

Measles (Rubeola)

Information Sheet for General Public

What is measles?

Measles is a highly contagious acute viral illness that is caused by the measles virus. It is spread through the air by coughing and sneezing. Measles can be prevented by vaccination with the MMR vaccine. The MMR vaccine is very safe and effective and protects against three diseases: measles, mumps, and rubella.

What are the symptoms of measles?

Measles typically begins with:

- High fever, and
- Cough, or
- Runny nose (also known as coryza), or
- Red, watery eyes (also known as conjunctivitis)

2-3 days after symptoms begin, tiny white spots (also known as Koplik spots) may appear inside the mouth. See Figure 1.

3-7 days after symptoms begin, a rash breaks out. It usually begins as flat red spots (see Figure 2.) that appear on the face/hairline and spread downward to the neck, trunk, 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 from the head to the rest of the body. When the rash appears, a person's fever may spike to more than 104° Fahrenheit. Rash can last 4-7 days and fades in the same order it appears, from head to the rest of the body.

Other symptoms include diarrhea, lack of appetite, and generalized lymph node swelling.

How does measles virus spread?

Measles is a highly contagious virus that lives in the nose and throat mucus of an infected person. It can spread to others through coughing and sneezing. Measles virus can live for up to

Figure 1. Images retrieved from <http://phil.cdc.gov/phil/home.asp>



Figure 2. Images retrieved from <http://phil.cdc.gov/phil/home.asp>



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2 hours on a surface or in an airspace where an infected person coughed or sneezed. If other people breathe the contaminated air or touch the infected surface, then touch their eyes, noses, or mouths, they can become infected.

Who is at risk for contracting measles?

Non-immune persons of any age can get measles.

How long does it take to show signs of measles after being exposed?

It takes an average of 10 days (range of 7-12 days) from exposure to the first symptom, which is usually fever. The measles rash does not usually appear until approximately 14 days (range of 7-21 days) after exposure.

How long can a person with measles be contagious to others?

Infected people can spread measles to others from four days before to four days after the rash appears. Persons with weakened immune systems may have prolonged excretion of the virus and can be contagious for the duration of illness. Measles is so contagious that if one person has it, more than 90% of the people exposed to that person or the airspace they coughed and/or sneezed in who are not immune will also become infected.

How serious is measles?

Measles can be serious for all age groups. However, children younger than 5 years and adults older than 20 years are more likely to suffer from measles complications such as ear infections, diarrhea, and other severe complications like pneumonia (infection of the lungs), encephalitis (swelling of the brain) and even death. Measles may cause pregnant women to have a spontaneous abortion, give birth prematurely, or have a low-birth-weight baby.

How common is measles?

Worldwide, 7 million measles cases are estimated to occur annually. As of May 17, 2019, the U.S. has reported 880 cases reported from 24 states since January 1, 2019. The last reported case of measles in West Virginia was in 2009 following international travel.

How is measles diagnosed?

A doctor considers a patient's symptoms and laboratory testing in order to diagnose measles.

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Is there a treatment for measles?

There is no specific treatment for measles. Supportive care can be provided to relieve symptoms and address complications.

Can measles be prevented?

Yes. There are safe and effective vaccines to prevent measles: MMR (measles, mumps, and rubella) vaccine and MMRV (measles, mumps, rubella and varicella) vaccine. See Measles Vaccination Information section.

Can someone get measles more than once?

No. Measles infection produces lifelong immunity to the virus.

Exposure & Isolation Information

What do I do if I or my child is exposed to a person with measles?

Contact your healthcare provider or local health department immediately to determine if you or your child are immune to measles. Although there is no treatment for measles, steps can be taken to prevent you from becoming ill if you are exposed.

If you suspect that you or your child may have measles, IMMEDIATELY call your doctor and let them know about your symptoms so that they can tell you what to do next. Your doctor can make special arrangements to evaluate you, if needed, without putting other patients and medical office staff at risk.

What do I do if I or my child is diagnosed with measles?

If you or your child is diagnosed with measles you should stay home and avoid contact with people until 4 days after the rash appeared. Staying home is an important way to prevent measles from spreading.

How long should someone with measles be isolated?

People should be isolated for 4 complete days after they develop a rash. People with measles should not leave their home or isolation during those days except for a medical emergency to prevent spreading measles to others.

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Measles Vaccination Information

There are safe and effective vaccines to prevent measles: MMR (measles, mumps, and rubella) vaccine and MMRV (measles, mumps, rubella and varicella) vaccine. The MMR vaccine is the most commonly given vaccine of the two.

How effective is the measles vaccine?

One dose of the MMR vaccine is about 93% effective at preventing measles; two doses of MMR vaccine are about 97% effective.

Who should get vaccinated/What are the vaccine recommendations?

- Children should get 2 doses of the MMR vaccine – the first dose at 12-15 months of age and the second dose at 4-6 years of age.
- Adults born after 1957 with no evidence of immunity should receive at least one dose of MMR vaccine.
- Students at post-high school educational institutions and healthcare workers with no evidence of immunity should receive two doses separated by at least 28 days.

What is considered as evidence of immunity?

Only written documentation of age-appropriate vaccination, laboratory evidence of immunity, laboratory confirmation of disease, or birth before 1957 are considered evidence of being immune to measles.

