



Caring for Infants and Vulnerable Individuals with Respiratory Syncytial Virus (RSV) at Home and Their Prevention

Joint Statement by The Asian Society for Pediatric Infectious Diseases, Asia Pacific Pediatric Association, Hong Kong Chinese Medical Association Ltd., The Hong Kong Society for Paediatric Immunology Allergy and Infectious Diseases, The Hong Kong Society for Infectious Diseases, The Pediatric Infectious Diseases Society of Thailand, The Singapore Pediatric Society, Infection and Tropical Diseases Working Group of Indonesian Pediatric Society, The Hacettepe University Faculty of Medicine, Department of Pediatric Infectious Diseases, Ankara, Türkiye, The Bangladesh Society for Paediatric Infectious Disease, Malaysian Pediatric Association, Paediatric Infectious Diseases Academy, India, Sri Lanka College of Paediatricians, The Federation of Medical Societies of Hong Kong, The Hong Kong Society for Microbiology and Infection, The Macau Pediatric Society, Centre for Health Education and Health Promotion, The Chinese University of Hong Kong, The Hong Kong Thoracic Society (Limited), Chest Delegation Hong Kong and Macau, The Obstetrical and Gynaecological Society of Hong Kong, Diabetologists & Endocrinologists Alliance, The Association of Licentiate of Medical Council of Hong Kong, Macau Universal Health and Medical Development Association, Hong Kong Respiratory Nursing College, College of Nursing Hong Kong, The Hong Kong College of Paediatric Nursing, The Hong Kong Paediatric Nurses Association, The Hong Kong Paediatric and Adolescent Dermatology Society, The Hong Kong Midwives Association, Asian Medical Expert Academy, The Hong Kong School Nurses Association Ltd., Hong Kong Early Childhood Educators Association and The Silveriders.

Respiratory Syncytial Virus (RSV) is identified as the leading cause of acute respiratory infections (ARI) in young children and infants and plays a significant role in ARIs among older adults, especially those with chronic medical conditions.¹⁻⁴ RSV can cause serious respiratory infections, long-term consequences and potential mortality in the above at-risk groups. Understanding RSV, its symptoms, and preventive measures can help you protect your child yourself, your elder family members from potential complications. This guide aims to provide you with essential information about RSV, including how it spreads, signs to watch out for, and steps you can take to minimize the risk of infection.

Route of transmission and the incubation period of Respiratory Syncytial Virus (RSV)

Respiratory Syncytial Virus (RSV) is a common respiratory virus that usually causes mild, cold-like symptoms. In most patients, RSV infection is self-limiting and manifests as an upper respiratory illness. **However, RSV can cause serious illness in infants particularly those children born preterm, aged below 1 year old, some young children, adults with co-existing medical illness and older adults such as heart or lung conditions, diabetes, and weakened immune systems.** The virus can be spread through droplets and contact. **The virus can survive on surfaces or objects for about 4 to 7 hours. The average incubation period is usually 5-7 days.**⁵⁻⁷

Symptoms of RSV infections

RSV may not be severe when it first starts. However, it can become more severe a few days into the illness. Initially, mild symptoms might develop which include low-grade fever, runny or stuffy nose, headache and cough, sore throat and sneezing. Symptoms might continue to progress and increase severity to difficulty in breathing, wheezing, severe cough, high fever and bluish discoloration of the skin due to lack of oxygen (cyanosis).⁸⁻⁹ In very young infants (less than 6 months old), the symptoms of RSV infection may include rapid breathing, irritability, decreased activity and appetite, apnoea, and lethargy.⁸⁻⁹

Almost all children are infected by RSV at least once by 2 years old, and reinfection throughout life is common.¹⁰ Whilst most RSV infections cause a mild, cold-like illness, infants up to 12 months, especially those 6 months and younger and premature infants, frequently develop severe infection such as bronchiolitis and pneumonia, which may result in hospitalization or mechanical ventilation and potentially result in death. Two to three out of every 100 infants with RSV infection may need to be hospitalized.⁸ **Over 70% of RSV hospitalizations occur in healthy full-term infants.**¹¹

RSV is the leading cause of bronchiolitis, which is a common lung infection in infants, young children, and in adults, especially older adults or those individuals with chronic illnesses. These are inflammation, swelling, irritation and a buildup of mucus collection in the small airways of the lung. Bronchiolitis starts out with symptoms much like a common cold. It gradually gets worse, causing coughing and a high-pitched whistling sound when breathing out called wheezing. Occasionally, children have trouble breathing and difficulty feeding. Symptoms of bronchiolitis can last for 1 to 2 weeks but occasionally can last longer.¹²

