

MEASLES FAQ: general information for the public



Q: Am I protected against measles?

A: CDC considers you protected from measles if you have written documentation (records) showing at least **one** of the following:

- You received **two** doses of measles-containing vaccine, and you are a(n)—
 - school-aged child (grades K-12)
 - 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 received **one** dose of measles-containing vaccine, and you are a(n)—
 - preschool-aged child
 - adult who will not be in a high-risk setting for measles transmission
- A laboratory confirmed that you had measles at some point in your life
- A laboratory confirmed that you are immune to measles
- You were born before 1957

Q: What should I do if I'm unsure whether I'm immune to measles?

A: If you're unsure whether you're immune to measles, you should first try to find your vaccination records or documentation of measles immunity. If you do not have written documentation of measles immunity, you should get vaccinated with measles-mumps-rubella (MMR) vaccine. Another option is to have a doctor test your blood to determine whether you're immune. But this option is likely to cost more and will take two doctor's visits. There is no harm in getting another dose of MMR vaccine if you may already be immune to measles (or mumps or rubella).

Q: I've been exposed to someone who has measles. What should I do?

A: Immediately call your doctor and let him or her know that you have been exposed to someone who has measles. Your doctor can:

- determine if you are immune to measles based on your vaccination record, age, or laboratory evidence, and
- make special arrangements to evaluate you, if needed, without putting other patients and medical office staff at risk.

If you are not immune to measles, MMR vaccine or a medicine called immune globulin may help reduce your risk developing measles. Your doctor can help to advise you and monitor for signs and symptoms of measles.

If you do not get MMR or immune globulin, you should stay away from settings where there are susceptible people (such as school, hospital, or childcare) until your doctor says it's okay to return. This will help ensure that you do not spread it to others.

Q: I think I have measles. What should I do?

A: Immediately call your doctor and let him or her know about your symptoms you are having. Your doctor can:

- determine if you are immune to measles based on your vaccination record or if you had measles in the past, and
- make special arrangements to evaluate you, if needed, without putting other patients and medical office staff at risk.

Q: My doctor or someone from the health department told me that I have measles. What should I do?

A: If you have measles, you should stay home for four days after you develop the rash. Staying home is an important way to not spread measles to other people. Talk to your doctor to discuss when it is safe to return.

You should also:

- Cover your mouth and nose with a tissue when you cough or sneeze and put your used tissue in the trash can. If you don't have a tissue, cough or sneeze into your upper sleeve or elbow, not your hands.
- Wash your hands often with soap and water.
- Avoid sharing drinks or eating utensils.

- Disinfect frequently touched surfaces, such as toys, doorknobs, tables, counters.

Call your doctor if you are concerned about your symptoms.

Q: How effective is the measles vaccine?

A: The measles vaccine is very effective. One dose of measles vaccine is about 93% effective at preventing measles if exposed to the virus. Two doses are about 97% effective.

Q: Could I still get measles if I am fully vaccinated?

A: Very few people—about three out of 100—who get two doses of measles vaccine will still get measles if exposed to the virus. Experts aren't sure why. It could be that their immune systems didn't respond as well as they should have to the vaccine. But the good news is, fully vaccinated people who get measles are much more likely to have a milder illness. And fully vaccinated people are also less likely to spread the disease to other people, including people who can't get vaccinated because they are too young or have weakened immune systems.

Q: Do I ever need a booster vaccine?

A: No. CDC considers people who received two doses of measles vaccine as children according to the U.S. vaccination schedule protected for life, and they do not ever need a booster dose.

Adults need at least one dose of measles vaccine, unless they have evidence of immunity. Adults who are going to be in a setting that poses a high risk for measles transmission should make sure they have had two doses separated by at least 28 days. These adults include students at post-high school education institutions, healthcare personnel, and international travelers.

If you're not sure whether you were vaccinated, talk with your doctor.

Q: How common was measles in the United States before the vaccine?

A: Before the measles vaccination program started in 1963, about 3 to 4 million people got measles each year in the United States. Of those people, 400 to 500 died, 48,000 were hospitalized, and 4,000 developed encephalitis (brain swelling) from measles.

Q: What are the vaccine coverage levels like in the United States?

A: Nationally, the rates of people vaccinated against measles have been very stable since the Vaccines for Children (VFC) program began in 1994. In 2016, the overall national coverage for MMR vaccine among children aged 19–35 months was 91.1%. However, MMR vaccine coverage levels continue to vary by state, with MMR coverage levels of <90% observed in 2016 in several states and local areas. At the county or lower levels, vaccine coverage rates may vary considerably. Pockets of unvaccinated people can exist in states with high vaccination coverage, underscoring considerable measles susceptibility at some local levels.

