RESPIRATORY SYNCYTIAL VIRUS





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GETTY IMAGES

RESPIRATORY SYNCYTIAL VIRUS

TOO YOUNG TO REMEMBER

Anyone can get RSV, but babies seem to get it again and again. New research may explain why. Scientists studied tissue samples of small children and found that important immune cells called "memory T cells" aren't fully functional in children's bodies until they are about 4 to 6 years old. These cells remember germs they've encountered before. If the germs try to come back, the cells mount an immediate attack against them. But in babies and toddlers, the cells don't remember so well, so the body lets the same germs in over and over.

SOURCE: Immunity



Minimum number of months that an injection of protective antibodies protects infants against severe illness from RSV.

SOURCE: CDC

3.5x

How many more children under 4 were hospitalized for RSV in late August 2023 compared to early August—the start of RSV season.

SOURCE: CDC

NEW IN VACCINE RESEARCH

Some vaccines protect you for life. So why do others, like the flu, COVID, and the RSV vaccines for expectant mothers and older adults, only last for a few months? These seasonal viruses multiply in the mucus in your nose before they fully enter your body where they would trigger the immune response that vaccines ensure. On top of that, viruses like some flu strains and COVID evolve rapidly and complicate vaccine design. For now, that means people get flu and COVID shots every year. RSV vaccines, for those who are eligible, and preventive antibody treatments for babies offer a season of protection. But research is underway to develop vaccines that would go right into the nasal mucus membrane, rather than the arm, and potentially offer a lifetime of protection.

SOURCE: Cell Host & Microbe

HAND SANITIZERS SAVE THE DAY

Though it weakens over time, RSV can live on surfaces like countertops and doorknobs for up to 7 days, new research shows. But a test of five standard surface disinfectants, with typical ingredients like alcohol and hydrogen peroxide, all worked to deactivate the virus. Hand sanitizers containing at least 30% alcohol disarmed the germs, too. So keep wiping down those counters and sanitizing those hands. It's working!

SOURCE: The Journal of Hospital Infection



STATS & FACTS

By Sonya Collins

Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

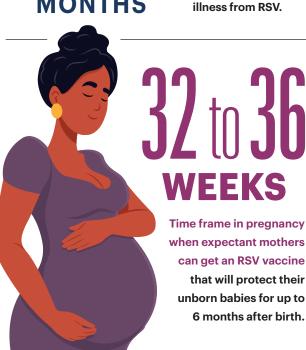


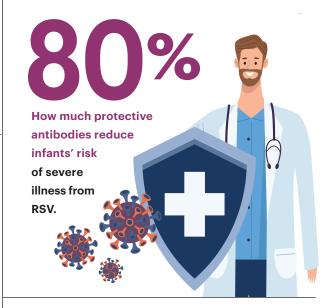
Estimated number of infants and children under 5 years old hospitalized with RSV each year—babies up to 12 months are at greatest risk.





Ages when all healthy infants can receive protective antibodies to help prevent severe







Average length of RSV season, which lasts from fall through spring.



Protection when they need it most.

For babies under age one born during or entering their first Respiratory Syncytial Virus (RSV) season, Beyfortus is a preventative antibody that can help protect them against serious RSV lung infection.

You would do anything to protect your child. And you can help protect them against serious RSV.



- Newborns and babies under 1 year of age born during or entering their first RSV season.
- Children up to 24 months of age who remain at risk of severe RSV disease through their second RSV season.

IMPORTANT SAFETY INFORMATION

Your child should not take Beyfortus if your child has a history of serious allergic reactions to nirsevimab-alip or any of the ingredients in Beyfortus.

Please see additional Important Safety Information and Brief Summary of Patient Information on the following pages.

You are encouraged to report side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.



Understanding the Risks of RSV

Most of the time, RSV will cause a mild, cold-like illness. But it's important to know that RSV:

Is the leading cause of hospitalizations in babies 1 and under.

Is a highly contagious

virus that can lead to

respiratory infection

in babies.

- → Is 16 times more likely to lead to hospitalization in babies than the flu.
- - ♣ Is most common and spreads most often during the winter virus season (fall through spring) but can vary by local area.

♣ Can affect even the

healthiest of babies.

Important Safety Information (cont'd):

Before your child receives Beyfortus, tell your healthcare provider about all of your child's medical conditions, including if your child:

serious infection.

- has ever had a reaction to Beyfortus.
- has bleeding or bruising problems. If your child has a problem with bleeding or bruises easily, an injection could cause a problem.

