



# What Local Experts Advise on Vaccinations

**T**HIS AUGUST WE'RE TAKING A closer look at vaccinations – all types and for all ages. While Covid-19 vaccinations have been in the news often in the past years, there are many more life-saving immunizations that everyone needs to keep current as well.

For this feature we checked in with Dr. Lori Handy at Children's Hospital of Philadelphia for her recommendation to give the Covid-19 vaccine to young kids (from 6 months to 5 years). Dr. Diana Kudes of Suburban Hospital reminds parents

that kids of all ages need other vaccinations as they return to school, daycare and playgrounds where diseases can easily spread. And parents need to remember to stay current on important vaccinations as part of a lifelong process, according to Dr. RaidaRabah of Chester County Hospital. Finally, Dr. Raymond Carter of ChristianaCare urges seniors to get necessary vaccinations — they have nothing to lose and everything to gain.

We hope you find something helpful in these pages. And here's to your health!





# Covid Vaccination for Young Kids

THE CDC'S LATEST GUIDANCE EXTENDS TO CHILDREN AS YOUNG AS 6 MONTHS

Lori Handy, MD, MSCE,  
Children's Hospital of Philadelphia

ON JUNE 18, 2022, THE CENTERS FOR DISEASE Control and Prevention (CDC) endorsed a recommendation for Covid-19 vaccination for children as young as 6 months of age, making about 20 million children across the country newly eligible. Many parents with young children have been eagerly awaiting this milestone in the pandemic since the CDC's October 2021 recommendation covering children 5 to 11.

Some families, though, are more reluctant to move ahead with vaccinating their young children, so it's essential to understand why these vaccines are important and how they have been studied so parents can make the best decision for their children.

## LOGISTICS

Two vaccines are available for this new, younger age group. Both vaccines have been provided Emergency Use Authorization (EUA) from the U.S. Food and Drug Administration (FDA).

The Moderna vaccine is an mRNA vaccine. Each dose contains a quarter of the amount of vaccine as the adult dose and is given in two doses, 28 days apart.

The Pfizer vaccine is also an mRNA vaccine. Each dose of this vaccine contains one tenth the amount of medication as the adult dose and is given in three doses. After the first dose is given, the second dose is given three weeks later, and the third dose is given at least eight weeks after that.

Children will be considered fully vaccinated two weeks after completing either series of vaccines — either the two-dose Moderna series or the three-dose Pfizer series.

It's currently unknown if a booster will be recommended for either series of immunizations.

## EFFECTIVENESS

Both vaccines had predefined outcomes that they needed to meet to determine whether they were effective. The studies were done looking at something called "immunobridging" — essentially, ensuring that the participants had an immune response equal to or more robust than teenagers and young adults.

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# Vaccines Are Vital for Healthy Kids

KIDS ARE RETURNING TO SCHOOL AND PLAYGROUNDS. SO ARE COMMON CHILDHOOD DISEASES.

Diana Kudes, MD, Suburban Hospital

PEDIATRIC IMMUNIZATIONS HAVE CHANGED THE world! Parents used to live in fear of their child getting common diseases that could kill, blind, disfigure or disable their child. Even for kids who were not severely affected, these diseases still cost lots of missed school, medical bills and missed work for parents.

Thanks to some amazing vaccines, most of those illnesses have become rare in our country.

## IMPORTANCE OF VACCINES

Some parents were afraid to bring their child to the doctor's office for routine visits early on during the Covid pandemic. That was understandable then. But this delay put many children behind in getting all their needed vaccinations.

As children return to their usual activities, common illnesses have also quickly returned. Those common childhood illnesses that are preventable with vaccines will also now increase if we don't improve current immunization rates.

The diseases that we immunize against are still out there and will spread if children are not protected. Some parents I talk to don't think children are at risk of getting these diseases because they believe the diseases don't happen in our country.

While infections from illnesses like measles are uncommon in the U.S., they do happen. In the past few years, I've diagnosed children

in my practice with pertussis (whooping cough), varicella (chicken pox) and mumps — all of which have highly effective vaccines.

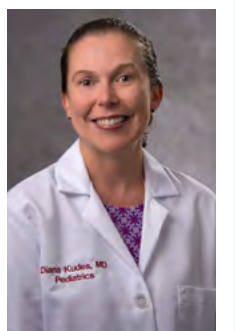
## MEASLES – A CAUTIONARY TALE

Vaccines can be highly effective, but none offer 100% protection. It's important that the majority of children be immunized to prevent spread to those who are not or cannot be immunized (for example, because they have an illness such as leukemia).

