PROCEDURE

Respiratory syncytial virus (RSV) preventive antibody - what you need to know

An RSV preventive antibody is an injection that gives a baby temporary protection against severe RSV illness.

PURPOSE
To reduce a child's risk of severe RSV illness

PROCEDURE TYPE
Therapeutic; intramuscular injection at the bedside or clinic

WHERE IT IS DONE
Hospital bedside or outpatient clinic

ANAESTHESIA
None

HOW LONG IT TAKES
About one to two minutes

PREPARATION
No fasting; follow the treating facility's instructions

RECOVERY
Same day; no driving restriction for the accompanying adult

MAIN RISKS
Injection-site reaction, rash, bleeding, severe allergic reaction

RESULTS
Protection starts promptly; there is no test result

Overview

A respiratory syncytial virus, or RSV, preventive antibody is a medicine given by injection. It supplies ready-made antibodies that can recognize RSV. These antibodies lower the chance that an infant or young child will develop severe RSV illness requiring medical care.

This injection is not an RSV vaccine. A vaccine teaches the immune system to make its own protection. A preventive antibody provides protection directly, so it does not rely on the baby producing an immune response first.

Long-acting products include nirsevimab and clesrovimab. They are designed to protect through an RSV season after one injection. Palivizumab is an older antibody used for certain

high-risk children and requires injections during the RSV season. The available product and eligibility may differ by age, medical history, season and local supply.

The injection does not contain live RSV and cannot cause RSV infection. It does not treat an infection that has already developed.

Why the procedure is performed

RSV is a common respiratory virus. In babies, it can infect the small breathing tubes in the lungs or cause pneumonia. Preventive antibodies are intended to reduce the risk of severe disease, not to prevent every RSV infection.

An antibody may be offered because your baby:

RSV seasons usually occur during colder months in much of the continental United States, but timing differs in some regions. Your healthcare team should use local RSV activity and current public health guidance when recommending the injection.

- Is entering their first RSV season without protection from maternal RSV vaccination
- Was born shortly after maternal vaccination, before enough antibodies could cross the placenta
- Has a medical condition that raises the risk of severe RSV illness
- Is entering a second RSV season and meets specific high-risk criteria

Who should and should not have it

In the United States, an RSV antibody is generally recommended for an infant younger than 8 months entering or born during their first RSV season when:

Most babies do not need both maternal RSV vaccination and a preventive antibody. An antibody may still be considered in unusual situations, such as when antibody transfer through the placenta may have been reduced or when a baby has an especially high medical risk.

Certain children aged 8 through 19 months may be eligible for nirsevimab before a second RSV season. This includes some children with chronic lung disease of prematurity, severe immune system weakness, or severe cystic fibrosis. American Indian and Alaska Native children may also be eligible under current US recommendations.

The injection should not be given to someone who previously had a serious allergic reaction to that antibody or one of its ingredients. It may be delayed during a moderate or severe acute

illness. A minor illness, such as a mild cold, does not always require delay.

Tell the healthcare team about bleeding disorders, low platelets or medicines that reduce blood clotting. Because the medicine enters a muscle, these conditions can increase bruising or bleeding. They do not always prevent the injection, but the team may take additional precautions.

Each antibody has its own approved ages and uses. A product intended for a first RSV season may not be appropriate for an older child.

- The birth parent did not receive an RSV vaccine during pregnancy
- Their maternal vaccination status is unknown
- The baby was born within 14 days after maternal vaccination

How to prepare

The treating facility's own instructions take priority over general information in this article.

No fasting is usually needed. Your baby can generally feed normally before and after the injection. Routine medicines are usually continued unless the treating team gives different instructions.

Bring information about:

Dress your baby or child in clothing that allows easy access to the thigh. You may be asked to hold and comfort them during the injection.

- Maternal RSV vaccination, including the date it was given
- Previous reactions to medicines or injections
- Bleeding conditions or blood-thinning medicines
- Your child's current illnesses and medical conditions
- Any previous RSV antibody doses

What happens during the procedure

A healthcare professional confirms your child's identity, age, medical history and eligibility. They will check the selected product and ask about allergies or previous reactions.

The skin is cleaned. The medicine is then injected into a muscle, usually in the outer thigh. The injection itself takes only a few seconds. Anaesthesia and sedation are not needed.

Your child may cry or pull away because of the needle or brief stinging. Holding, feeding, distraction or skin-to-skin contact may help.

The team may ask you to remain nearby for a short observation period, especially if your child has a history of allergic reactions. Most children leave the clinic or hospital area the same day.

Recovery and what to expect afterward

The thigh may be sore, red or slightly swollen. Gentle handling is usually enough. Ask the healthcare team before giving medicine for discomfort, particularly for a very young baby.

Your child can usually feed normally after the injection. There are no routine food or drink restrictions.

Normal play, bathing and daily activity can usually continue. Avoid rubbing or pressing hard on the injection site.

No sedation is used, so the accompanying adult can normally drive home. The child receiving the injection should travel in an age-appropriate car seat as usual.