Tell your healthcare provider about all the medicines your child takes, including prescription and over-the counter medicines, vitamins, and herbal supplements. Your infant should not receive a medicine called palivizumab if they have already received Beyfortus in the same RSV season.



Help Prevent Serious RSV Lung Infections with Beyfortus



• Beyfortus helps protect against serious lung infection caused by RSV that may require medical care, such as: trips to the doctor, urgent care, ER or hospital.



 Beyfortus works by providing your child with the RSV-fighting antibodies they lack, giving them an extra layer of protection as their immune system matures. Beyfortus may not protect all children.



 Beyfortus is an injection given directly to your baby that provides fast acting protection against serious RSV lung infection.



• Beyfortus is FDA approved for babies under one born during or entering their first RSV season.

Ask your baby's doctor about Beyfortus today.

Important Safety Information (cont'd):

Serious allergic reactions have happened with Beyfortus. Get medical help right away if your child has any of the following signs or symptoms of a serious allergic reaction:

- swelling of the face, mouth, or tongue
- difficulty swallowing or breathing
- unresponsiveness
- bluish color of skin, lips, or under fingernails
- muscle weakness
- severe rash, hives, or itching

The most common side effects of Beyfortus include rash and pain, swelling, or hardness at the site of your child's injection. These are not all the possible side effects of Beyfortus. Call your healthcare provider if you have questions about side effects.

Please see Brief Summary of Patient Information on following page.

You are encouraged to report side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

sanofi

Rx Only

BEYFORTUS® (Bay for tus) (nirsevimab-alip) injection, for intramuscular use

Summary of Information about BEYFORTUS

What is BEYFORTUS?

BEYFORTUS is a prescription medicine that is used to help prevent a serious lung disease caused by Respiratory Syncytial Virus (RSV) in:

- newborns and babies under 1 year of age born during or entering their first RSV season.
- children up to 24 months of age who remain at risk of severe RSV disease through their second RSV season.

BEYFORTUS is an antibody that contains nirsevimab-alip which is used to help prevent RSV disease for 5 months. It is not known if BEYFORTUS is safe and effective in children older than 24 months of age.

Your child should not receive BEYFORTUS if your child has a history of serious allergic reactions to nirsevimab-alip or any of the ingredients in BEYFORTUS. See the end of this Summary of Information for a complete list of ingredients in BEYFORTUS.

Before your child receives BEYFORTUS, tell your healthcare provider about all of your child's medical conditions, including if your child:

- has ever had a reaction to BEYFORTUS
- has bleeding or bruising problems. If your child has a problem with bleeding or bruises easily, an injection could cause a problem.

Tell your child's healthcare provider about all the medicines your child takes, including prescription and over-the-counter medicines, vitamins, and herbal supplements. Your infant should not receive a medicine called palivizumab if they have already received BEYFORTUS in the same RSV season.

How is BEYFORTUS given?

- BEYFORTUS is given as an injection, usually in the thigh (leg) muscle, by your child's healthcare provider.
- Your child should receive BEYFORTUS before or during the RSV season. RSV season is the time of year when RSV infections are most common, usually occurring fall through spring. Your healthcare provider can tell you when the RSV season starts in your area.
- Your child may still get RSV disease after receiving BEYFORTUS. Talk to your child's healthcare provider about what symptoms to look for.
- If your child has heart surgery, your child's healthcare provider may need to give your child an additional BEYFORTUS injection soon after surgery

What are the possible side effects of BEYFORTUS?

- Serious allergic reactions have happened with BEYFORTUS. Get medical help right away if your child has any of the following signs or symptoms of a serious allergic reaction.
 - swelling of the face, mouth or tongue
 - o difficulty swallowing or breathing
 - unresponsiveness
 - bluish color of skin, lips or under fingernails
 - o muscle weakness
 - o severe rash, hives or itching

The most common side effects of BEYFORTUS include rash, and pain, swelling or hardness at the site of your child's injection. These are not all of the possible side effects of BEYFORTUS. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

General information about the safe and effective use of BEYFORTUS.

Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. You can ask your pharmacist or healthcare provider for information about BEYFORTUS that is written for health professionals.

What are the ingredients in BEYFORTUS?

Active ingredient: nirsevimab-alip

Inactive ingredients: arginine hydrochloride, histidine, L-histidine hydrochloride monohydrate, polysorbate 80, sucrose and water for injection.

The risk information provided here is not comprehensive. To learn more, talk about BEYFORTUS with your health care provider. For the FDA- approved product labeling or more information go to www.beyfortus.com or call 1-855-239- 3678 (1-855-BEYFORTUS).

