



WHAT IS MEASLES?

Measles is a very contagious respiratory disease caused by a virus. Before the measles vaccine became available, measles was a common childhood disease. Some people may suffer from severe complications, such as pneumonia (infection of the lungs) and encephalitis (swelling of the brain). They may need to be hospitalized and could die. Symptoms include: rash, high fever, cough, runny nose, and red, watery eyes.

HOW DO PEOPLE GET MEASLES?

Measles is easily spread from person to person. When an infected person talks, coughs or sneezes, the virus is released into the air and enters another person's body through the nose, mouth or throat. People can also become sick if they come in contact with the mucus or saliva (spit) from an infected person. The measles virus can live on contaminated surfaces and in the air for up to two hours. A person with measles may be contagious starting 4 days before through 4 days after they develop a rash.

ARE THERE COMPLICATIONS WITH A MEASLES VIRUS INFECTION?

Yes. Common complications include ear infections and diarrhea. Severe complications include pneumonia (infection of the lungs), encephalitis (swelling of the brain), and death. Measles may cause pregnant women to have babies born early (premature) or with low birth weight.

HOW DO I KNOW IF MY CHILD IS PROTECTED AGAINST MEASLES?

Your child is considered protected against measles if they meet one or more of the following criteria:

1. School-age child (grades K-12): received two doses of measles vaccine
2. Pre-school aged child: received one dose of measles vaccine
3. Have laboratory confirmation of measles antibodies (IgG), or laboratory confirmation that they had measles at some point in their life.

WHERE CAN I GET A MEASLES VACCINE FOR MY CHILD?

Measles vaccine (MMR – measles, mumps, and rubella) is available from:

- Many doctor's offices
- Urgent Care Centers (call to confirm)
- Local pharmacies (check with locations based on child's age)
- Federally funded health centers (for under or uninsured individuals)
- Local health department (LHD) or Pennsylvania Department of Health (PADOH) state health center

WHAT SHOULD I DO IF MY CHILD HAS BEEN EXPOSED TO SOMEONE WITH MEASLES?

If you think your child has been exposed to measles, contact your health care provider immediately. If your child has not been vaccinated, measles vaccine may prevent the disease if given within 3 days after exposure. Immune globulin (IG) may prevent or modify disease and provide temporary protection if given within 6 days of exposure in persons who cannot have the vaccine.

IF MY CHILD IS EXPOSED, DOES THAT MEAN THEY WILL GET SICK OR INFECTED?

An exposure occurs when a person is in the same space (e.g., room, office, building) as someone who is infected, even if they already left. The virus can linger in the air for up to 2 hours. People are less likely to get sick with measles if they have received the MMR vaccine. Approximately 90 percent of people who aren't protected from measles will get measles when they are exposed to someone with the disease.



MEASLES FACT SHEET FOR PARENTS AND GUARDIANS

IF MY CHILD HAS MEASLES, WILL THEY HAVE TO STAY HOME FROM SCHOOL, CHILDCARE, AND OTHER ACTIVITIES?

Yes, if your child has been diagnosed with measles, they will need to stay home from school and other activities. Children without immunocompromising conditions will have to stay home for 4 days after the date the rash started (onset of rash is day zero). Children with immunocompromising conditions might have to stay home longer than 4 days because they might still be able to spread the virus to others. This decision will be made on a case-by-case basis and will likely include conversations between the health department and medical provider.

DOES MY VACCINATED CHILD HAVE TO STAY HOME IF THEY ARE EXPOSED TO SOMEONE WITH MEASLES?

No, if your child has received measles vaccine, typically the measles, mumps, rubella (MMR) or measles, mumps, rubella, and varicella (MMRV) vaccine, they do not need to stay home when they have been exposed to someone with measles. Contact your health care provider for recommendations if your school-aged child has only received one dose of vaccine.

DOES MY UNVACCINATED CHILD HAVE TO STAY HOME IF THEY ARE EXPOSED TO SOMEONE WITH MEASLES?

Yes, unvaccinated children who are exposed to someone with measles, including those who have a medical or other exemption to vaccination, must be excluded from school and other activities through 21 days after their most recent exposure. However, your child may return to school and other activities if they receive a dose of MMR vaccine within 72 hours after their initial exposure. A representative from the health department will provide you with information about when your child can return to school and other activities.

WHAT SYMPTOMS MIGHT MY CHILD DEVELOP IF THEY ARE EXPOSED TO SOMEONE WITH MEASLES?

