

The Daily Independent

# Vaccine Awareness Guide

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**Healthy,  
From A-to-Z**



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**A guide to the  
immunizations  
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# Vaccinations A-Z

A comprehensive look at the most common immunizations and when you should receive them

BY LISA IANNUCCI  
CTW FEATURES

Throughout your lifetime, you need vaccinations to protect you from a host of diseases and viruses. Sometimes though, it can be confusing — what vaccinations should you get? When? Why? We helped to decipher the medical jargon and provide you with a simple guide to vaccinations, from A to Z.

- **Diphtheria:** Diphtheria is a bacterial disease that causes a thick white or gray coating in the back of your nose or throat that makes it hard to breathe. It is accompanied by a sore throat, mild fever (101 degrees or less), and chills. The Diphtheria vaccination is often called DTaP or Tdap because it is also combined with vaccinations for tetanus and pertussis (or whooping cough). The DTaP or Tdap vaccinations are given in five doses — 2 months, 4 months, 6 months, between 15-18 months and between 4-6 years.

- **Haemophilus influenzae type b (Hib):** Hib was once the leading cause of bacterial meningitis — an infection of the lining of the brain and spinal cord — among children under 5. It also caused pneumonia, severe throat swelling, infections of the blood, joints, bones and death. Today, the first vaccination is given between 7 and 11 months and it is followed by two additional doses.

- **Hepatitis A:** Hepatitis A is a highly contagious infection that causes your liver to become inflamed and unable to function. It is passed from person to person through contaminated food



or water or from close contact with an infected person. The Hepatitis A vaccine is given to children as a two-dose series six months apart and can also be given to anyone who is homeless; people in direct contact with others who have hepatitis A; men who have sex with men; people who use illicit drugs, and people with chronic liver disease.

- **Hepatitis B:** When a baby is born, the first vaccination it receives is against Hepatitis B, a serious liver infection that is passed through blood, semen or other bodily fluid because of sexual contact; sharing needles, syringes, or other drug-injection equipment; or from mother to baby at birth. The vaccination is given in a 3-dose series at birth, 1–2 months, and 6–18 months.

- **Herpes zoster:** Shingles is a virus (think of it as a chicken pox reprise) that causes a painful rash on either side of your torso. It can cause rare complications like pneumonia, brain infection and postherpetic neuralgia, a pain that can last for months, if not years. The Herpes Zoster Zostavax vaccine is recommended for those over 60 years old, but not given to those pregnant women or those who have a weakened immune system because of HIV/AIDS or another disease.

- **Human Papillomavirus (HPV):** According to the CDC, HPV is a virus that spreads by genital contact and infects about 14 million people each year. HPV infection can cause cervical, vaginal, and vulvar cancers in women, penile cancer in men and genital warts, anal and throat cancer in both men and women – although not all of these cancers are caused by HPV. The HPV vaccine is recommended for children over 11.

- **Seasonal Influenza (flu):** The flu causes fever, chills, cough, sore throat, runny nose, muscle or body aches, headaches, fatigue and – in some cases – vomiting and diarrhea. In more serious instances, the flu can lead to death. Annual vaccinations are the most effective way to prevent the flu. The American Academy of Pediatrics recommends an annual flu vaccine -- or nasal spray -- for everyone 6 months and older and especially for those 65



years and older because of a greater risk of serious complications.

- **Measles:** Measles is a highly contagious virus that lives in the nose and throat mucus of an infected person and can be spread through coughing and sneezing. It can live up to two hours in the air after the infected person has coughed or sneezed, even if they already left the room. The symptoms of measles are a high fever, cough, runny nose, and red, watery eyes. A few days later, tiny white spots - known as Koplik spots -- appear inside the mouth, followed by a rash and possible high fever. Measles can progress into such complications as pneumonia and encephalitis (swelling of the brain). The measles vaccine is included in what's called the measles-mumps-rubella or MMR vaccine, which is delivered in two doses before the child is six years old.