Why are people born before 1957 considered immune to measles?

People who were born before 1957 lived through several years before the first measles vaccine was licensed. At this time, measles was widespread, and people were very likely to have had measles as children. Infection with the measles virus results in lifelong immunity and these people are not able to get measles again.

Who should NOT get vaccinated?

Anyone who has ever had a life-threatening allergic reaction to the antibiotic neomycin, any other component of the MMR vaccine, or to a previous dose of the MMR or MMRV vaccine. Tell your doctor if you have any severe allergies.

Pregnant women should not get MMR vaccine. Women should avoid getting pregnant for 4 weeks after vaccination with MMR vaccine.

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Where can I get a measles vaccine?

You can get an MMR vaccine through your primary care physician, local health department, or other health care clinic. Pharmacists in West Virginia are not permitted to administer the MMR vaccine at this time. Visit vaccinefinder.org and select “MMR” to find additional locations where the vaccine is available.

I do not have insurance. Where can I get a measles vaccine?

The Vaccines for Children Program provides free vaccines for children with Medicaid or who lack insurance. Adults without insurance can receive vaccine from their physician, WV Health Right, or any federally qualified health center.

Do people who got the killed measles vaccine in the 1960s need to be revaccinated with the current, live measles vaccine?

Yes, talk to your doctor about getting revaccinated with the current MMR vaccine. If you’re unsure whether you fall into this group, you could ask your doctor to test your blood to determine whether you are immune, or you can get a dose of the MMR vaccine. There is no harm in getting another dose of the MMR vaccine.

I am an adult now but only got one dose of measles vaccine as a child. Do I need a second dose?

Adults born after 1957 need at least one dose of measles vaccine or documentation of immunity.

Adults in high-risk settings should make sure they have had two doses separated by at least 28 days. This includes students at post-high school education institutions, healthcare personnel, international travelers, and people who public health authorities determine are at increased risk for getting measles during a measles outbreak.

I received an MMR vaccine. How soon am I am protected?

People are usually fully protected 2 or 3 weeks after receiving the vaccine.

Do I ever need a booster?

No. People who received two doses of measles vaccine as children according to the U.S. vaccination schedule are protected for life.

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Can the measles vaccine give me the measles?

No. The MMR vaccine does not cause measles infection. It is possible for some people to develop a measles-like rash after being vaccinated, but the rash is much milder than measles and cannot be spread to other people. If you develop measles after getting the vaccine, you were likely exposed to the measles virus before you received the vaccine.

What are the risks from getting an MMR vaccine?

Getting the MMR vaccine is much safer than getting any of the three diseases the vaccine prevents (measles, mumps, and rubella). Most people who get an MMR vaccine do not have any problems; however, just as any medicine, a vaccine can cause allergic reactions or mild side effects in some people. You should discuss the MMR vaccine with your provider to determine risks.

What should I do if I'm unsure of my immunity to measles?

If you do not have written documentation of measles immunity, you should get vaccinated with the MMR vaccine. If you are not sure if you are fully vaccinated, talk with your doctor.

Where can I obtain vaccination records?

You can obtain vaccination records at your physician's office, your county's Board of Education office, or by calling the West Virginia Immunization Registry at (877) 408-8930.

Could I still get measles if I am fully vaccinated?

Very few people—about three out of 100—who get two doses of measles vaccine will still get measles if exposed to the virus. Fully vaccinated people are much more likely to have a milder illness and less likely to spread the disease to others.

Travel Recommendations

What are the international travel recommendations?

Infants aged 6-11 months should receive 1 dose of the MMR vaccine before international travel. Infants who receive the MMR vaccine before their first birthday should receive 2 additional doses (1 dose at age 12-15 months and another dose at least 28 days after the first dose).

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Adults should have two doses of the MMR vaccine before international travel.

What are the domestic travel recommendations?

When considering domestic travel, careful consideration should be given to the risk of exposure while visiting another area. If you plan to travel to an area that is experiencing measles transmission and are unsure of your immunity to measles, you should talk to your provider about the risk of exposure.

Measles Prevention in West Virginia

What is West Virginia doing to protect its residents from getting measles?

West Virginia is 1 of only 3 states that does not allow religious or philosophical exemptions from vaccination. For medical exemptions, West Virginia requires a state-approved medical exemption.

West Virginia registered child daycares and primary and secondary public and private schools require selected age-appropriate immunization.

Measles is immediately notifiable to the local and state health departments. Local health departments investigate measles as soon as it is reported.

West Virginia has a pediatric vaccine safety net which ensures patients under the age of 18 years can get vaccinated at local health departments.

Helpful Links for Additional Measles Information

WV DHHR Office of Epidemiology & Prevention Services Measles Information:

<https://oeps.wv.gov/measles/pages/default.aspx>

CDC Measles in the U.S. FAQ:

<https://www.cdc.gov/measles/about/faqs.html>

CDC for Healthcare Providers:

<https://www.cdc.gov/measles/hcp/index.html>

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CDC Measles Vaccination:

<https://www.cdc.gov/measles/vaccination.html>

CDC for Public Health Professionals:

<https://www.cdc.gov/measles/stats-surv.html>

CDC Outbreak Toolkit for Healthcare Providers:

<https://www.cdc.gov/measles/toolkit/healthcare-providers.html>

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