

Understanding the Childhood Immunization Schedule

An Overview for Parents and Caregivers

Parents and caregivers want to make informed decisions about their children's health. One question many parents and caregivers have is why several vaccines are recommended during the first few years of a child's life. The recommended immunization schedule from the American Academy of Pediatrics (AAP) is designed to protect children when they are most vulnerable to serious diseases and when vaccines provide the greatest benefit. The AAP's immunization schedule is endorsed by 12 medical and health organizations representing more than 1 million clinicians, physicians, pharmacists, and other pediatric healthcare professionals.

Why do children receive vaccines early in life?

Babies and young children are more likely to become seriously ill from diseases like measles, whooping cough, and meningitis because their immune systems are still developing. Many vaccine-preventable diseases are most dangerous during infancy and early childhood.

The recommended schedule helps children build protection before they are most likely to be exposed to these diseases.

Is it okay for babies to get multiple vaccines in a short period of time?

Yes, babies' immune systems are capable of responding to multiple vaccines at the same time. During a single visit, a baby may receive several vaccines that protect against different diseases. Each vaccine teaches the immune system to recognize and fight germs before children are exposed to the real disease, helping build protection without overwhelming the body or weakening the immune system. In fact, babies are exposed to many more challenges to their immune systems every day through normal activities like eating, breathing, and interacting with their environment than they encounter through vaccines.

For example, the AAP immunization schedule recommends what's called a combination vaccine to prevent measles and other diseases in children 12 months to 12 years old: measles-mumps-rubella (MMR) vaccine and the measles-mumps-rubella-varicella (MMRV) vaccine. Combination vaccines like MMR and MMRV protect against several diseases in a single dose, reducing the number of injections a person receives and visits to a healthcare professional.



Why do some vaccines require more than one dose? When should children get additional doses?

Each vaccine works a little differently. Vaccines contain only a small number of antigens — the parts of a virus or bacteria that train the immune system to recognize disease. Some vaccines provide strong protection after one dose, while others require additional doses to build stronger, longer-lasting immunity. “Booster” doses, meaning extra vaccine doses that help restore protection after it starts to wear off, help the immune system remember how to respond if a child is exposed to a disease in the future.

The timing of each dose is based on when it provides the greatest benefit for growing children. For example, both the MMR and MMRV vaccines require two doses. The first dose of either vaccine is typically administered between 12 and 15 months of age. This is because the natural protection newborns receive through their birth parents wears off gradually over the infant’s first year, so the immune response to the vaccine may not be as successful before the age of 1. The second dose of either vaccine is typically administered at 4 years of age.

Spreading out vaccines...

- May require more visits and more injections.
- Increases the amount of time children remain at risk of preventable illnesses.
- Has no supporting evidence that delaying or spacing out vaccines provides benefits.

Alternative schedules have not been shown to be safer or more effective.

How is the childhood immunization schedule developed?

The childhood immunization schedule reflects decades of research on childhood diseases, immune system development, and vaccine performance. The American Academy of Pediatrics has a multi-step review process, conducted by independent experts, that includes identifying key questions, reviewing the latest research on disease and vaccine safety and effectiveness, discussing the evidence, voting on recommendations, completing peer and Board review, publishing guidance, and continuing to monitor new evidence to update recommendations as new information becomes available. The schedule is designed to provide protection at the ages when children are most likely to benefit.

Why is following the recommended schedule important?

Staying up to date on recommended vaccines helps children:

- Build protection before they are exposed to serious diseases.
- Reduce their risk of hospitalization and other serious complications.
- Spend more time learning, playing, and growing.
- Help protect babies, older adults, and people with weakened immune systems in their communities.

If you have questions about your child’s immunizations, talk with your healthcare professional or pediatrician. They can help you understand which vaccines are recommended based on your child’s age and health needs.

Sources

American Academy of Pediatrics. [All About the Recommended Immunization Schedule.](#)

Children’s Hospital of Philadelphia Vaccine Education Center. [The Science Behind the Vaccine Schedule.](#)

American Academy of Pediatrics. [AAP Immunization Recommendations Process: 2026.](#)

American Academy of Pediatrics. [Addressing Parents’ Concerns: Do Multiple Vaccines Overwhelm or Weaken the Infant’s Immune System?](#)

American Academy of Pediatrics. [How to respond when caregivers ask about combined vaccines, deviating from recommendations.](#)

American Academy of Pediatrics. [Measles Toolkit.](#)