Q: Where do cases of measles that are brought into the United States come from?

A: Travelers can bring measles into the United States from any country where the disease still occurs or where outbreaks are occurring including Europe, Africa, Asia, and the Pacific. Worldwide, the 19 cases of measles per 1 million persons are reported each year; about 89,780 die. In recent years, many measles cases came into the United States from common U.S. travel destinations, such as England, France, Germany, India. During 2014, many measles cases came from the Philippines and Vietnam.

Q: Why have there been more measles cases in the United States in recent years?

A: In 2008, 2011, 2013, 2014, and 2015, states reported more measles cases compared with previous post-elimination years. CDC experts attribute this to:

- more measles cases than usual in some countries to which Americans often travel (such as England, France, Germany, India, the Philippines and Vietnam), and therefore more measles cases coming into the US, and/or
- more spreading of measles in U.S. communities with pockets of unvaccinated people.

Q: Has measles been eliminated from the United States?

A: Yes. In 2000, the United States declared that measles was eliminated from this country. The United States eliminated measles because it has a highly effective measles vaccine, a strong vaccination program that achieves high vaccine coverage in children, and a strong public health system for detecting and responding to measles cases and outbreaks.

Q: What does “measles elimination” mean?

A: CDC defines measles elimination as the absence of continuous disease transmission for 12 months or more in a specific geographic area. Measles is no longer endemic (constantly present) in the United States.

Q: If measles is eliminated, why do people still get it in the United States?

A: Every year, unvaccinated travelers (Americans or foreign visitors) get measles while they are in other countries and bring measles into the United States. They can spread measles to other people who are not protected against measles, which sometimes leads to outbreaks. This can occur in communities with unvaccinated people.

Most people in the United States are protected against measles through vaccination. So measles cases in the U.S. are uncommon compared to the number of cases before a vaccine was available. Since 2000, when public health officials declared measles eliminated from the U.S., the annual number of people reported to have measles ranged from a low of 37 people in 2004 to a high of 667 people in 2014.

Q: Is measles a concern for the United States?

A: Yes. Since measles is still common in many countries, travelers will continue to bring this disease into the United States. Measles is highly contagious, so anyone who is not protected against measles is at risk of getting the disease. People who are unvaccinated for any reason, including those who refuse vaccination, risk getting infected with measles and spreading it to others. And they may spread measles to people who cannot get vaccinated because they are too young or have specific health conditions.

Q: Could measles ever re-establish itself in the United States?

A: Yes, measles could become endemic (constant presence of a disease in an area) in the United States again, especially if vaccine coverage levels drop. This can happen when people

- forget to get vaccinated on time,
- don't know that they need a vaccine dose (this is most common among adults), or
- refuse vaccines for religious, philosophical or personal reasons.

Research shows that people who refuse vaccines tend to group together in communities. When measles gets into communities with pockets of unvaccinated people, outbreaks are more likely to occur. These communities make it difficult to control the spread of the disease. And these communities make us vulnerable to having the virus re-establish itself in our country.

High sustained measles vaccine coverage and rapid public health response are critical for preventing and controlling measles cases and outbreaks.

Q: Will the United States ever get rid of measles completely?

A: Yes, it's possible. The first step is to eliminate measles from each country and region of the world. Once this happens, there will be no place from which measles can spread.

All member states in the six World Health Organization regions have committed to eliminating measles by the year 2020. Once every country eliminates a disease, health officials consider the disease "eradicated" from the world.

Measles and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against measles is to get the measles-mumps-rubella shot (called the MMR shot). Doctors recommend that all children get the MMR shot.

Why should my child get the MMR shot?

The MMR shot:

- Protects your child from measles, a potentially serious disease, as well as mumps and rubella.
- Prevents your child from getting an uncomfortable rash and high fever from measles.
- Keeps your child from missing school or childcare (and keeps you from missing work to care for your sick child).

Is the MMR shot safe?

Yes. The MMR shot is very safe, and it is effective at preventing measles (as well as mumps and rubella). Vaccines, like any medicine, can have side effects. But most children who get the MMR shot have no side effects.

What are the side effects?