In the long term, RSV infection may be possibly associated with recurrent wheezing, reduced pulmonary function, and increased healthcare resources utilization.¹³⁻¹⁵ Severe RSV infection, with lower respiratory tract involvement, is more strongly associated with the development of recurrent wheezing of early childhood (RWEC) or asthma than non-severe RSV infection. However, the evidence on cause of association is mixed and inconclusive.^{10,14}

In community dwelling older adults, it is estimated that the yearly incidence of RSV infection is about 3-7%.¹⁶ Among older patients who are hospitalized, about 10-20% results in intensive care unit admission or mortality.¹ The illness is mild in most adults; **however, adults with history of chronic obstructive pulmonary diseases, heart diseases, stroke, diabetes mellitus, kidney disease, obesity and immunosuppression stand a higher risk of severe illness from RSV requiring hospitalization.**¹⁷ Similar to subjects at younger age, in the adults RSV may cause persistent cough, wheezing, worsening of chronic lung conditions, pneumonia, respiratory failure, exacerbation of underlying chronic diseases, with or without fever. When compared with influenza viral infection, **RSV infection in hospitalized adults is associated with more severe clinical manifestations, including elevated incidences of pneumonia, more severe respiratory complications, greater reliance on supplemental oxygen therapy, acute kidney injury, and increased mortality rates.**^{1,17-20}

Treatment for RSV

There is **no specific antiviral medication for fighting RSV.**²¹ Most RSV infections go away on their own in a week or two. Patients, parents and caregivers should focus on relieving symptoms and comfort care across all age groups, making the patients comfortable and to observe for complications.⁶

Recommendation to adult patients, parents and carers on caring for infants and children

Adults with risk factors for severe RSV-related illness should seek medical attention at low threshold, especially if the symptoms do not resolve. Most patients with mild condition can be managed at home with medications aiming to relieve symptoms.

There are a few general measures to reduce risk of RSV transmission:

1. Personal Hygiene for infected subjects or household contact:²²

- Unwell adults, parent / carer and the child should stay at home and away from other family members.
- Wear an appropriately-sized surgical mask to reduce the possibility of cross-infection.
 - According to recommendations by the Centers for Diseases and Prevention, children 2 years and older can wear surgical masks to protect themselves and others from respiratory virus infections.
 - The mask must cover both the mouth and nose.
 - After use, the surgical masks should be folded and disposed of in a covered rubbish bin. Remember to clean both hands thoroughly after disposal.
 - These hygiene practices also apply to adults, especially older adults or individuals with chronic conditions, to minimize risk and reduce transmission within households.
- Hand hygiene and prompt disposal of tissues

2. Home hygiene²²

- Home hygiene recommendations are important to reduce the risk of transmission not only to infants but also to adults, particularly older adults or individuals with weakened immune systems
- Maintain good ventilation at home. Open more windows because good ventilation can effectively allow the virus to be carried away with the airflow. A HEPA filter is useful to filter off the virus.
- Clean your home daily with 1:99 diluted household bleach.
- Use 1:49 diluted household bleach to clean the child's toys thoroughly every day. Objects contaminated with the child's secretions while sneezing or coughing should be disinfected with 1:49 diluted household bleach.
- Remarks: As bleach irritates mucous membranes, the skin and the airway, decomposes under heat and light and reacts readily with other chemicals, **bleach should be used with caution**. Improper use of bleach may reduce its effectiveness in disinfection and can injure users. Overuse of bleach will pollute the environment and disturb ecological balance.²³⁻²⁴

3. Specific recommendation to carer / parent of children infected with RSV

i.) Onset of the symptom(s) of infection:

- Parent / carer/ adult patient needs to record the date and time when the child starts to have symptom(s) of infection, allow for assessment of the condition.

ii.) Regular observation:

- Record the amount of oral fluid and food intake and the frequency of urination and bowel opening.
- Be aware of any new symptoms such as: cough, runny nose, sore throat and vomiting, etc.
- Be highly alert to any symptoms indicating deterioration in the child's condition, such as pallor, difficulty in breathing and/or confusion.

iii.) Measure and record body temperature:

- Use an ear (tympanic) thermometer and record the child's temperature every four hours. An ear (tympanic) temperature above 38°C indicates fever.
- Feeling the forehead as a form of temperature measurement is extremely inaccurate and unreliable.
- Parent / carer/ adult patient may use appropriate dose of paracetamol to relieve fever, headache, and sore throat in the child.

4. Adequate food, fluid intake and rest:

- Maintain a healthy lifestyle by eating more fresh vegetables and fruits, drinking more water, and maintaining regular exercise.
- Remember to have adequate rest and sleep. All these can enhance the body's immunity to fight against respiratory viruses.

5. Natural course of RSV Infection

- **Antiviral medication is not routinely recommended** for RSV infection. However, if the fever and other symptoms persists, consult your family doctor for further advice.
- Parent / carer should stay calm as most patients infected with RSV will eventually recover. Most RSV infections go away on their own in 1-2 weeks.

