but the timing and severity of RSV season in a given community can vary from year to year.

Healthcare providers should consider RSV in the differential diagnosis of patients with respiratory illness, particularly during the RSV season.

For more information about recommended infection prevention and control practices in healthcare settings, see [CDC's Isolation Precautions Guideline: Preventing Transmission of Infectious Agents in Healthcare Settings](#).

## RSV Immunizations

There are immunizations to protect people who are at increased risk of severe RSV.

- CDC recommends [RSV vaccination](#) for all adults ages 75 and older and for adults ages 50–74 who are at increased risk of severe RSV.
- To protect infants from severe RSV, CDC recommends an [RSV vaccine for pregnant women \(Pfizer's Abrysvo\)](#) or an [infant RSV antibody given to the baby](#).
  - Nirsevimab is also recommended for a small group of young children ages 8–19 months entering their second RSV season. Clesrovimab has not been recommended for this group.

### Keep in mind

A recommendation from a healthcare provider is one of the most important factors that influences a patient's choice to accept a new prevention product or vaccine.



## Clinical features

### In infants and young children

RSV infection can cause a variety of respiratory illnesses and symptoms in infants and young children. It most commonly causes a cold-like illness but can also cause lower respiratory infections, like bronchiolitis and pneumonia. Two to three percent of infants under 6 months of age

are hospitalized with RSV every year. Severe disease most commonly occurs in very young infants, including healthy babies without underlying conditions.

Additionally, children with any of the following underlying conditions are considered at increased risk of severe RSV disease:

- Premature infants
- Children with suppressed or weakened immune systems
- Children who have neuromuscular disorders or a congenital anomaly, including those who have difficulty swallowing or clearing mucus secretions
- Children with severe cystic fibrosis

Infants and young children with RSV infection may have rhinorrhea and a decrease in appetite before any other symptoms appear. Cough usually develops 1 to 3 days later. Soon after the cough develops, sneezing, fever, and wheezing may occur. Symptoms in very young infants can include irritability, decreased activity, and apnea.

Most otherwise healthy infants and young children who are infected with RSV do not need hospitalization. Those who are hospitalized may require oxygen, rehydration, and mechanical ventilation. Most improve with supportive care and are discharged in a few days.

## In adults ages 50 and older

Adults who get RSV usually have mild or no symptoms. Symptoms are usually consistent with an upper respiratory tract infection, which can include rhinorrhea, pharyngitis, cough, headache, fatigue, and fever. Milder illness in adults typically resolves in 1–2 weeks. However, RSV can also cause severe disease and hospitalization in adults.

RSV can sometimes also lead to exacerbation of serious conditions such as:

- Asthma
- Chronic obstructive pulmonary disease (COPD)
- Heart failure

Epidemiologic evidence indicates that all adults ages 75 and older and adults ages 50–74 with certain risk factors are at increased risk of severe RSV.

## Conditions that increase the risk for severe RSV

The following conditions increase the risk of severe RSV:<sup>\*</sup>

- Chronic cardiovascular disease (e.g., heart failure, coronary artery disease, or congenital heart disease [excluding isolated hypertension])
- Chronic lung or respiratory disease (e.g., chronic obstructive pulmonary disease, emphysema, asthma, interstitial lung disease, or cystic fibrosis)
- End-stage renal disease or dependence on hemodialysis or other renal replacement therapy
- Diabetes mellitus complicated by chronic kidney disease, neuropathy, retinopathy, or other end-organ damage, or requiring treatment with insulin or sodium-glucose cotransporter-2 (SGLT2) inhibitor
- Neurologic or neuromuscular conditions causing impaired airway clearance or respiratory muscle weakness (e.g., poststroke dysphagia, amyotrophic lateral sclerosis, or muscular dystrophy [excluding history of stroke without impaired airway clearance])
- Chronic liver disease (e.g., cirrhosis)
- Chronic hematologic conditions (e.g., sickle cell disease or thalassemia)
- Severe obesity (body mass index  $\geq 40$  kg/m<sup>2</sup>)
- Moderate or severe immune compromise<sup>†</sup>
- Residence in a nursing home
- Other chronic medical conditions or risk factors that a health care provider determines would increase the risk for severe disease due to viral respiratory infection (e.g., frailty,<sup>§</sup> situations in which health care providers have concern for presence of undiagnosed chronic medical conditions, or residence in a remote or rural community where transportation of patients with severe RSV disease for escalation of medical care is challenging<sup>¶</sup>)

<sup>\*</sup> Patient attestation is sufficient evidence of the presence of a risk factor. Vaccinators should not deny RSV vaccination to a person because of lack of medical documentation.

<sup>†</sup> A list of moderately or severely immunocompromising conditions can be found in the [COVID-19 vaccination interim clinical considerations](#).

<sup>5</sup> Frailty is a multidimensional geriatric syndrome that reflects a state of increased vulnerability to adverse health outcomes. Although no consensus definition exists, one frequently used tool for determination is the Fried frailty phenotype assessment in which frailty is defined as a clinical syndrome with three or more of the following symptoms present: unintentional weight loss (10 lbs [4.5 kg] in the past year), self-reported exhaustion, weakness (grip strength), slow walking speed, or low physical activity.

<sup>¶</sup> Health care providers caring for adults ages 50–74 years residing in these communities may use clinical judgement, knowledge of local RSV epidemiology, and community incidence of RSV-associated hospitalization to recommend vaccination for a broader population in this age group.

## Resources

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[RSV Immunization Guidance for Infants and Young Children](#)

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[RSV Vaccine Guidance for Pregnant Women](#)

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[RSV Vaccine Guidance for Adults](#)

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### SOURCES

**CONTENT SOURCE:**

[National Center for Immunization and Respiratory Diseases; Coronavirus and Other Respiratory Viruses Division](#)