- **Meningococcal:** Meningococcal disease can cause infections of the lining of the brain and spinal cord (meningitis) and bloodstream infections (bacteremia or septicemia). The disease is spread through spit, kiss-

ing or living in close quarters. Vaccinations are available for 11 and 12 year olds, who get a dose of the MenACWY vaccine, with a booster about 5 years later.

- **Mumps:** Known for puffy cheeks and tender jaw, mumps are caused by a virus that includes such symptoms as a fever, headache, muscle aches, tiredness, and loss of appetite. The mumps vaccination is part of the measles, mumps, and rubella vaccine, which children receive two doses of before they are six years old.

- **Pertussis:** The pertussis cough is intense, making it difficult to breathe and is highly contagious. It affects people of all ages, but is especially risky for babies. The pertussis vaccination is part of two vaccines in the United States – DTaP and Tdap, which also help to prevent against tetanus and diphtheria.

- **Pneumococcal:** Pneumococcal vaccine caused many illnesses, including ear infections and meningitis. The CDC recommends the pneumococcal conjugate vaccine for all adults 65 years or older, and people 2 through 64 years old with

certain medical conditions. They also recommend the pneumococcal polysaccharide vaccine for all adults 65 years or older, people 2 through 64 years old with certain medical conditions, and adults 19 through 64 years old who smoke cigarettes.

- **Polio:** Polio was a worldwide epidemic from the early 1900s until the 1950s when the vaccination was invented. Poliovirus starts out looking like the flu – sore throat, fever, tiredness, nausea, headache and stomach pain -- but some victims suffered a paralytic form of polio which attacked their spinal cord and caused a paralysis of their arms and/or legs. Today, a polio vaccine is available in four doses, given to children at 2 months, 4 months, 6 through 18 months (booster) and 4 through 6 years.

- **Rotavirus:** Rotavirus is contagious among children and can cause severe watery diarrhea, vomiting, fever, and abdominal pain. There are two vaccines available one given at 3 doses at ages 2 months, 4 months, and 6 months or another given in 2

# VACCINE AWARENESS GUIDE



doses at ages 2 months and 4 months.

- **Rubella:** Known as German measles, this virus includes a low-grade fever, sore throat, and a rash. The danger to rubella is that it can cause a miscarriage or birth defects if a pregnant woman infects the baby she is carrying. A rubella vaccination is available as part of the measles-mumps-rubella vaccine, which children receive two doses of before they are six years old.

- **Tetanus:** Sometimes you get scraped by a rusty nail or you're active outside when infected soil gets into a split in your skin, causing tetanus. Symptoms include painful muscle stiffness and the infection can be fatal. The Tdap vaccine protect against tetanus, diphtheria, and pertussis. Preteens and teens get a Tdap vaccine at 11 or 12 years old and adults get a Td booster shot every 10 years.

- **Varicella:** Last, but not least is chickenpox, otherwise known as varicella-zoster virus. It's all about itching and blisters, fatigue and fever. The chickenpox vaccine was first used in 1995. Today, children under age 13 get two doses - first at 12 to 15 months, the second between 4 through 6 years. If someone is older than 13 and hasn't had chickenpox the vaccine is available, with two doses given more than 28 days apart.

If you're traveling out of the country, there may be other vaccinations you might be required to get as well. Check with your doctor if you plan on vacationing on foreign soil to see what you might need to get and when.