Manufactured by: AstraZeneca AB, Södertälje, Sweden

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WHAT IS RSV?

WHAT'S TYPICALLY A COMMON COLD FOR MOST CAN BE DEADLY FOR SOME BABIES

By Sonya Collins

Reviewed by Neha Pathak, MD, WebMD Lead Medical Reviewer

You've probably seen (and had) RSV many times. Most people have it by the time they reach age 2. Typically, it just means a runny, clogged-up nose, a cough, and maybe a fever. But for some people—usually babies, older adults, or people with a weak immune system—RSV can cause a serious infection that can lead to hospitalization and even death.

"It's the most common reason children are hospitalized for infection every year," says Stanley Spinner, MD, chief medical officer of Texas Children's Pediatric Associates in Houston. "Fifty to 80,000 kids in this country are hospitalized every year due to RSV."

WHAT IS RSV?

Respiratory syncytial virus (RSV) is one of the respiratory viruses that circulates more commonly in the fall and winter. It gets around in the same way that other colds, the flu, and COVID do and during the same season. It gets in your body through your nose or your mouth and infects your airways and lungs. For most people, even babies, it's mild and clears up in a couple of weeks. But in many babies, it turns serious.

"Why there is so much concern about RSV is because it can get into the breathing tubes in younger kids," Spinner says. "Those breathing tubes are very small, produce a lot of mucus, and can get plugged up. That's called bronchiolitis. Or, in the lungs, it's pneumonia."

WHAT MAKES RSV SO SERIOUS?

When mucus begins to block the airways, babies won't get enough oxygen. Moms and dads will see that the baby is working hard to breathe or can't take the bottle or the breast because of breathing trouble. At this point, the baby will need to see a doctor.

"There's just not a lot of room for that mucus, so it plugs up the airways and they can't breathe," Spinner says.

In the hospital, babies may need oxygen, fluids, and IV nutrition. Up to 300 children under age 5 die from RSV

each year in the U.S.

"Parents need to know that almost 80% of kids hospitalized for RSV are healthy kids," Spinner says. "They were full-term babies, who you don't feel are at high risk, but RSV can do this to any young child."

HOW DO YOU PREVENT IT?

There didn't used to be much you could do to prevent RSV in babies. Now, babies who are under 8 months of age during their first RSV season can receive an injection of protective antibodies that help prevent severe illness from this respiratory virus.

"Up until the advent of this new monoclonal antibody that we've been eagerly anticipating, there has been nothing we could do about it," Spinner says. "Once people start getting it for their babies, we are expecting it to be a game changer."



FIND OUT IF YOUR LITTLE ONE MAY HAVE IT

By Sonya Collins Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

Almost every child gets RSV (respiratory syncytial virus) before they turn 2 years old. It spreads quickly and easily. For almost everyone, it just looks like the common cold and is no cause for alarm. But it's a good idea to understand how it's spread, so you can try to prevent it, and the signs that your baby's RSV may be more than a cold.

"RSV is pretty contagious," says Michael D. Patrick, MD, an emergency medicine physician and pediatrician at Nationwide Children's Hospital in Columbus, OH. "Almost all kids get it at some point during young childhood."

HOW DO YOU GET RSV?

RSV spreads like other seasonal respiratory viruses. You get it through droplets that come from the mouth or nose of an infected person. Those droplets might land directly on you from an uncovered cough or sneeze. Or you might pick them up from a surface, like a countertop, where the germs can survive for up to a week.

"You may cough into your hand and



then touch a doorknob, then someone else touches the doorknob and then touches their face," Patrick says. "Or you might walk through someone's recent cough that they didn't cover. Those droplets stay suspended in the air for a little bit."

HOW CAN I TELL IF MY BABY HAS IT?

For most babies, the symptoms of RSV are just like the telltale signs of a cold. They'll have a runny, stuffed up nose, cough, and possibly a fever.

It's important to understand that babies don't know how to switch their breathing from their nose to their mouth when they have a cold. You'll need to use a suction device, specifically designed for this purpose, to clear your baby's nose every few hours. Humidifiers and saline nasal sprays also help.

If those are not enough and your baby is struggling to breathe, you need medical help.

Look for faster breathing, straining around the chest, collarbone, or stomach when they breathe, or noisy breathing that sounds like grunting,

wheezing, or mucus in the throat.

"You'll see them sucking in between their ribs, flaring their nostrils, or just working hard to breathe," Patrick says. "At that point, they should probably see someone."