For highly contagious diseases, like measles, we need at least 95% of people vaccinated to prevent an outbreak — for so-called herd immunity. Unfortunately, there have been recent measles out-

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Additionally, data in older children demonstrates that vaccination significantly reduces the incidence of a rare but dangerous condition called Multisystem Inflammatory Syndrome in Children (MIS-C) that occurs after a Covid-19 infection. This will continue to be studied in younger children and is another anticipated benefit.

**SAFETY**

The mRNA vaccines made by both Moderna and Pfizer have been monitored by the most extensive safety monitoring in U.S. history, providing confidence in their safety. The data from these trials has passed through an independent advisory board, then the FDA, and finally the branch of the CDC that provides guidance on vaccines — the Advisory Committee on Immunization Practices (ACIP).

The side effects that were noted — such as fever, fatigue and pain at the injection

site — are the anticipated immune response associated with vaccination. Reactions such as these indicate the immune response is making a significant response. These side effects are short-lived and not harmful.

**PRACTICALITIES**

Many families are looking to determine the value of vaccinating their child even though Covid-19 is mild in most children.

This is a question that pediatricians have always considered when selecting infections for which to provide vaccination. Mild in *most* children does not mean mild in *all* children. Even if the incidence of severe disease is rare in children, the mRNA vaccine aims to vaccinate children to prevent hospitalization or death from relatively common infections.

As the virus that causes Covid-19 transitions to endemic (consistently present, but limited to a specific region) from pandemic

(when a disease's growth is exponential), children will continue to have Covid-19 exposures. While the medical community anticipates that children who are vaccinated may potentially get a mild infection with Covid-19, those children who receive an mRNA vaccine will be protected from severe disease and hospitalization as occurred during the recent Omicron surge.

A practical consideration when deciding whether to vaccinate your child is that there are likely to be changes to the quarantine requirement after a vaccinated child is exposed to Covid-19. As a result, vaccinated children will likely be able to go to school or daycare instead of having to stay home.

These quarantine changes would likely make the 2022–23 school year and daycare less chaotic for families and allow children to continue to have important experiences with other children required for their ongoing growth and development. ♦

breaks in the U.S. in communities with low immunization rates. According to the CDC, we had 704 cases of measles in 2019 — that's before the pandemic — which was the highest number since 1994. And almost all those cases were in unvaccinated people.

This is very concerning as we are now dealing with growing pockets of unvaccinated children.

**VACCINES ARE SAFE**

Some parents worry that vaccines are more dangerous than the diseases they prevent. Part of this belief is because vaccines have been so successful that parents don't have personal experience with these diseases.

When I was younger, my cousin was hospitalized with epiglottitis and needed a hole in her trachea to breathe. Her condition was caused by Haemophiles influenzae type b infection. Thanks to an immunization that came out shortly after (Hib vaccine), I've never had a patient with that illness. And most parents today don't worry their child will get my cousin's disease.

All vaccines given to children go through a long process to confirm they work and are safe. Once vaccines are licensed, they are continually monitored for adverse reactions that may not have been detected in the initial studies. When concerns were brought up that vaccines like the MMR caused autism, studies were undertaken to evaluate this concern. The medical community found strong evidence that vaccines do not cause autism.

**VACCINES FOR EACH AGE**

We start protecting children just after birth with the **hepatitis B vaccine** because the disease can be contracted at birth. Babies require two more doses, between the ages of one and six months, for protection.

Then, at the two-month visit, we give multiple vaccines. Injections that contain multiple vaccines are used in as few as two needles to protect against eight different diseases, and one vaccine is given orally.

These vaccines are repeated at four and six months of age. The child is not fully

protected until the complete series of vaccinations is done. Children get booster doses of some of these vaccines again between 12 and 15 months, and then between four and five years of age.

The illnesses we immunize against are **diphtheria, pertussis (whooping cough), tetanus, polio, Haemophilus b, hepatitis B, rotavirus and pneumococcal disease**. Pneumococcal disease can cause sepsis, pneumonia, meningitis and ear infections. Rotavirus causes a diarrheal illness, and the vaccine to prevent it is the only one we currently give by mouth.