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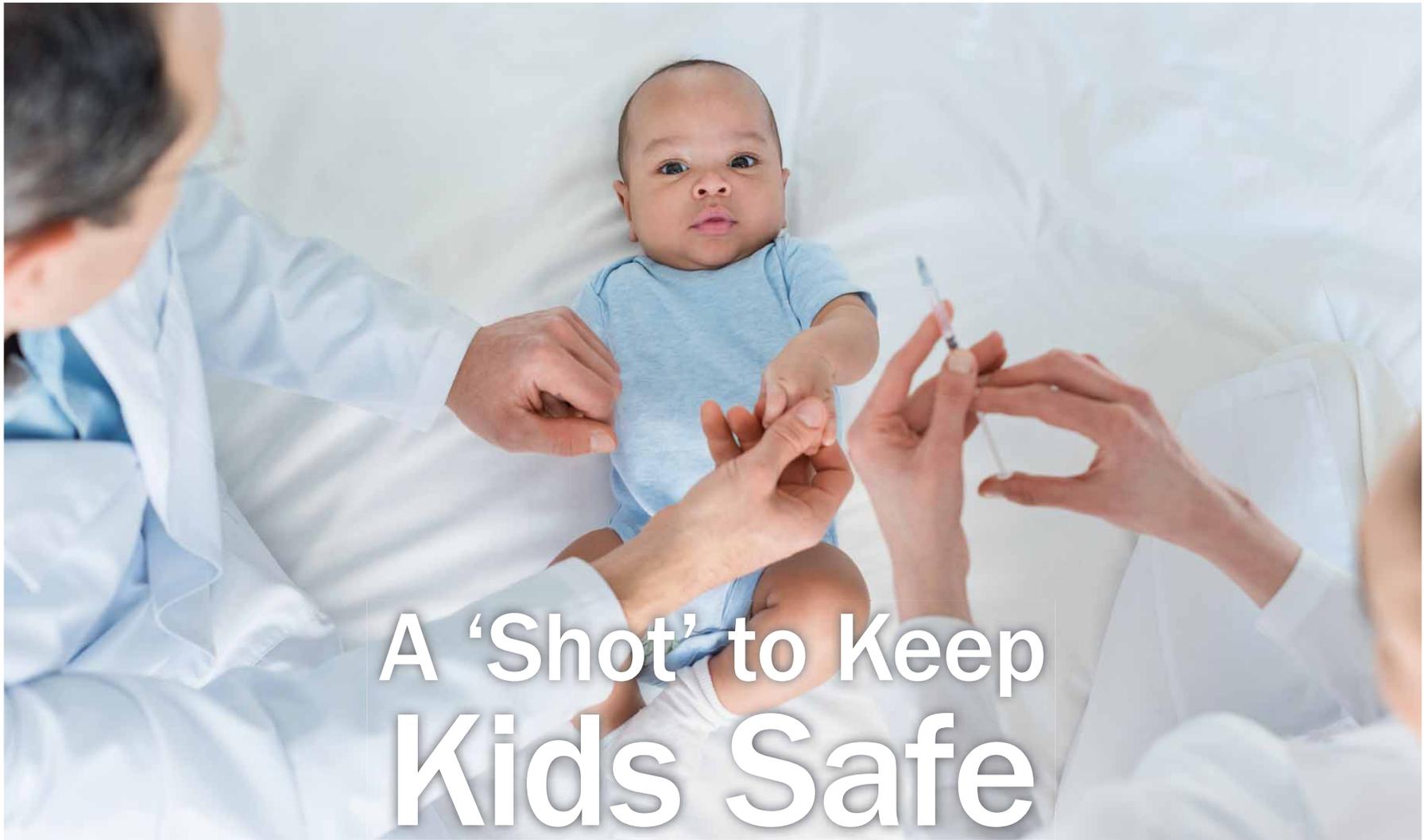
## Vaccination Timeline for Kids, Babies to Teens

Cut it out and paste it on your refrigerator. Here is the vaccination timeline for your kids up to their teenage years, according to the Centers for Disease Control:

- **Hepatitis B:** Three doses – birth, 2nd and 3rd month; between 6 and 18 months.
- **Rotavirus:** Two doses – 2 months; 4 months
- **DTaP:** Five doses – 2 months; 4 months; 6 months; 15 and 18 months; fifth between 4 and 6 years.
- **Hib:** Three doses – 2 months; 4 months; 12-15 months.
- **Influenza:** annually
- **Measles, Mumps and Rubella (MMR):** Two doses – 12-15 months; 4-6 years.
- **Meningococcal:** Two doses – 11-12 years; 16 years.
- **Pneumococcal:** Four doses – 2 months; 4 months; 6 months; 12-15 months.
- **Polio:** Four doses – 2 months; 6-18 months; 4-6 years.
- **Varicella:** Two doses – 12-15 months; 4-6 years.