STOP THE SPREAD OF RSV

When someone in the house has a cold:

- + Wipe surfaces frequently with disinfectant.
- + Wash your hands with soap and water or use hand sanitizer.
- + Wear a mask.
- + Cover coughs and sneezes and wash your hands afterward.

RSV IN INFANTS AND YOUNG CHILDREN

SYMPTOMS OF RSV

When a child gets RSV, at first they may have the same symptoms as they would with a mild cold. After a few days, these symptoms can get more severe. Early symptoms include:

- Runny nose
- Eating and drinking less
- · Cough, which later may include wheezing

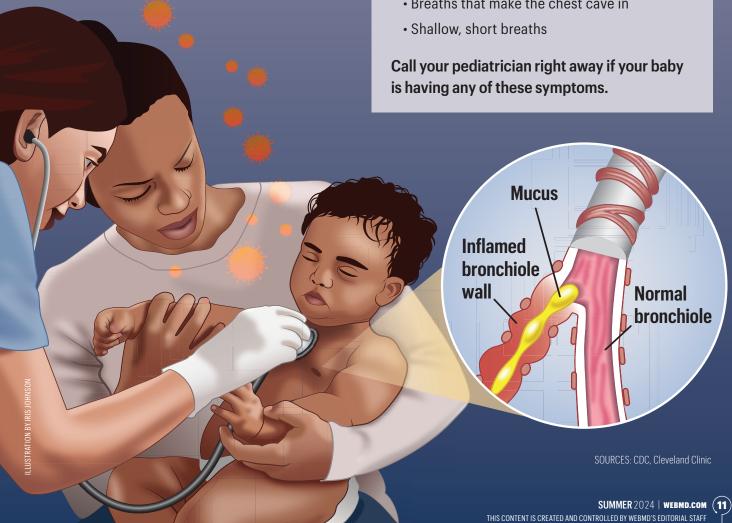
RSV IN VERY YOUNG INFANTS

RSV doesn't always cause a fever. Babies under 6 months may show symptoms such as:

- Fussiness or irritability
- Decreased appetite
- · Disinterest in activities
- Changes in their breathing pattern

Severe symptoms include:

- Pauses in breathing (apnea)
- Flared nostrils while breathing
- · Blue or gray color to lips or fingernails
- · Breaths that make the chest cave in



MY BABY'S RSV STORY

OUR BOUT WITH THE VIRUS AND THE WAYS LOVE BROUGHT US TOGETHER DURING A TOUGH TIME

Bv Ava Piñon

Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

THE WARMTH OF FAMILY

My little girl Shira was born in early November 2022. Except for gestational diabetes, my pregnancy was seamless. Her delivery not so much! She came on the scene giving us a scare. The cord was wrapped around her neck twice.

Once home, we bonded as a family of four-my husband, myself, my toddler daughter, and my newborn. We kept each other warm and we stayed close. We are a very risk-averse family (since COVID) and didn't go anywhere with the baby. We didn't have visitors. The first time we ventured out was when my baby was about 1 month old. It didn't go as planned.

AN UNEXPECTED TURN

The first time we took the baby out was to visit my family. My mom had the sniffles, but we thought it was her normal allergies. Unfortunately, she didn't know that she had RSV since they don't test adults as much. We stayed there for about 4 nights.



While there, I noticed the baby wasn't sleeping well. She was snoring a bit and waking herself up. This was my first sign that something wasn't right. Her sleeping pattern changed. I've had anxiety ever since my older child got COVID when I was pregnant, so the baby sleeps with a device that checks her oxygen and heart rate. I checked and everything was fine. Then, I changed her diaper and saw some retractions (or pulling) under her rib cage. It's a sign that she was struggling to breathe. Her skin was slightly discolored-very dull versus her normal vibrant, pinkish tone. We were preparing to return home (about a 90-minute drive), but my pediatrician called back and told us not to go home. He said go to the hospital immediately!

A HARROWING HOLIDAY

They gave Shira some treatments in the ER, did an EKG, and sent us home. The morning of New Year's Eve, her breathing still didn't look good. I called my mom to come down and watch my toddler as we prepared to go



back to the hospital. They took one look at her and sent us immediately in an ambulance to the local children's hospital. We checked in and didn't leave for 24 days.

My precious little newborn spent days on breathing machines, a host of treatments, and constant watch for her oxygen level and other vitals. It was tough. The worst day was when Shira suffered a cardiac arrest in my husband's arms. We thought we would lose her. After discharge, she had a feeding tube for a month, and I couldn't breastfeed again. It was a scary time. I don't want any parent to go through what we went through. As I look back, I recognize that we missed three holidays—New Year's Eve, New Year's Day, and the Martin Luther King Jr. holiday. Our January was a blur.