6. Warning signs requiring immediate medical attention:

- **Seek immediate medical attention if the patient has respiratory distress, including tachypnoea, chest wall retractions, nasal flaring, etc. This is true for both children and adults.**
- A poor sleep due to respiratory distress, persistent high fever or poor oral intake are also dangerous signs.
- Call an ambulance to the hospital at once if the patient develops breathing difficulty, blue lips, chest pain, fast heartbeat, sudden change of sensorium or confusion, or convulsion.
- Adults, especially older adults or with chronic medical conditions, should seek medical attention early if symptoms do not resolve.

7. Prevention against RSV Infection

- **Prevention is better than cure** and is the only way to maintain daily health. To protect infants and young children, older adults, and individuals with chronic or immunocompromising conditions, precautions for RSV prevention include:
 - Maintain good personal hygiene, pay attention to hand hygiene in any place, do not touch your mouth or nose with your hands after touching public items, and wash your hands frequently;
 - During epidemic seasons, try to avoid places where crowds gather;
 - Wear a properly fitted surgical mask when going out;
 - Observe respiratory hygiene etiquette and cover your mouth and nose when you cough or sneeze.
- In addition, **if necessary, parents may consider giving their babies RSV antibody injections for protection (passive immunization). Pregnant women may also consider receiving RSV vaccination so that maternal antibodies can be transferred to the baby through the placenta. Citizens may consult their doctors based on their actual needs. Adults, particularly individuals and those with chronic conditions, should consider similar preventive measures, including hand hygiene, avoiding crowded places, and maintaining good respiratory etiquette or vaccination.**

8. Immunization – Infants

- Possible options for immunization against RSV include **(1) Infant immunization with RSV long-acting monoclonal antibodies, (2) Maternal RSV vaccine for pregnant women and (3) Infant immunisation with short-acting monoclonal antibodies for preterm and high-risk babies.**²⁵⁻³⁵⁻³⁷
- Infant immunization involves the use of long-acting monoclonal antibodies that mimic the antibodies our bodies naturally produce to fight infections. Monoclonal antibodies provide passive immunity which means they offer direct and immediate protection without requiring the immune system to respond. These antibodies are made to target specific structure on the surface of pathogens and remain in the body for an extended period to provide prolonged protection.^{31,39} In a recent published meta-analysis reviewed real-world effectiveness of RSV long-acting monoclonal antibodies, it showed long-acting monoclonal antibodies are able to reduce RSV-related lower respiratory tract infection, hospitalisation and ICU admissions by 75%, 83% and 81%.⁴⁰ Proven sustained efficacy against RSV disease in infants were demonstrated in pivotal clinical trials with duration of protection at least 6 months and sustained levels of RSV neutralising antibodies through 1 year.^{41-44,66}
- Maternal immunization involves vaccinating pregnant women at specific period (recommended gestational ages from different societies and countries varied, including a recommended gestational age to be above 26 weeks, 28 weeks, and above 32 weeks) to protect both mother and infants from infectious diseases. When a pregnant woman is vaccinated, her immune system produces antibodies against the targeted pathogens and are then transferred to the fetus through the placenta during pregnancy. The transferred antibodies provide passive immunity to the newborn, protecting them during the first few months of life when their immune system is still developing, and they are most vulnerable to infections.^{38-39,42-43}
- RSV prophylaxis with short-acting monoclonal antibody should be considered for 5 to 6 months after hospital discharge among preterm infants born at <29 weeks gestational age; it should also be considered for children aged <1 year with haemodynamically significant congenital heart disease or bronchopulmonary dysplasia.³²
- **All the three preventive strategies have been proven to be effective in preventing RSV lower respiratory tract infection especially for high-risk infants (preterm, infants with immunocompromised condition, chronic lung and heart diseases).**^{31-32,47-49}
- With the severe RSV disease burden in infants, many developed countries such as USA, Australia, France and Spain have included RSV immunisation in their national immunisation program to protect infants against RSV.^{47, 50-52,66}
- The Scientific Committee on Vaccine Preventable Disease (SCVPD), Centre for Health Protection, Department of Health reached interim consensus on the use of RSV vaccination in January 2025. Although vaccination is effective in preventing severe RSV -associated lower respiratory tract disease among infants born to vaccinated mothers for up to 6 months after birth, clinical trial data showed a higher percentage of preterm births in the vaccinated group. Besides, in a US post-marketing study, maternal RSV vaccination did not show an increased risk for preterm birth but

there was an observed increased risk of hypertensive disorders of pregnancy. Hence, pending additional safety data for using maternal RSV vaccination, the Committee does not currently recommend universal vaccination for pregnant women. SCVPD is of the view that pregnant women may receive RSV vaccination to protect their newborn infants against RSV disease, as an individual decision under informed consent in consultation with their family doctor or doctor providing antenatal care.⁵³