Most parents and caregivers do not need to miss additional work beyond the appointment. If your child is unsettled or develops a reaction, you may wish to monitor them at home.

Risks and possible complications

Most reactions are mild and settle without treatment. Possible effects include pain, redness, swelling or a rash. Bruising or bleeding can occur at the injection site, especially in a child with a clotting problem.

A serious allergic reaction is possible with any injected antibody. Warning signs can include widespread hives, swelling of the face or throat, wheezing, breathing difficulty, marked weakness or collapse. This requires emergency care.

Preventive antibodies do not provide complete protection. A child can still catch RSV and may still become seriously unwell. Protection also decreases over time.

The injection does not weaken the immune system and does not cause RSV infection. However, information about other medicines and previous reactions is important because each antibody product has specific ingredients and precautions.

Results and follow up

There is no laboratory result to wait for. The supplied antibodies begin providing protection promptly after the injection.

Long-acting antibodies are intended to protect through about one RSV season. Protection gradually decreases. Palivizumab works for a shorter period and requires repeat injections on a schedule set by the treating team.

Routine follow-up is not usually needed after a single long-acting injection. Keep a record of the product name and date. Your child's healthcare team may review eligibility again before the next RSV season, particularly if your child has a high-risk condition.

The injection does not change the need for routine childhood vaccines. It can generally be given at the same visit as vaccines, using different injection sites.

Alternatives

Maternal RSV vaccination is the main alternative for protecting a young infant. In the United States, it is given during a defined period late in pregnancy and during the RSV vaccination season. Antibodies then cross the placenta to the baby. This avoids an infant injection, but protection may be inadequate if the baby is born soon after vaccination or if antibody transfer is reduced.

For certain high-risk children, palivizumab may be considered when an appropriate long-acting antibody cannot be used or obtained. It has established use in selected children, but it requires repeated injections during the RSV season rather than one long-acting dose.

You may choose no antibody after discussing the expected benefits and limits. This avoids an injection but leaves the child without this added layer of protection.

Handwashing, keeping a young baby away from people who are ill, avoiding tobacco smoke and cleaning frequently touched surfaces can reduce exposure. These measures are helpful but are less reliable than immunization and cannot replace antibody protection when it is recommended.

When to call your healthcare team

Contact the healthcare team during routine hours if you have questions about expected soreness, eligibility for a future season, or the injection record.

Call the team promptly if your child develops:

Seek emergency help immediately for trouble breathing, swelling of the face or throat,

widespread hives with weakness, blue or grey lips, collapse, or difficulty waking your child.

The antibody does not rule out RSV. Urgent assessment is also needed if your baby has pauses in breathing, laboured breathing, signs of dehydration or a major decrease in feeding.

- Redness or swelling that is spreading or worsening
- Persistent rash or hives without breathing problems
- Unusual or ongoing bleeding at the injection site
- Feeding difficulties, unusual sleepiness or symptoms that concern you

Common questions

Will my baby be asleep for the injection?

No. Sedation and anaesthesia are not needed. The injection goes into a thigh muscle and takes only a few seconds.

Can I drive my baby home afterward?

Yes. The medicine does not sedate your baby or affect your ability to drive. Use the usual age-appropriate car seat.

How painful is it?

The needle may cause brief stinging, and the thigh may remain sore afterward. Feeding, holding or distracting your baby can help.

When will I know whether it worked?

There is no test result. The antibodies start providing protection promptly, but they cannot prevent every RSV infection.

Is this the same as an RSV vaccine?

No. It gives your child ready-made antibodies. A vaccine prompts the vaccinated person's immune system to make antibodies.

Can my baby still get RSV afterward?

Yes. Infection remains possible, but the antibody lowers the risk of severe RSV illness. Seek care for concerning breathing or feeding changes even if your baby received the injection.

Sources

- Centers for Disease Control and Prevention. RSV Immunization Guidance for Infants and Young Children . Clinical guidance covering maternal vaccination, infant antibodies and second-season eligibility.
- Jones JM, Fleming-Dutra KE, Prill MM, and colleagues. Use of Nirsevimab for the Prevention of Respiratory Syncytial Virus Disease Among Infants and Young Children: Recommendations of the Advisory Committee on Immunization Practices-United States, 2023 . Morbidity and Mortality Weekly Report. 2023;72:920-925.
- US Food and Drug Administration. Beyfortus (nirsevimab-alip) injection: Prescribing Information . Sanofi Pasteur and AstraZeneca.
- US Food and Drug Administration. Enflonsia (clesrovimab-cfor) injection: Prescribing Information . Merck Sharp & Dohme LLC.
- US Food and Drug Administration. Synagis (palivizumab) injection: Prescribing Information . Information on indications, administration, hypersensitivity and bleeding precautions.
- American Academy of Pediatrics. Respiratory Syncytial Virus Immunization Recommendations and Clinical Guidance . Guidance for infant and young-child RSV prevention.