A NEW SONG

Our experience gave us a glimpse of the love from our village. We had doctor friends in the hospital who would check on us. My mother-in-law (a nurse practitioner) drove down from New York

and was my medical dictionary. We have a wonderful Jewish community in our area who would do everything from grab a package from our front porch to bring us clothes. One friend brought by leftover food from her son's bar mitzvah. My mother and uncle watched our older child. We felt so loved during the worst month of our lives.

Today, Shira is a happy, healthy baby. As a family, we value each other's company so much more since we were apart so long while she was in the hospital. We play together and are still very strict about where we go. We just look at each other and tear up. We're so grateful for everyone we have. We have decided to not send my toddler to child care this year. We are a lot more cautious. Before we go to a friend's house, we do a health check. "Is everyone feeling well?" Is everyone up to date on vaccines that are recommended? Shira means "song" or "poem" in Hebrew. Her name is fitting. She is our miracle baby. Her laugh is our music.



AVA'S TIPS

- + Record a video of your baby breathing normally so you'll recognize changes.
- + Educate yourself on the symptoms of RSV before you're in the situation.
- + Stay home if someone you're visiting is sick. Don't risk it!

HELP EVERYONE KEEP YOUR BABY SAFE

By Rachel Reiff Ellis Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor



You have a new baby, and your loved ones are thrilled. They can't wait to visit. But they may not be thinking about what else they could bring with them alongside their excitement.

RSV often looks like a mild cold in many people, and they may not know they have it. It spreads easily through the air on infected droplets, and it can also live on hands. Babies can be infected by both direct and indirect contact with the virus.

"Direct contact would be

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things like kissing the face of a child when you have RSV, something grandparents are known for," says Robert Goldbach, MD, a pediatrician at KidzCare Pediatrics in Lillington, NC.

It can also live for hours on hard surfaces that an infected person touches or sneezes or coughs on. That means any visitor who has the sniffles could be putting your baby at risk, both while they're there and hours later.

Here's how to help your friends and family members understand

SETTING BOUNDARIES WITH FAMILY

These tips can help you talk to your family about RSV prevention.

- + Explain your feelings
- + Set the boundary early
- + Be clear about what will happen if the boundary is not kept



the risks and help protect your baby from RSV.

PREVENTION TIPS FOR BABIES

Set your little one up for successful protection with these steps:

Get your COVID vaccine when you're pregnant. If you're 32 to 36 weeks pregnant during the months of September to January, be sure to get your COVID shot. The vaccine creates antibodies that pass to your fetus. This means the baby will have some antibodies to protect them from RSV for the first 6 months

after birth.

Talk to your doctor about a monoclonal antibody immunization. Doctors recommend these for all infants younger than 8 months who are born during-or who are enteringtheir first RSV season or for children ages 8 to 19 months who are at increased risk for severe RSV disease and entering their second RSV season.

HANDLING OTHERS

Have the conversation early. It will likely be easier for everyone involved

PROPER HANDWASHING

How to scrub up the right way

- + Wet hands
- + Lather well
- + Get between fingers, under nails, backs of hands
- + Scrub for 20 seconds
- + Rinse well
- + Dry hands

if you talk about your commitment to prevent germs before a visit. "Be sure everyone's on the same page about expectations," Goldbach says.

Don't be afraid to say no. Sometimes family members can take offense when you give them instructions or say no to a request, but remember that you are your baby's first line of defense against germs like RSV. Stay firm with your boundaries around your baby.

Encourage vaccines. Not only are they good for the person getting them, but they also help protect your baby. "The seasonal flu shot is especially important, not only for personal protection, but for preventing others from passing on the flualong with good handwashing habits," says Dianna Baker, MD, a pediatrician with MaineGeneral Health in Augusta, ME.

Make hand hygiene easy. Make a sign for your door that reminds visitors to wash hands before holding baby and have hand sanitizer on hand in case you're not near a sink. "Choose a hand sanitizer that's at least 60% alcohol," Baker says.

Consider masks. If you're unsure about the health of a visitor, have masks on hand and ask them to wear one as a precaution.

looking to STAY WELL every day











ECHINACEA

Beautiful flower traditionally thought to help your body's defenses



Tasty herb commonly thought to be a supportive hand to your overall health



ROSE HIPS

Tart and tasty herb commonly used to help support your well-being

ELDERFLOWERS

Light colored flower traditionally considered to help support a healthy lifestyle











Redefining Wellness EVERY DAY