

1-877-YALEMDS Should You Get a Measles Vaccine Booster?

BY [KATHY KATELLA](#) MARCH 14, 2025

As cases increase in some places, a Yale Medicine specialist reviews the groups, including some adults, who should get vaccinated.



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These days, most people are vaccinated against [measles](#), a highly contagious, life-threatening respiratory virus, when they are children. But recent reports that measles is spreading in parts of the United States are prompting some adults to wonder whether they need a measles booster shot.

As of mid-March, 301 confirmed measles cases had been reported this year across 15 jurisdictions in the U.S., from New York City to Alaska, and 93% of those cases were associated with outbreaks (defined as three or more cases), according to the Centers for Disease Control and Prevention (CDC). For comparison's sake, the 2025 number exceeds the 285 cases the agency documented throughout 2024. In 95% of this year's cases, people who were infected were either unvaccinated or their vaccination status was unknown.

In late February, a school-age child died of the disease in West Texas, an area that has experienced an uptick in cases. In neighboring New Mexico, a second death was reported about a week later in an adult who tested positive for measles (the official cause of death in that case is awaiting confirmation). Both the child and adult were unvaccinated.

The death in Texas was the first death from measles in the U.S. since 2015. The Texas outbreak was one of three occurring in this country so far this year.

While the CDC notes that the risk for widespread measles in the United States remains low, it also released an [advisory](#) following these deaths saying that all Americans should be up to date on their measles, mumps, and rubella (MMR) vaccine. The vaccine is the most important tool for preventing a measles infection, the advisory states.

[Measles](#) was declared “eliminated” in the U.S. in 2000, although scattered infections were reported in the years that followed, usually in people who had traveled internationally and became infected. Outbreaks have become more frequent in recent years. In 2024, there were 16 reported measles outbreaks in the U.S., accounting for 69% of cases, according to the CDC.

“The problem with measles is that it is so contagious. It’s one of the most contagious diseases in existence,” says [Scott Roberts, MD](#), a Yale Medicine infectious diseases specialist, adding that a person’s geographical risk can change quickly.

Dr. Roberts talked to us about three things everyone should know about measles and measles vaccination.

1. Measles is a highly transmissible disease.

Measles starts with a cough, fever, runny nose, and [conjunctivitis \(pink eye\)](#), surfacing seven to 14 days after infection. Three to five days after symptoms begin, the red measles rash appears, starting on the face and spreading down the body.

In the worst cases, the disease can lead to serious complications such as deafness, pneumonia, encephalitis (inflammation of the brain), and death. Children younger than age 5, people with weakened immune systems, and pregnant women are especially at risk for a severe case.

“Measles can lead to a weakened immune system and a heightened risk of infection from other viruses and bacteria,” Dr. Roberts says. “It is also a cause of keratitis (inflammation of the cornea), which can lead to blindness.”

If you survive measles, you are also at higher risk for subacute sclerosing panencephalitis (SSPE), an incurable degenerative brain and nervous system disorder that causes symptoms such as depression, uncontrolled movements, and dementia.

Measles is highly contagious—it’s easier to catch than the [flu](#) or [COVID-19](#). The basic reproductive number (known as the R_0 , pronounced “R naught”)—a metric used to describe the contagiousness of an infectious agent—is between 12 and 18 for measles, Dr. Roberts explains. That means a person with measles is likely to infect 12 to 18 people who have no immunity to the disease, he says.

The virus can be spread to others anytime from four days before to four days after the measles rash appears. It can happen after someone with the measles has coughed or sneezed, when other people breathe the contaminated air or touch an infected surface, then touch their eyes, nose, or mouth. The virus can linger on a surface or in the air for two hours.

Measles tends to spread when people who live in an area where an outbreak is occurring travel to a location that has low measles vaccination rates—places where people are vulnerable, Dr. Roberts says.

However, “communities with a high percentage of vaccinated people have herd immunity, and measles will have a hard time growing to the size of an outbreak in those places,” he says. (Herd immunity is achieved when a large majority of a population is immune to a specific disease, due to vaccination or previous infection.)

“The measles vaccine is a tremendous success story and speaks to the power of vaccination in eliminating such a contagious disease,” Dr. Roberts says.

2. The measles vaccine is safe and highly effective.

In addition to measles, the MMR vaccine protects against mumps and rubella. Mumps is characterized by painful swelling in the salivary glands, causing puffy cheeks and a swollen jaw. Rubella, which is also called German measles, causes a mild rash and fever, but if a pregnant woman is infected, it can cause birth defects to her unborn baby.