For more information, visit <https://www.cdc.gov/vaccines/schedules>.





## A 'Shot' to Keep Kids Safe

Why vaccinations are a must in the effort to protect children, at-risk populations

BY LISA IANNUCCI  
CTW FEATURES

Right in the nursery when a baby is born, it receives its first vaccination — a shot protecting it against Hepatitis B, a serious liver infection. This is the start of a lifetime of vaccinations to help strengthen the baby's immune system and fight against such preventable illnesses as measles, mumps, rubella and pneumococcal disease.

But the mere mention of the word vaccine can spark heated debates. On one side are parents who believe in the purpose of the vaccinations and stick to the 18-year schedule set forth for their children by the American Academy of Pediatrics. On the other side of the debate are parents who do not vaccinate their children because of religious or other beliefs. Anti-vaccination proponents (nicknamed anti-vaxxers) have also

long argued a link between autism and vaccinations.

Stuck in the middle are those who, whether they want a vaccine or not, have compromised immune systems and cannot have them, leaving their susceptible bodies exposed to these potentially deadly diseases.

"There are a host of diseases — such as Diphtheria, haemophilus, measles and polio — over many hundreds of years that took the lives of many humans, children in particular, and also caused a lot of disease and disability," explained Carl Fichtenbaum, professor in the division of infectious diseases at the University of Cincinnati College of Medicine in Clifton, Ohio. "People just don't remember that kind of sadness. That's why we looked for solutions and now have routine vaccinations against 11 viruses and six bacteria."

According to Dr. Susan Besser, a

primary care provider specializing in Family Medicine, with Mercy Personal Physicians at Overlea in Baltimore, Maryland, delaying vaccinations serves no practical purpose.

"The times that are given are the optimal times for vaccinations and the best times that that child can develop immunity," she said.

In addition to that initial Hepatitis B shot, babies also receive the Pneumococcal vaccination and vaccinations for Rotavirus, Diphtheria, tetanus, and pertussis, MMR (measles, mumps and rubella), Hepatitis A, and Varicella (chicken pox) over the first few years of its life.

Regardless of vaccinations, Besser also explained that no disease or virus is truly eradicated and any — or a new variant of it — can come back. "Earlier this year, there was a new paralytic illness that looked like polio, and sounded like polio, but wasn't exactly polio," she said.

According to the World Health Organization, the poliovirus mainly affects children under 5 years of age and 1 in 200 infections leads to irreversible paralysis. Although polio cases have decreased by over 99% since 1988, there were still 33 reported worldwide cases in 2018. WHO states that failure to eradicate polio from these last remaining strongholds could result in as many as 200,000 new cases every year, within 10 years, all over the world.

"Everyone even thinks that smallpox is eradicated, but it's out there somewhere, even in a lab where we hope it stays."

Other diseases have been also making a comeback. From January 1 to May 17, 2019, 880 individual cases of measles were confirmed in 24 states and in 2018, the CDC reported 13,439 cases of whooping cough.

This is enough information, according to Besser, to encourage parents



to vaccinate their children. “In addition to saving yourself, there’s something called herd immunity,” said Besser. “If everyone is vaccinated, then we don’t have an epidemic because the disease stops. It can’t go anywhere because it can’t infect a whole bunch of folks.”

This is especially important for children whose immune systems are compromised due to illness or chemotherapy. “You run the risk that these children, who don’t have sufficient immunity to mount a defense

and develop antibodies to the disease, will get sick,” said Besser.

According to the Centers for Disease Control (CDC), millions of children are safely vaccinated each year and the most common side effects are mild, such as pain or swelling at the injection site, fussiness, or a low-grade fever. But according to the CDC, serious side effects like seizures or convulsions, non-stop crying for three hours or more, very high fevers (above 104 degrees), serious allergic reactions,

severe brain reactions, and low blood counts are so rare (about 1 in 14,000 for seizures, for example), they question whether those reactions are actually caused by the vaccines or other underlying illnesses.