Here is a recap of immunizations your child needs, starting at one year old.

- At the age of one, children are given the **MMR (measles, mumps, rubella)** vaccine and **varicella** vaccine (chicken pox). Booster dose are needed between the ages of four and five years.
- **Hepatitis A vaccine** is given in two doses at 12–15 months and 18–24 months. Some teenagers may not have been given this as infants and should



# Remember to Get Your Shots: It's a Lifelong Process

COVID ISN'T ALL YOU SHOULD BE  
VACCINATED AGAINST

Raida M. Rabah, MD, *infectious diseases specialist at Penn Medicine Chester County Hospital*

VACCINATIONS HAVE DOMINATED THE HEADLINES since the start of the Covid pandemic, more than two years ago. However, we've benefitted from immunization since healthcare officials in the United States recommended the first batch of "routine" vaccines in the late 1940s. Over the nearly 75 years since, billions of lives have been saved worldwide by vaccines.

And yet, for all the good they've done and continue to do, vaccinations are often mistakenly thought to be something limited to our childhood. While some vaccines are administered strictly during infancy and childhood, most need to be updated throughout our lives.

**REASONS FOR VACCINATIONS**

Ensuring we're staying up to date with the recommended vaccines is important for several reasons. For one, the ease of travel these days has opened us up to literally a world of viruses we previously had little to no exposure to. For another, as we age, our immune response to previous vaccinations gradually wanes. Vaccines are also constantly evolving, with newer, more effective versions becoming available regularly.

But perhaps the most critical reason is that we're not living alone in the world. Being fully vaccinated best protects not only you but everyone you interact with and everyone they interact with. This includes children who aren't yet old enough to be vaccinated and

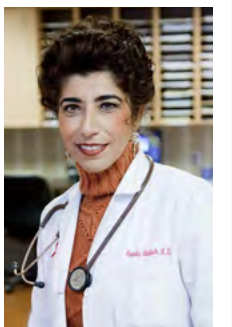
immunocompromised people who are susceptible to getting sick regardless of their vaccination status.

**RECOMMENDED VACCINES FOR ADULTS**

What follows is a brief but comprehensive rundown of current recommended vaccines. For the sake of simplicity, the guidance is for healthy adults. If you're at greater risk than most for a certain condition, or if you'd simply like to learn more about these vaccines, including their potential side effects, visit the Centers for Disease Control and Prevention's (CDC) website, *CDC.gov*, and search "Adult Immunization Schedule."

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get caught up at this point. Hep A causes outbreaks every year, including a recent case connected to contaminated strawberries.

- At 11, children should be boosted with the **tetanus and pertussis (Tdap), meningitis ACWY and HPV vaccines**. HPV is a vaccine to prevent cervical cancer and genital warts. A second dose is needed six months later. It's recommended for both girls and boys.

- At 16, teens need a **meningitis ACWY booster** vaccine and can discuss the **option of meningitis B vaccine with their doctor**.
- **Influenza vaccine** is recommended for children starting at six months of age. For the first season they get it, they need a second dose one month later. Then they should get a single dose every fall. You can find out more information about each shot, possible side effects

and when to get them at [CDC.gov](http://CDC.gov). Parents can learn more about the diseases the vaccines prevent from sites like [CDC.gov](http://CDC.gov) or [HealthyChildren.org](http://HealthyChildren.org).

In summary, vaccines are safe and effective. As a mother and a doctor, I felt very comfortable getting my own children immunized and recommending vaccinations for my patients. ♦

## Get Your Shots *Continued from page 7*

If you're unsure of your vaccination history, or you know it's incomplete, you won't need to restart or add doses to a vaccine series, even if a long time has elapsed between doses. The best thing to do is schedule an appointment with your primary care physician to review your vaccination history. Also, while your doctor will have a complete record of your vaccinations, it's worth asking if any need to be updated at your next appointment.

### COVID

**When to get it:** Primary series vaccines for everyone ages 6 months and older, and boosters for everyone ages 5 years and older. A second booster is recommended for those 50 and older and for those who are 12 and older and are immunocompromised.

**Worth knowing:** If you've had Covid recently, don't delay your next vaccine dose (primary or booster) by any more than two weeks from when your symptoms started or your first positive test. With the latest variants, immunity appears to be short-lived.

