

# Multiple Vaccines at One Time

A healthy child receives support from many things: good nutrition (</English/healthy-living/nutrition/Pages/default.aspx>), physical activity (</English/healthy-living/fitness/Pages/default.aspx>), regular checkups (</English/ages-stages/Your-Childs-Checkups/Pages/default.aspx>) with the pediatrician and vaccines. Vaccines are important because they equip kids' immune systems to get ahead of serious, preventable diseases.



But why do kids sometimes get several vaccine shots during one doctor appointment? And why do some shots contain more than one vaccine?

Keep reading to find out how your child's body handles multiple vaccinations at one time. Learn why this strategy is a key part of the support system that keeps your child healthy, so they can focus on growing, developing and learning. Dr. Alok Patel also explains more in this video:

Why Multiple Vaccines Are Safe—and Smart—for Your Child | AAP



## Why vaccine timing is important

Children are born with immune systems ready to learn and resist the germs in their environments, but they take time to develop fully.

Vaccines make sure infants, toddlers and older children's immune systems get the most important lessons—like how to recognize and resist polio (</English/health-issues/vaccine-preventable-diseases/Pages/Polio.aspx>), measles (</English/health-issues/vaccine-preventable-diseases/Pages/Measles.aspx>) and whooping cough (</English/health-issues/conditions/chest-lungs/Pages/Whooping-Cough.aspx>)—at the earliest possible opportunity. That's why the timing recommended by the American Academy of Pediatrics (AAP) plays such an important role in keeping kids healthy.

Just like your child will reach growth milestones, their immune system goes through stages as they develop and get stronger. [Back to Top](#)

Researchers have studied every part of the immune system's learning process. That's how we know **the immune system learns best when vaccines are given at specific ages**. For example, a baby's immune system is ready to learn from the first dose of the **hepatitis B vaccine** (</English/safety-prevention/immunizations/Pages/hepatitis-b-vaccine-what-you-need-to-know.aspx>) right after birth. But it needs to wait at least 6 weeks until it can best learn from the **DTaP** (</English/safety-prevention/immunizations/Pages/Your-Babys-First-Vaccines.aspx>) (whooping cough) vaccine.

## The AAP recommended pace and timing for vaccines

The AAP recommended vaccination schedule (</English/safety-prevention/immunizations/Pages/Recommended-Immunization-Schedules.aspx>) is designed to help you make sure your child receives each vaccine at the right time (</English/safety-prevention/immunizations/Pages/Your-Babys-First-Vaccines.aspx>), when their immune system is ready to learn the most from it.

The schedule is based on two main considerations:

- when children's immune systems are ready to respond to the vaccine, and
- when children most need protection from a preventable, contagious disease.

There is also a convenience factor. When vaccines can be administered at the same time, the schedule also allows families to keep kids' immune systems up to date in fewer visits.

Teams of epidemiologists, immune system specialists, pediatricians and other medical researchers update the schedule routinely. They meet each year to share and review the best and newest science. They use the highest quality data to determine the best recommendations for parents about vaccines doses and timing. This ensures your pediatrician—and pediatricians across the nation—advise your family based on the latest science available.

Combining some vaccines in a single shot—or giving several shots at the same visit—has been carefully studied and tested over many years (</English/safety-prevention/immunizations/Pages/History-of-Immunizations.aspx>) to ensure it works well for children.

### Did you know?

Children's immune systems can handle hundreds—even thousands—of germs at once. They do it every day just as they crawl, play and explore their world. Far from overwhelming a child's body, **introducing a few weakened versions of diseases through vaccines gives the child's immune system helpful practice and important protection.**

For example, during a 2-month checkup (</English/ages-stages/Your-Childs-Checkups/Pages/Your-Checkup-Checklist-2-Months-Old.aspx>), most babies will be immunized against seven or eight different diseases (</English/ages-stages/Your-Childs-Checkups/Pages/Your-Checkup-Checklist-2-Months-Old.aspx>). It means that at 2 months of age, your kid's immune system is ready to learn from all those vaccines at the same time.