“People are making decisions that vaccines are unhealthy based upon a lot of misinformation and a lot of poorly gathered, unscientific information,” said Fichtenbaum. “I don’t go to my car mechanic to ask him for the best recipe to make dinner, yet we listen to people who reconfirm our preconceived beliefs.”

There are no federal laws mandating vaccinations, but each state has its own requirements to allow children to attend school and its own exemptions for those who do not want their child vaccinated. In addition, there are laws for removing unvaccinated children from childcare and school if there is an outbreak.

For example, in New York, according to the State Department of Health, children in daycare, Head Start, nursery school or pre-kindergarten must be immunized against diphtheria, tetanus, pertussis, measles, mumps, rubella, polio, hepatitis B, varicella,

Hib, and pneumococcal disease. However, immunization requirements can be waived if parents hold “genuine and sincere religious beliefs” against having their child immunized.

In Arkansas, exemption applications require parents sign a statement of understanding that “at discretion of the Department of Health, the unimmunized child or individual may be removed from daycare or school during an outbreak if the child or individual is not fully vaccinated.” In Georgia, children who have not been immunized may be excluded from the school or facility during an epidemic until they are either immunized against the disease, unless they present valid evidence of prior disease, or the epidemic or threat no longer constitutes a significant public health danger.”

Fichtenbaum suggests that all parents research vaccinations. “No vaccine and no medication is without risk, but it’s important to understand that the risks are not as bad as people say they are, and the benefits far outweigh any of the risks.”

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## Return of the Measles

If you once thought that a disease that has been eradicated is gone forever, think again. Almost 20 years ago, measles was declared eliminated from the United States. Today, there are just shy of 1,000 measles cases throughout 24 states across the country.

This highly contagious virus isn’t a childhood disease. Anyone of any age who is not vaccinated against it is at risk for catching measles if they are exposed. According to the Centers for Disease Control, the virus lives in the nose and throat mucus of an infected person and can be spread through coughing and sneezing.

The disease can live up to two hours in the air after the infected person has coughed or sneezed, even if they already left the room. The CDC also states that the measles are so contagious that if one person has it, 90% of those close to that person who are not immune will also become infected.

The symptoms of measles sounds like a regular respiratory illness — high fever, cough, runny nose, and red,

watery eyes. However, a few days after the symptoms start, tiny white spots — known as Koplik spots — may appear inside the mouth, followed by a rash and possible high fever. Measles can progress into such complications as pneumonia and encephalitis (swelling of the brain).

What should you do?

First, make sure your child is vaccinated. The CDC and the Academy recommend children receive the first dose of measles, mumps and rubella vaccine (MMR) at 12-15 months and the second dose at 4-6 years. During an outbreak affecting infants, MMR vaccine may be recommended for infants ages 6 months through 11 months, but should not count toward the two-dose series, according to the AAP Red Book.

Then, for adults, it’s a little different. According to the Centers for Disease Control, you are protected from measles if you have already had measles, are immune to them or were born before 1957. If you received two doses of the measles-containing vac-



cine, and you are a school-aged child (grades K-12) or an adult who will be in a setting that poses a high risk for measles transmission, including students at post-high school education institutions, healthcare personnel, and international travelers you are also considered immune.

“There are not enough measles cases that it warrants every adult going to their doctor and asking for an

antibodies test,” explained Carl Fichtenbaum, professor in the division of infectious diseases at the University of Cincinnati College of Medicine in Clifton, Ohio. “However, on a case by case basis, if you’re living in a city where there’s been a measles outbreak, then it may be worthwhile to get your measles antibody tested.”

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Just to Be Safe ...



## Why Baby Boomers and seniors should pay attention to the return of the measles

BY LISA IANNUCCI  
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In 2000, the measles were declared eliminated from the U.S. Nineteen years later, this contagious disease of the respiratory system is back, with hundreds of cases confirmed in more than 20 states across the country.