Most people get the MMR vaccine as children. It’s given in two shots, the first typically when a child is between 12 and 15 months of age, and the second when they are 4 to 6 years old. It’s a live vaccine, meaning that it contains a small, weakened dose of the virus. This trains a healthy immune system to recognize the measles, mumps, or rubella viruses if one tries to invade the body, and attack it, preventing an infection from developing.

No vaccine is 100% effective against measles, but two MMR shots are 97% effective. (Two shots are 88% effective against mumps, and a single shot is 97% effective against rubella.) Most people who are vaccinated will never get the measles; although a small percentage have “breakthrough” cases, the symptoms are usually mild.

The MMR vaccine is also safe, according to the CDC, which notes that most people have no side effects. If side effects do occur, the most common are soreness at the vaccination site, fever, and pain and stiffness in the joints. Some people may develop a mild rash in the three weeks after their vaccination, but this isn’t a concern unless they have also had a known or suspected exposure to the measles, according to the CDC.

3. Most people won’t need a booster, but you should check your vaccination status to be sure.

The good news is that most people have immunity to measles either through immunization or previous infection, Dr. Roberts says. The two MMR shots given to children are considered full immunization for life, and no additional vaccination is needed.

People born before 1957 are considered to have “presumptive evidence” of immunity, because nearly everyone born during this period got the disease during childhood. But health-care workers born before 1957 who don’t have proof of immunity should consider getting the vaccine.

Older children, adolescents, and adults born after 1957 should get at least one MMR shot if they have never had the measles or been vaccinated for the disease (or aren’t sure if they have)—that is, if they don’t have written documentation or other proof of immunity, according to the CDC. Among these individuals, certain groups should get two MMR shots at least 28 days apart; this includes people at high risk for exposure, including students at post-secondary institutions, health-care workers, international travelers, and women of childbearing age before they become pregnant.

Anyone 6 months or older should be vaccinated if they are in an area where an outbreak is occurring. If they will be traveling internationally, the CDC provides advice on being [fully vaccinated](#) before they leave, regardless of their destination.

Another group that may be at risk is adults who were immunized between 1963, when the first measles vaccine was approved, and 1967. During that period, some children received an inactivated (killed) measles vaccine that was less effective than the live vaccine. If you know that you got the inactivated vaccine and not the live one, or aren’t sure, you should get at least one dose of the live MMR vaccine, according to the CDC. The CDC provides [more information](#) on how many MMR shots you may need—if you still aren’t sure, you should ask your doctor.

There are a few ways to confirm your vaccination status, including records on paper or in a database. If you don’t have records from your childhood pediatrician, your state may have an [Immunization Information System \(IIS\)](#). The CDC provides more information on [locating vaccination records](#) on its website.

Alternatively, you can talk to your medical provider about having an MMR immunity blood test, which can show whether you have antibodies against measles.

If you decide that you do need a measles vaccination, check with your doctor to make sure that you’re eligible to get one. “Because the MMR vaccine is a live vaccine, some people cannot get it safely,” Dr. Roberts says.

Those who may not be eligible for the vaccine include people with weakened immune systems and those who have had an organ transplant or are receiving certain medical treatments, including chemotherapy, radiation, and immunotherapy. The vaccine is usually not given to children under 1 year of age, although it may be given to children as young as 6 months if they are traveling internationally or are in an area where there is an outbreak. [\(For a full list of people who should not receive the measles vaccine, check the CDC website.\)](#)

If you suspect you have been exposed to someone who has measles, call your doctor immediately so they can make a plan to determine whether you have immunity, evaluate you, and provide advice on what to do next. If you do get the illness and your case isn’t severe enough for you to go to the hospital, you should stay home and isolate yourself for four days so you won’t spread the virus to others, according to the CDC.

There is no specific antiviral therapy for measles, but medical care can help relieve symptoms and address complications.

Related Fact Sheets

Measles

Measles is a contagious virus commonly seen in children that causes fever, cough, runny nose, and pneumonia. Learn about symptoms and treatment.

Vaccines for Kids

Vaccines activate the immune system, training it to fight off certain viral and bacterial infections.

Vaccines for Adults

Vaccines aren't just for kids. Thousands of adults go to the hospital each year for a serious (sometimes even deadly) disease they might have avoided if they had received the vaccination to prevent it.

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