For up to 21 days after your child is exposed, it is very important for you to watch your child for symptoms of measles, which include the following (usually in this order):

- Fever
- Cough
- Runny nose
- Red, watery eyes (conjunctivitis, known as “pink eye”)
- Rash that starts on the head and spreads all over the body

WHAT SHOULD I DO IF MY CHILD IS EXPOSED TO SOMEONE WITH MEASLES AND THEN DEVELOPS SYMPTOMS?

If your child begins experiencing symptoms of measles, call the Pennsylvania Department of Health at 877-PA-HEALTH (877-724-3258). If you need to seek medical attention for your child’s measles symptoms, please inform the clinic or hospital before you arrive that your child may have been exposed to measles. This will help the clinic or hospital take steps to prevent the spread of measles to others.

WHAT IS CONSIDERED SCHOOL, CHILDCARE, AND OTHER ACTIVITIES?

These settings include, but are not limited to:

- youth camps
- childcare centers
- preschools
- schools
- institutions of higher education
- sports practices and games
- club meetings
- social activities
- public outings

ADDITIONAL RESOURCES

[Measles Fact Sheet](#) | [Pennsylvania Department of Health](#) • [Measles \(Rubeola\)](#) | [Measles \(Rubeola\)](#) | [CDC](#)



Overview

Measles is a highly contagious disease that can lead to serious health complications, especially for babies and young children. Anyone who is not fully vaccinated against measles is at risk. Severe measles can lead to hospitalization and even death.

SIGNS AND SYMPTOMS

Symptoms of measles typically begin within 7 to 14 days of exposure.

Individuals infected with measles will usually have a high fever, cough, runny nose, and red, watery eyes (also called “pink eye”).

- **Tiny white spots** (Koplik’s spots) may appear inside the mouth 2 to 3 days after symptoms begin.
- **Rash breaks outs 3 to 5 days after symptoms begin.** Flat red spots tend to appear on the face at the hairline and spread downward to the neck, torso, arms, legs, and feet. Small, raised bumps may also appear on top of the flat red spots. The spots may become joined together as they spread.
- **Fever** may rise to more than 104°F when the rash appears.
- **Rash persists for 5 or 6 days** and then fades, typically in the same order that it appears, from head to extremities.
- Other symptoms of measles include lack of appetite, swollen lymph nodes and diarrhea (especially in infants).
- **Some people may suffer severe complications**, such as pneumonia (infection of the lungs) and encephalitis (swelling of the brain). They may be hospitalized and could die.

Key Points about Measles

- Two doses of measles, mumps and rubella (MMR) vaccine provides the best protection against measles.
- Measles can spread when an infected person coughs or sneezes.
- Measles can stay in the air for up to two hours after a sick person has left the room.



Picture 1. The child’s face and forehead show the maculopapular rash.



Picture 2. Skin of a patient after three days with measles rash.

CAUSES AND TRANSMISSION

Measles is a highly contagious disease that can lead to serious health complications. Measles spreads through coughing and sneezing from an infected person. **A person might catch measles just by being in the same room as someone who is infected, even if they already left. The virus can linger in the air for up to two hours.**

If someone breathes in this contaminated air or touches contaminated surfaces and then touches their face (like their eyes, nose, or mouth), they could become infected. **A person with measles can spread the virus to others starting 4 days before through 4 days after the rash or symptoms appear.**

RISK FACTORS

Anyone who is not protected against measles, or has not been infected with measles in the past, is at risk of getting infected. Certain groups are more likely to have serious complications from measles. These include children younger than 5 years old, adults older than 20 years old, pregnant women, and people with a compromised immune system.



COMPLICATIONS

Common complications from measles include: ear infections (especially in children), diarrhea, pneumonia, brain inflammation, seizures or convulsions, and death. Pregnant women who have not had the measles, mumps, and rubella (MMR) vaccine, and contract measles, may have babies born early (premature) or with a low birth weight.

TEST AND DIAGNOSIS

Measles should be suspected in any person with a fever, rash and other symptoms, such as cough, runny nose or red, watery eyes, especially if the person recently traveled to an area where a measles outbreak is occurring or if they had possible contact with a person with fever and rash or measles. If you start to have symptoms, contact your health care provider for guidance and recommendations.

Health care providers can diagnose measles through laboratory testing. Blood samples can be tested for the presence of measles antibodies (IgM and IgG). Additionally, a urine sample or a swab of your nose or throat can be tested for the presence of the virus.