- The SCVPD will continue to monitor the scientific evidence, local epidemiology, and recommendations from the WHO and overseas authorities, and will review the RSV preventive options in as appropriate.⁵³
- **Parents should consider discussing with their healthcare professionals in choosing the most appropriate option to protect their infants against RSV-associated lower respiratory tract infection.**

9. Immunization – Adults

- **Possible options for immunization against RSV in adults aged ≥60 years include (1) adjuvanted RSV vaccine and (2) non-adjuvanted bivalent RSV vaccine. Adjuvanted RSV vaccine is also approved for use in adults aged 50–59 years with increased risk due to underlying health conditions.**^{54,55}
- The U.S. Advisory Committee on Immunization Practices (ACIP) recommends a single RSV vaccine dose for adults aged ≥60 years, particularly those with chronic respiratory, cardiovascular, renal, hepatic, neurologic, metabolic, or immunocompromised conditions, based on shared clinical decision-making. In June 2024, ACIP extended this recommendation to adults aged 50–59 years with similar high-risk conditions.⁵⁶
- Adjuvanted RSV vaccine contains an adjuvant that enhances immune response, particularly in older or immunocompromised adults, with clinical trials showing 82.6% efficacy against RSV-related lower respiratory tract disease (LRTD) and 94.1% against severe LRTD, with protection sustained for approximately 3 RSV seasons*.^{54,57} Bivalent vaccine targeting RSV-A and RSV-B prefusion proteins, demonstrated 66.7–85.7% efficacy against RSV-LRTD, with protection lasting about 2 RSV seasons*.^{55,58} (*As of publications in July 2025).
- Real-world data from the CDC (2023–2024 season indicate both vaccines reduced RSV-related hospitalizations by 73–80%, with no RSV-related ICU admissions or deaths among vaccinated individuals, compared to a measurable burden in unvaccinated controls.⁵⁹⁻⁶⁰
- The SCVPD of the Centre for Health Protection reached interim consensus in January 2025 that adults aged 75 years and above or living in residential care homes may consider receiving a single dose of RSV vaccine after consultation with their healthcare provider.⁵³
- Adults aged ≥60 years or 50–59 years with chronic conditions or immunocompromised status are encouraged to consult healthcare professionals to evaluate RSV vaccination suitability.
- Although the RSV vaccine has been proven effective in preventing RSV infection, a minor risk of adverse reactions remains post-vaccination, including the potential for Guillain-Barré Syndrome (GBS). For further details, please refer to the information published by the Hong Kong Drug

Office on January 8, 2025, available at:

<https://www.drugoffice.gov.hk/eps/news/showNews/newsTitle/consumer/2025-01-08/tc/54792.html>.⁶¹

- The risks of GBS following vaccination with non-adjuvanted bivalent RSV vaccine and adjuvanted RSV vaccine were assessed in self-controlled case series analyses using risk windows of 1 to 42 days post vaccination and control windows of 43 to 90 days post vaccination. The analyses of all GBS cases based on claims data suggest an increased risk of GBS during the 42 days following vaccination, with an estimated 9 excess cases of GBS per million doses of non-adjuvanted bivalent vaccine, and an estimated 7 excess cases of GBS per million doses of adjuvanted vaccine administered to individuals 65 years of age and older. Background risks of GBS in study populations influence excess GBS case estimates and may differ between studies and analyses within a study, precluding direct comparisons of excess GBS case estimates from other vaccine studies or populations.^{62,63}

10. Information from Hong Kong Centre for Health Protection

- For further information, please refer to the Hong Kong Centre for Health Protection Information webpage on RSV as follows:

<https://www.chp.gov.hk/en/healthtopics/content/24/36.html>⁶

11. International and Global Recommendations

- **World Health Organization** identified RSV as the most important cause of acute lower respiratory infections in infants and a significant burden in older adults and those with underlying conditions, **calling for global surveillance** and vaccine development.⁶⁴
- **In a joint appeal published in The Lancet, The World Society for Pediatric Infectious Diseases (WSPID), The Asian Society for Pediatric Infectious Diseases (ASPID), The Asia Pacific Pediatric Association (APPA) and 41 leading scientific and social organisations from across the globe are calling on Gavi, the Vaccine Alliance, to take urgent action to save millions of young lives by protecting them against RSV.**⁶⁵GAVI is a global partnership that works to ensure access to life-saving vaccines for children in the poorest countries. In collaboration with the World Health Organization (WHO), Gavi has already saved millions of lives by vaccinating children against other major life-threatening diseases.
- **The detailed recommendations in different regions and countries, please kindly refer to the relevant local and regional experts and societies.**

20th November 2025

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