Most children do not have any side effects from the shot. The side effects that do occur are usually very mild, such as a fever, rash, soreness or swelling where the shot was given, or temporary pain and stiffness in the joints (mostly in teens and adults). More serious side effects are rare. These may include high fever that could cause a seizure.

Is there a link between the MMR shot and autism?

No. Scientists in the United States and other countries have carefully studied the MMR shot. None has found a link between autism and the MMR shot.

What is measles?

Measles is a serious respiratory disease (in the lungs and breathing tubes) that causes a rash and fever. It is very contagious. In rare cases, it can be deadly.

What are the symptoms of measles?

Measles starts with a fever that can get very high. Some of the other symptoms that may occur are:

- Cough, runny nose, and red eyes
- Rash of tiny, red spots that start at the head and spread to the rest of the body
- Diarrhea
- Ear infection



Doctors recommend that your child get 2 doses of the MMR shot for best protection. Your child will need one dose at each of the following ages:

- 12 through 15 months
- 4 through 6 years

Infants 6 months to 11 months old should have 1 dose of MMR shot before traveling to another country.

Is it serious?

Measles can be dangerous, especially for babies and young children. From 2001-2013, 28% of children younger than 5 years old who had measles had to be treated in the hospital.

For some children, measles can lead to:

- Pneumonia (a serious lung infection)
- Lifelong brain damage
- Deafness
- Death

How does measles spread?

Measles spreads when a person infected with the measles virus breathes, coughs, or sneezes. It is very contagious. You can catch measles just by being in a room where a person with measles has been, up to 2 hours after that person is gone. And you can catch measles from an infected person even before they have a measles rash. Almost everyone who has not had the MMR shot will get measles if they are exposed to the measles virus.

Where do measles cases in the United States come from?

Every year, unvaccinated U.S. residents get measles while they are abroad and bring the disease into the United States and spread it to others. Measles is common in other parts of the world, including countries in Europe, Asia, the Pacific Islands, and Africa. Worldwide, about 20 million people get measles each year. When people with measles travel into the United States, they can spread the disease to unvaccinated people including children too young to be vaccinated.

How many measles cases are there in the United States each year?

From year to year, measles cases can range from roughly less than 100 to a couple hundred. However, in some years like 2014, there were more measles cases than usual. In 2014, 667 people from 27 states were reported as having measles. Most of these people got measles in the United States after being exposed to someone who got measles while in another country.

Where can I learn more about the MMR shot and my child?

To learn more about the MMR shot, talk to your child's doctor, call 1-800-CDC-INFO, or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend children receive all vaccines according to the recommended schedule.

MEASLES:

Important considerations



- ✓ As of January 2019, outbreaks of measles are occurring in New York and Washington states.
- ✓ In 2018, Europe experienced a large measles outbreak with over 69,000 cases of reported.
- ✓ In the U.S., 349 cases were reported from 26 states and D.C. in 2018, including 17 outbreaks.
- ✓ The last case of measles reported in Montana was in 1990.

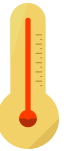
WHO'S AT RISK → INCUBATION → SYMPTOMS



- Babies who are too young for vaccine (<12 months)
- Immunocompromised
- Pregnant women
- Unvaccinated

Average: **14 days**
(range 7-21 days)

- High fever (up to 104 F)
- Runny nose
- Cough
- Red, watery eyes
- Rash (spreads from head to toe)
- Koplik spots (sometimes)



Measles complications can include: pneumonia, encephalitis, and/or death

How infectious is measles? One person can infect 12-18 susceptible people

RISK FACTORS



Travel to a place where measles is endemic



Contact with someone who has measles

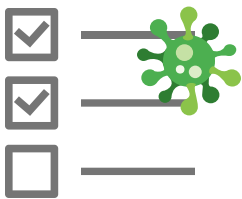


Not receiving a measles vaccine (MMR)



Visitors from areas where measles is occurring

SUSPECT



Evaluate signs and symptoms and risk factors to determine if measles is high on the suspicion list.

REPORT



Measles is **immediately reportable** to local public health. Reporting should not wait until lab results are available. If you suspect measles, report it ASAP.

CONFIRM



A diagnosis of measles is confirmed by prompt laboratory testing. **The gold standard** is PCR and can be performed as soon as possible following rash onset. Blood tests for IgM and IgG antibody production may also be helpful.

PREVENT



The measles vaccine (MMR) is extremely effective against preventing the disease in those who are >12 months of age. **Two doses of MMR are 97% effective.**

For more information, contact your local health department