Providers should contact the Pennsylvania Department of Health (PA DOH) at 877-724-3258 or their [local health department](#) to immediately report a suspect measles case, or if they have questions about testing.

TREATMENT

Measles has no specific treatment. A health care provider should help manage any complications appropriately and recommend supportive care, watching for dehydration or difficulty breathing. Report complications immediately to a health care provider.

PREVENTION— PROTECT YOURSELF WITH THE VACCINE.

The best way to prevent measles is to remain up to date on all measles vaccinations especially when considering travel. The measles, mumps, and rubella (MMR) vaccine protects you from measles, mumps, and rubella, potentially serious diseases caused by viruses. In the United States, two types of vaccines for measles are available:

- **MMR** – combination of vaccines for measles, mumps, and rubella (German measles)
- **MMRV** – combination of vaccines for measles, mumps, rubella, and varicella (chicken pox)

Two doses of MMR or MMRV vaccine are about 97% effective at preventing measles; one dose is approximately 93% effective. Both MMR and MMRV vaccines may be given at the same time as other vaccines. The first dose is typically given between 12 and 15 months of age and the second dose is given at 4 to 6 years old.

Your health care provider can give more information about each vaccine, including which one you should receive and when.

HIGH RISK INDIVIDUALS

For children under 12 months old who are unvaccinated, unvaccinated pregnant women, and individuals with compromised immune systems who have been exposed to measles, PA DOH or the local health department can provide specific recommendations to prevent the disease. These recommendations may include getting an MMR dose within 3 days of exposure or receiving immune globulin (Ig) treatment within 6 days of exposure to help prevent the disease. **There may be additional recommendations from PA DOH or local health department about who may need MMR or Ig depending on a specific measles exposure.**



IMMUNITY

You are protected from measles if you meet **at least one of the following**:



- You received two doses of the measles- vaccine and meet at least one of the following criteria:
- ☐ A school-age child (Grades K-12)
 - ☐ An adult who will be in a setting that poses a high risk for measles transmission (including students at post-high school education institutions, health care personnel, and international travelers)
 - ☐ International travelers of 12 months of age or older
 - ☐ An adult who will not be in a high-risk setting for measles transmission



- You received **one dose** of the measles vaccine and meet at least one of the following criteria:
- ☐ A preschool-aged child
 - ☐ An adult who will NOT be in a high-risk setting for measles transmission*
 - ☐ **International traveler infant** aged 6-11 months*



You have a laboratory confirmation of measles antibodies (IgG) or laboratory confirmation that you had measles at some point in your life.



You were born before 1957

***If you are unsure whether you are fully vaccinated or if you are at high-risk of measles infection, talk with your health care provider.**

Pennsylvania residents unsure about their vaccination record, may be able to obtain their [vaccination record online](#) or by contacting PA DOH at 877-774-4748 if you have questions about getting a copy of your records. Note that Pennsylvania is a voluntary reporting state (with some exceptions); and immunization records began being collected around 2000, therefore, administered doses prior to then will most likely not be included.

[Unvaccinated health care personnel](#) born before 1957 should contact their health care provider for additional guidance.

DISEASE PATTERN

Before widespread immunization, measles was a common childhood disease, with about 500,000 diagnosed cases and 500 deaths occurring each year in the United States. After widespread vaccination started in 1963, reported measles cases in the U.S. dropped by approximately 98%. In the late 1980s and early 1990s, there was a resurgence in measles cases in the U.S. caused by low vaccination rates.

Despite having a safe and effective vaccine for more than 50 years, measles is still the leading vaccine-preventable disease killer of children throughout the world. [Even in areas with high vaccination coverage](#), outbreaks still happen among groups of individuals who are under-vaccinated or unvaccinated. [Large outbreaks continue](#) to occur in Asia, Africa, and some parts of Europe.

Because signs of autism may appear around the same time children receive the MMR vaccine, some parents may worry that the vaccine causes autism. Vaccine safety experts, including experts at [CDC](#) and the American Academy of Pediatrics (AAP), agree that MMR vaccine is not responsible for increases in the number of children with autism. In 2004, a report by the Institute of Medicine (IOM) concluded that there is no link between autism and MMR vaccine, and that there is no link between autism and vaccines that contain thimerosal as a preservative.

Resources: [Measles \(Rubeola\) | Measles \(Rubeola\) | CDC](#) | [Preventing Measles Before and After Travel](#)