### FLU

**When to get it:** Generally, one shot annually, at the start of the fall. However, some may benefit from multiple doses, depending on their age and health.

**Worth knowing:** If you've avoided getting a flu shot because you have an egg allergy, it's time to reconsider. While the vaccines change each year to best protect against the

latest flu strain, many of them won't trigger your allergy.

### TETANUS, DIPHTHERIA, PERTUSSIS

**When to get it:** One dose of Tdap (tetanus-diphtheria-pertussis) if you've never received one. It can be given at any time, regardless of when you last got a Td (tetanus-diphtheria) shot. This should be followed by either a Td or Tdap booster every 10 years. A single dose of Tdap is also recommended during every pregnancy.

**Worth knowing:** Pertussis (whooping cough) can be severe in newborns and infants. However, they won't be fully immunized until around age 7. This makes it all the more important for the adults in their lives to be up to date with their own Tdap vaccination.

### VARICELLA (CHICKENPOX)

**When to get it:** Typically given as a two-dose series across infancy and early childhood. If you never received the vaccine, or have no sign of immunity, you'll be given two doses, four to eight weeks apart.

### HERPES ZOSTER (SHINGLES)

**When to get it:** Two doses separated by two to six months for adults age 50 and older and immunocompromised adults age 19 and older.

**Worth knowing:** If you previously received Zostavax, a shingles vaccine that's no longer available in the U.S., ask your doctor for

Shingrix, the new vaccine. Studies have shown that the effectiveness of Zostavax wanes significantly over time.

### HUMAN PAPILLOMAVIRUS (HPV)

**When to get it:** A series of either two or three doses, depending on the age at initial vaccination, before becoming sexually active. Three doses are recommended for immunocompromised people.

**Worth knowing:** The vaccine works best when given before any exposure to HPV. Having a new sex partner, at any age, puts you at risk of getting a new HPV infection.

### PNEUMONIA

**When to get it:** If you didn't receive the vaccine in childhood, or your previous vaccination history is unknown, and you're 65 or older, one dose of PCV20, the newest vaccine, is recommended. You could also be given one dose of PCV15, followed a year later by one dose of PPSV23.

### HEPATITIS A AND B

**When to get it:** If you weren't separately vaccinated for hepatitis A and B in childhood, anyone 18 and older is eligible for a combination vaccine that protects against both types. It's given as three doses over six months.

**Worth knowing:** If you're receiving the vaccine prior to travelling abroad, get it at least two weeks before departing.



# Seniors Should Get Vaccinated

YOU'VE GOT NOTHING TO LOSE AND EVERYTHING TO GAIN.

Raymond Carter, MD, *clinical leader of the primary care practice at ChristianaCare's Concord Health Center in Chadds Ford*

SOME THINGS THAT ARE HEALTHY ARE ALSO PESKY. A staircase for instance. It's less convenient than taking an elevator — but it's far better for your cardiovascular system. Or a salad. Not always as satisfying as a hamburger, but much richer in nutrition.

Vaccines also can be pesky, not to mention prickly. But they are essential for your good health.

When you're born in the United States, during the first few years of your life, you receive many childhood vaccines to build additional immunity. That's why we've largely eradicated diseases such as measles, mumps, smallpox and more in the U.S.

I say "largely" because not all of these diseases are completely eliminated from our communities. And that's also why it's important for you to stay up-to-date with vaccinations that can protect you and your loved ones.

If you're a senior, it's important to know what vaccines you should get, including some that you may have received as a child for which you're now eligible for a booster.

### COVID-19 VACCINE AND BOOSTERS

**Stay protected.** Getting vaccinated and boosted against Covid-19 is the best defense against this virus. It will also help protect others around you from getting the virus, including people who are more likely to get very sick or die from Covid-19. Second boosters are now strongly recommended for all persons 50 and above.

**Worth knowing:** Getting vaccinated and boosted with this safe, highly effective vaccine can reduce your risk of getting Covid-19 and prevent you from getting severe or life-threatening symptoms even if you do get this virus.

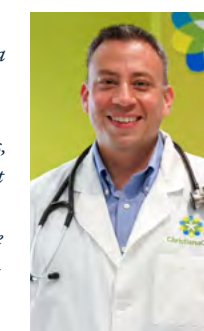
**When to get it:** As soon as possible.

