

Important Message About Childhood Vaccinations Including Flu and RSV

The Serious Consequences of Vaccine-Preventable Diseases

Before vaccines were available, these diseases killed or permanently disabled thousands of children every year in the United States. The diseases we vaccinate against are not mild childhood illnesses—they are dangerous infections with devastating complications.

Influenza (Flu) is far more serious than many people realize. Each year, an estimated 8-10% of US children develop symptomatic influenza infection. During recent influenza seasons, pediatric deaths have ranged from 37 to 207 reported deaths per season, but statistical models suggest the actual number could be as high as 724 deaths in a single season. Up to 80% of children who die from influenza were unvaccinated. Among hospitalized children, 20% require intensive care unit admission, 17% develop pneumonia, and 5% need mechanical ventilation to breathe. Influenza can cause severe complications including brain inflammation (encephalitis), heart inflammation (myocarditis), muscle breakdown, and bacterial infections including life-threatening bloodstream infections and invasive streptococcal disease. Children can also develop acute necrotizing encephalopathy, a devastating brain disease that causes rapid neurological deterioration. Annual flu vaccination reduces the risk of influenza-associated death by 65% overall and by 51% even in children with underlying medical conditions. Vaccination also reduces the risk of life-threatening influenza requiring ICU admission by 75%.

RSV (Respiratory Syncytial Virus) is the leading cause of hospitalization in US infants. Globally, RSV causes 33 million episodes of lower respiratory tract infection, 3.6 million hospitalizations, and over 100,000 deaths annually in children under 5 years. Infants under 6 months have the highest disease burden and account for nearly 40% of all RSV hospitalizations and more than half of all RSV-associated deaths. One in every 50 deaths in children aged 0-60 months and one in every 28 deaths in infants aged 28 days to 6 months is attributable to RSV. Before RSV immunization became available in 2023, an estimated 2-3% of infants under 3 months were hospitalized for RSV each year in the United States. New RSV prevention products—maternal RSV vaccination during pregnancy and nirsevimab (a long-acting antibody given to infants)—reduce RSV-associated hospitalizations by 70-82%. These products have already prevented hundreds of RSV hospitalizations during the 2024-2025 season.

Measles is one of the most contagious diseases known. Without vaccination, 30-40% of children with measles develop serious complications including pneumonia (the leading cause of measles death), brain inflammation, permanent hearing loss, and blindness. Measles kills 1-3 out of every 1,000 infected children in developed countries. One of the most tragic complications is subacute sclerosing panencephalitis, a fatal brain disease that develops 7-10 years after measles infection and is 100% fatal within 1-3 years. Additionally, measles causes

"immune amnesia"—it destroys your child's immune memory for 2-3 years, making them vulnerable to other serious infections even after they recover from measles.

Pertussis (Whooping Cough) causes severe coughing fits that can last for months. In infants, it can cause them to stop breathing, leading to brain damage or death. Before the vaccine, pertussis killed thousands of infants annually.

Polio can cause permanent paralysis and death. Before the vaccine, polio paralyzed over 15,000 children annually in the United States. Children who survived often needed iron lungs to breathe or were left with permanent disabilities.

Diphtheria creates a thick coating in the throat that can block the airway, causing suffocation. It also produces a toxin that can cause heart failure, paralysis, and death. The mortality rate can be as high as 10%.

Haemophilus influenzae type b (Hib) was the leading cause of bacterial meningitis in children before the vaccine. It caused permanent brain damage, deafness, and death in thousands of children each year.

Varicella (Chickenpox) is not just an itchy rash. Before vaccination, it caused over 10,000 hospitalizations and 100 deaths annually in the United States. Complications include severe skin infections (including flesh-eating bacteria), pneumonia, brain inflammation, and permanent scarring. Bacterial skin infections from chickenpox can lead to sepsis, toxic shock syndrome, and death.

Pneumococcal disease causes meningitis, bloodstream infections, pneumonia, and ear infections. Before the pneumococcal vaccine, it was responsible for thousands of cases of meningitis and bloodstream infections in young children annually, many resulting in death or permanent disabilities like deafness and brain damage.

Rotavirus was the leading cause of severe diarrhea in infants and young children before vaccination, causing over 400,000 doctor visits, 200,000 emergency room visits, and 20-60 deaths annually in the United States. Severe dehydration from rotavirus can be life-threatening.

Hepatitis B can cause lifelong liver infection, cirrhosis, liver cancer, and death. When infants are infected, 90% develop chronic infection that can silently damage their liver for decades before causing liver failure or cancer.

Hepatitis A causes severe liver disease and can be particularly dangerous in young children and those with underlying health conditions.