## Your child's body learns to protect itself with your support

Your baby's immune system starts learning in the womb how to identify and resist harmful germs. It receives memory cells (antibodies) from mom with information about some of the germs they will find in the world, though that doesn't last very long.

Babies are born, their immune systems are ready to keep learning, but they need time. Vaccines are allies that guide them on that journey.

Bodies respond to vaccines by creating new memory cells. These store instructions to identify and resist germs that could make them sick. Back to Top

Some vaccines include several shots scheduled across months or years and are meant to provide lifelong immunity ([Hib \(/English/health-issues/vaccine-preventable-diseases/Pages/Haemophilus-Influenzae-type-b.aspx\)](#), [hepatitis A \(/English/health-issues/conditions/abdominal/Pages/Hepatitis.aspx\)](#), [chickenpox \(/English/health-issues/vaccine-preventable-diseases/Pages/Varicella-ChickenPox.aspx\)](#), among others). Other vaccines need yearly boosters because some germs change over time ([influenza \(/English/health-issues/conditions/flu/Pages/the-flu-what-parents-need-to-know.aspx\)](#) or [COVID \(/English/health-issues/conditions/COVID-19/Pages/when-can-kids-get-the-COVID-vaccine-or-booster.aspx\)](#)). There are also vaccines children receive in combined shots (MMR and DTaP).

MMR is a combination vaccine for mumps ([/English/health-issues/vaccine-preventable-diseases/Pages/Mumps.aspx](#)), measles ([/English/health-issues/vaccine-preventable-diseases/Pages/Measles.aspx](#)) and rubella ([/English/health-issues/vaccine-preventable-diseases/Pages/German-Measles-\(Rubella\).aspx](#)). Children get 2 doses. They get the first dose when they are between 12 and 15 months, and the second dose when they are between 4 and 6 years old.

When the 2 shots of the MMR vaccine are received at the right time, kids' immune systems learn how to resist 3 diseases. The MMR vaccine is one of the most effective ever developed, so your child won't probably catch these diseases at all. If they are infected, their symptoms will be mild.

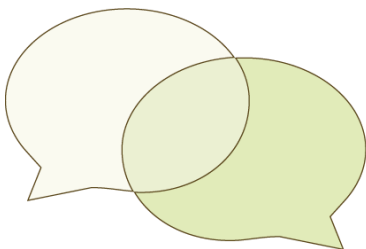
## Why not delay or spread out vaccines?

Spreading out immunizations or using slower-paced schedules delays this learning process. **It leaves your child vulnerable to a serious infection when their body could be building immunity in advance.**

There is no way to tell which children will get seriously ill from different childhood diseases, so the risk of delaying could be quite high.

If your child is exposed to a disease when they are unvaccinated, they could get seriously sick and need to be hospitalized. Or, they can get injuries and health conditions that can linger for years or even a lifetime.

The younger the child, the higher the risk. Babies are the most likely age group to be hospitalized or die from the diseases vaccines can prevent.



# Parent to Parent

## Right on Time

*By Anita Emly*

With my first child, I chose to not get all the recommended vaccines and delay the ones I felt were safe. I considered myself reasonably well-informed and thought this as a way to avoid possible risks.

When my daughter turned one, still behind on her jabs, I started having doubts about vaccinating her at all. I eventually decided not to continue her immunizations, even on the delayed and selective schedule I'd created.

a year later, I was pregnant again. My husband and I were conflicted on how—or even whether we'd vaccinate again. I decided to dive in and look closely at all the information I could find about vaccines.

**The first thing that made me question what I thought about vaccines was finding there are lots of studies on the Tdap and other vaccines given during pregnancy ([/English/ages-stages/prenatal/Pages/vaccines-during-pregnancy-keeping-you-and-your-baby-healthy.aspx](#)). Back to Top**

I learned about the intense work that goes into creating the vaccine schedule. I learned how vaccines are **monitored for safety in various countries (<https://www.who.int/groups/global-advisory-committee-on-vaccine-safety/>)** across the globe.