According to the Centers for Disease Control and Prevention, measles is a highly contagious virus that lives in the nose and throat mucus of an infected person and can be spread through coughing and

sneezing. Here's the kicker – the disease can live up to two hours in the air after the infected person has coughed or sneezed, even if they already left the room. The CDC also states that the measles are so contagious that if one person has it, 90% of those close to that person who are not immune will also become infected.

This frightens 62-year-old Carol Kino. "I was never vaccinated for anything but polio," says the New York City resident. Thanks to the recent cases of measles affecting



the New York area, Kino contacted her doctor to check her immunity and her doctor confirmed that she needed a vaccination. The MMR vaccine protects against measles, mumps and rubella.

However, Valerie Cluzet, MD, an infectious disease specialist with Health Quest in Poughkeepsie, New York, says that the chance that most people over 50 who were born in the United States and are up-to-date on their MMR vaccine will get infected with measles is minimal.

“If you’ve had two doses of the MMR vaccine, you’re considered immune,” says Cluzet. “Some people who received the early version of the vaccine in the 1960s may not have gotten as good immunity as those who got a later version of the vaccine. That’s why if you’re older, it is advised to check if you’re immune or not. It’s not unreasonable if you were born between 1963 to 1968 to get another shot of the vaccine.”

This becomes more important if you, say, work around children or even babysit your grandchildren and they are exposed. “A normal person with a normal immune system can get a dose of the MMR if they get it within three days of being exposed,” says Cluzet.

The symptoms of measles sounds like a regular respiratory illness – high fever, cough, runny nose, and red, watery eyes. However, a few days after the symptoms start, tiny white spots – known as Koplik spots – may appear inside the mouth, followed by a rash and possible high fever. Measles can progress into such complications as pneumonia and encephalitis (swelling of the brain).

“Measles can kill,” says Cluzet. “Most of the data are for children because that’s who’s been getting it, but if you look at the statistics, about one in 2,000 people who get the measles will die. More importantly, one in 20 will get pneumonia, and about one in 4 will be hospitalized.”

Just being hospitalized can bring its own complications. “Especially if you’re an older adult,” says Cluzet. “Even though measles doesn’t have a high mortality rate, the complica-

tion rate is relatively high.”

The best defense against measles is a strong offense, so if you’re unsure if you’ve been exposed or if you have immunity, contact your doctor. While you are there, discuss your other vaccinations as well, such as:

- Flu vaccine: Although flu season is wrapping up for the year, make a note on your calendar to get your flu shot before the next season strikes. “Even if it doesn’t stop you from getting the flu, it can give you a milder flu and prevent hospitalization and complications,” says Cluzet. The CDC recommends that those who are 65 years and older get the vaccine because of a greater risk of serious complications.

- Herpes zoster vaccine: Also known as the shingles vaccine, it is recommended for people 60 years old or older. “Shingles is a viral infection – the same virus that causes chickenpox – that causes a painful rash on either the left or the right side of your torso,” says Cluzet. “There are some rare complications from shingles, like pneumonia and brain infection, but more commonly people can get what’s called post-herpetic neuralgia, a pain that can last for months, if not years, related to the

shingles.”

- Pneumococcal vaccine: Last, but definitely not least, you should be immunized against pneumococcal disease, which can cause many types of illnesses, including ear infections and meningitis. The CDC recommends the pneumococcal conjugate vaccine for all adults 65 years or older, and people 2 through 64 years old with certain medical conditions. They also recommend the pneumococcal polysaccharide vaccine for all adults 65 years or older, people 2 through 64 years old with certain medical conditions, and adults 19 through 64 years old who smoke cigarettes.

“This is important at preventing the most common cause of pneumonia, but also at preventing the more severe infections that come with the pneumonia bacteria,” says Cluzet.

All of these vaccinations are important, so don’t skip any of them. “Vaccinations are an easy way to prevent complications and possible infections,” says Cluzet. “So even though it doesn’t seem like it’s doing anything, prevention is really important.”

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