Meningococcal disease is a bacterial infection that can kill a healthy child within 24 hours. Even with treatment, 10-15% of infected people die, and 10-20% of survivors suffer permanent disabilities including brain damage, hearing loss, or limb amputation.

HPV (Human Papillomavirus) causes cervical cancer, throat cancer, anal cancer, and genital cancers in both men and women. When given at the recommended age of 11-12 years,

the HPV vaccine provides 93% protection against these cancers. When delayed until the early twenties, protection drops to only 21%.

Rubella during pregnancy causes devastating birth defects including deafness, blindness, heart defects, and intellectual disabilities in babies (congenital rubella syndrome). Before vaccination, rubella caused thousands of miscarriages and babies born with severe disabilities.

Mumps can cause permanent deafness, meningitis, inflammation of the testicles or ovaries (which can lead to infertility), and pancreatitis.

Tetanus causes painful muscle spasms and lockjaw. Even with intensive medical care, 10-20% of people with tetanus die.

What Happens When Vaccination Rates Drop

Recent scientific modeling shows the catastrophic consequences if childhood vaccination rates decline. If vaccination rates dropped by 50%, we would see over the next 25 years:

- 51 million cases of measles
- 10 million cases of rubella
- 4 million cases of polio
- Over 10 million hospitalizations
- 159,000 deaths
- Tens of thousands of children left with permanent brain damage, paralysis, deafness, and blindness

Even at current vaccination levels in some states, measles may become endemic again within the next 20 years if coverage doesn't improve. This means measles would once again be a constant threat to our children instead of a rare imported disease.

The Success of Vaccination

Routine childhood vaccination has been one of the greatest public health achievements in history. Among children born between 1994 and 2023, vaccines have prevented:

- 508 million cases of disease
- 32 million hospitalizations
- Over 1 million deaths
- Saved \$2.7 trillion in societal costs

For children born in 2017 alone, vaccines will prevent over 17 million cases of disease and 31,000 deaths over their lifetimes. Vaccination has reduced disease incidence by 17% to

100% for all targeted diseases, with many diseases like polio, diphtheria, and measles eliminated from routine circulation in the United States.

During the 2023-2024 influenza season alone, vaccination prevented an estimated 266 deaths in children 6 months through 17 years of age.

Outbreaks Happen in Unvaccinated Communities

Over 90% of measles cases occur in unvaccinated individuals. Studies consistently show that vaccine-preventable disease outbreaks occur in communities with clusters of unvaccinated children. When vaccination rates drop in a community, everyone becomes vulnerable—including babies too young to be vaccinated, children with cancer or other conditions that prevent vaccination, and others with weakened immune systems.

What You Need to Do

- Vaccinate your children on the recommended schedule. The timing is based on decades of research showing when children are most vulnerable and when vaccines work best.
- Get your child vaccinated against influenza every year. Annual flu vaccination is necessary because flu viruses change each year and immunity wanes over time.
- Protect infants against RSV. For pregnant women, RSV vaccination during weeks 32-36 of pregnancy protects newborns. For infants, nirsevimab (a long-acting antibody) can be given during the first RSV season (typically October through March in most of the United States).
- Do not delay vaccines. Every day your child is unvaccinated is a day they are vulnerable to these serious diseases.
- Complete the full vaccine series. Many vaccines require multiple doses to provide full protection.
- If your child has missed vaccines, schedule catch-up vaccination immediately. It's never too late to protect your child.
- Talk to us if you have questions or concerns. We are here to provide you with accurate, evidence-based information.

Vaccines Are Safe

All recommended childhood vaccines have undergone extensive safety testing and continue to be monitored for safety. Serious side effects are extremely rare. The typical side effects—soreness at the injection site, mild fever, or fussiness—are minor and temporary compared to the serious, often permanent consequences of the diseases they prevent.

Protecting Our Community

Vaccination is not just about protecting your own child—it's about protecting all children in our community. When vaccination rates are high, we create "community immunity" that

protects those who cannot be vaccinated. When rates drop, we all become vulnerable to outbreaks of diseases that were once eliminated.

The diseases we vaccinate against have not disappeared—they are still circulating in other parts of the world and can be brought into our community at any time. Only high vaccination rates keep these diseases from spreading.

Our Commitment to You

We are committed to keeping your children healthy and safe. The childhood vaccination schedule is based on decades of scientific research and has saved millions of lives. We strongly urge you to vaccinate your children on time with all recommended vaccines, including annual flu vaccine and RSV immunization for infants.

Please contact our office to:

- Check your child's vaccination records
- Schedule any missed or delayed vaccines
- Schedule annual flu vaccination
- Discuss RSV immunization options for pregnant women or infants
- Discuss any questions or concerns you may have

Thank you for trusting us with your child's health. Together, we can protect our children and our community from these preventable diseases.