I also came to realize that all these nations, with their different healthcare systems and different governments—nations that can rarely agree on anything—have **come to a consensus on vaccination (<https://news.un.org/en/story/2025/04/1162301>)**.

As I was discovering all of this, a friend of mine fell ill from flu—so ill that she had to be hospitalized. She had not gotten a flu shot. In less than three weeks she went from flu, to pneumonia, to sepsis, then to coma. My friend died. She was 28.

At the time of this tragedy, I had been afraid to get **vaccines while pregnant ([/English/health-issues/conditions/COVID-19/Pages/covid-19-vaccines-during-pregnancy-and-breastfeeding-parent-faqs.aspx](#))**. But that fear was nothing compared to seeing a vivacious young woman taken down by a vaccine-preventable disease. I got my flu shot at the pharmacy two days after my friend died, and Tdap at my prenatal appointment the following week.

I thought about how my own daughter got sick with **influenza ([/English/health-issues/conditions/flu/Pages/the-flu-what-parents-need-to-know.aspx](#))** when she was 2. She suffered with a 106-degree fever. I later learned that about 80% of the pediatric flu deaths in one flu season were in unvaccinated children. It finally hit me how greatly I had endangered my daughter when I opted-out of the flu vaccine

**All of this convinced me to get my daughter caught up on her vaccines.** She is getting them alongside her infant brother, who is getting his vaccines at the pace and timing pediatricians recommend.

My daughter is four years old now, and my son turned one. Both are thriving, and I have peace knowing that vaccinating them is one of the best and safest things I can do for them.

## Possible side effects after vaccination

Sometimes, after receiving one or more vaccines, a child may have swelling, redness or feel sore where they received the shot. A few of them might get a mild fever ([/English/tips-tools/symptom-checker/Pages/symptomviewer.aspx?symptom=Fever+%280-12+Months%29](#)). **This is normal. In fact, it shows that your child's immune system is building up its response.**

Before getting a vaccine, tell your doctor if your child has had any allergic reaction to the ingredients of any other vaccine in the past. If there are any signs that concern you after they receive the vaccine, don't hesitate to call your doctor.

Serious reactions or allergic reactions to vaccines are very rare, but they do happen. These rare problems typically show up very soon after a vaccination. There are two government agencies that monitor vaccine reactions and safety through the Vaccine Adverse Reporting System (VAERS ([/English/safety-prevention/immunizations/Pages/vaccine-studies-examine-the-evidence.aspx](#))). Report serious adverse reactions to VAERS, so that medical researchers can spot trends.

## Remember

If you've fallen behind on your child's vaccinations, it's a good time to get caught up. Read more here ([/English/safety-prevention/immunizations/Pages/Recommended-Immunization-Schedules.aspx](#)). Don't hesitate to talk with your pediatrician about childhood immunizations if you have any questions.

## More information

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- [All About the Recommended Immunization Schedules \(/English/safety-prevention/immunizations/Pages/Recommended-Immunization-Schedules.aspx\)](/English/safety-prevention/immunizations/Pages/Recommended-Immunization-Schedules.aspx)
- [Vaccine Protection: How Healthy is Your Community? \(/English/safety-prevention/immunizations/Pages/Vaccine-Protection-How-Healthy-is-Your-Community.aspx\)](/English/safety-prevention/immunizations/Pages/Vaccine-Protection-How-Healthy-is-Your-Community.aspx)
- [Vaccines Your Child Needs by Age 6 \(/English/safety-prevention/immunizations/Pages/Your-Babys-First-Vaccines.aspx\)](/English/safety-prevention/immunizations/Pages/Your-Babys-First-Vaccines.aspx)
- [What to Know About Your Baby's Immune System \(/English/safety-prevention/immunizations/Pages/what-to-know-about-your-babys-immune-system.aspx\)](/English/safety-prevention/immunizations/Pages/what-to-know-about-your-babys-immune-system.aspx)

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