### FLU VACCINE

**Get it even if you are healthy. Plus, it's free!** Even if you're in tip-top shape in your senior years, you should still get the flu vaccine each year. Since age is an independent risk factor for severe

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## MENINGITIS

**When to get it:** One booster dose is recommended between ages 16 and 18. A booster is also recommended if you find yourself among an outbreak and it's been at least five years since your last vaccination.

## YOU'RE AT RISK

We live in a bubble. Everyone reading this article has access to state-of-the-art health-care, which manages to quell most out-

breaks. As a result, it's easy to believe that getting vaccinated is unnecessary.

But many of the diseases prevented by the vaccines highlighted here are still prevalent in certain parts of the world. And because we now live in a global world, those viruses and bacteria are capable of infecting us.

Prior to the pandemic, about 50,000 American adults died from vaccine-preventable diseases each year, according to the National Foundation for Infectious Diseases.



Protect yourself. Protect your family. Protect your neighbors. ♦

# Seniors Vaccinated *Continued from page 9*

consequences from the flu, you're more vulnerable than a 20-something couch potato.

Seniors are at a higher risk of developing serious complications from the flu, such as pneumonia. The flu virus kills about 12,000 Americans 65 and older each year, according to the Centers for Disease Control and Prevention, and it hospitalizes many more.

**Worth knowing:** Know that you can't get the flu from the flu vaccine. Let me be even clearer: It is *impossible* to get the flu from the flu vaccine. Like most vaccines, the flu vaccine contains a dead organism to trigger your immune system. It is *not* a live virus or live bacteria. The vaccine is updated each year to account for changes in the actual virus.

The best part? Medicare charges nothing for the flu shot.

**When to get it:** Every year. It can be the difference between life and death.

## PNEUMOCOCCAL (PNEUMONIA) VACCINE

**Keep serious illness at bay.** Older people have a higher risk of getting pneumonia and are more likely to die from it if they do. The disease can trigger bloodstream infections, sepsis and other health issues that are far worse than a pesky vaccine.

**Worth knowing:** The pneumococcal vaccine will significantly reduce your risk of catching pneumonia or falling seriously ill from it.

**When to get it:** At age 65, even if you're completely healthy. Earlier, if you've had cer-

tain medical problems that would increase your risk.

## TETANUS, DIPHTHERIA AND PERTUSSIS (TDAP) VACCINE

**Get it for your grandchildren.** I care for seniors who understandably question the need to get the Tdap booster vaccine every 10 years, as the chances are rare of contracting tetanus, diphtheria or pertussis ("whooping cough") as an adult.

Let's consider the upside and downside risks. As people age, their immunity wanes, so seniors will have less immunity than middle-aged adults. If you get these vaccines, the downside is the slight, brief pain in your shoulder muscle.

Here's the upside: You avoid the dire consequences of each disease.

- *Tetanus*, which enters the body through cuts in the skin, is a terrible, life-threatening illness that forcefully tightens your entire body to the point where you can't breathe.
- *Diphtheria* causes significant throat swelling and also can be life-threatening. What's worse, it spreads from person to person.
- *Whooping cough* may not kill you, but it spreads easily from person to person. Recent outbreaks have been reported throughout the U.S. Although whooping cough is typically a mild disease for seniors, the disease causes vicious symptoms in babies and children, resulting in violent and rapid

coughing, and accompanied by a disturbing "whooping" sound.

**Worth knowing:** When seniors get the Tdap vaccine, they protect themselves *and* their grandchildren from these terrible diseases.

**When to get it:** Every 10 years.

## SHINGLES

**Avoid this painful illness.** An infection that's more common than tetanus and diphtheria is shingles. Caused by varicella zoster (the same virus as chickenpox), shingles wreaks havoc on the nerves, and includes symptoms such as tingling, itching and burning pain. It also triggers a rash of fluid-filled blisters on your skin, and pain can remain even after the rash disappears.

**Worth knowing:** You should get this vaccine, even if you've had chickenpox.

**When to get it:** Adults 50 and older should get vaccinated against shingles in a two-dose course.

## KEEP UP WITH YOUR VACCINATIONS

Talk with your primary care provider to be sure you're up to date on your vaccines. Together, you can be sure you're protected against preventable illnesses and the serious health consequences they can cause.

As a primary care provider myself, I recognize that getting shots can feel a bit inconvenient and pesky, but vaccines also unlock the freedom to live a healthy, active life. ♦