

Fact sheet

Measles (Rubeola)

What is measles?

Measles is a highly infectious respiratory disease caused by the measles virus.

How is measles spread?

Measles spreads easily. When someone with measles coughs, sneezes, or talks, infected droplets spray into the air, where other people can inhale them. The infected droplets may also land on a surface, where they remain active and contagious for several hours. You can contract the virus if you put your fingers in your mouth or nose or rub your eyes after touching an infected surface. The measles virus can survive for 2 hours in air or on surfaces where an infected person has been.

What are the signs and symptoms of measles?

The first symptoms of measles resemble a cold and appear about 7–12 days after exposure to the virus. These include a cough, fever of 101°F or greater, runny nose, and red, watery eyes, and sometimes white spots in the mouth called Koplik spots. These mild symptoms may last 3–5 days. A few days later, a rash begins around the ears and hairline, and spreads to cover the face, trunk, and arms. The rash may last about 5–6 days.

It is also important to know that people with measles can spread the disease from 4 days before to 4 days after the rash appears. This means an infected person can spread the disease before they know they are infected.

Who is most at risk?

People at highest risk are individuals who are unvaccinated, pregnant women, infants younger than 6 months of age, and those with weakened immune systems.

What type of health problems are caused by measles?

Measles can cause severe illness and complications, such as diarrhea, ear infections, pneumonia, encephalitis (brain infection), seizures, and death. These complications are more common among children younger than 5 years of age and adults older than 20 years of age.

How is measles diagnosed?

Your doctor can usually diagnose measles based on the rash and other signs. If necessary, a blood test or swab from the throat or nose can confirm whether the rash is truly measles.

How is measles treated?

There is no specific therapy for measles. Medical care is supportive and to help relieve symptoms and help with issues such as bacterial infections.

How can measles be prevented?

The best protection against measles is measles-mumps-rubella (MMR) vaccine. MMR vaccine provides long-lasting protection against all strains of measles. Children usually

get the MMR vaccine at 12–15 months of age and again at 4–6 years of age. Students at post-high school educational institutions who do not have evidence of measles immunity need 2 doses of MMR vaccine, separated by at least 28 days.

Adults who do not have evidence of immunity should get at least 1 dose of MMR vaccine. People 6 months of age and older who will be traveling internationally should be protected against measles. Healthcare personnel without evidence of immunity should get 2 doses of MMR vaccine, separated by at least 28 days. Visit [MMR vaccination](#) for more information.

People exposed to measles who cannot readily show evidence of immunity against measles may get the MMR vaccine as post-exposure prophylaxis (PEP). If immunity cannot be provided, these individuals should be excluded from the setting (school, hospital, childcare).

MMR vaccine, if administered within 72 hours of initial measles exposure, may provide some protection. If measles still develops, the illness usually has milder symptoms and lasts for a shorter time.

Pregnant women, infants and people with weakened immune systems who are exposed to the virus may receive an injection of proteins (antibodies) called immune serum globulin (IG). When given within 6 days of exposure to the virus, these antibodies can prevent measles or make symptoms less severe.

Can I still get measles if I am fully vaccinated?

Very few people—about 3 out of 100— who get 2 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. However, 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.

What is the difference between measles (rubeola) and German measles (rubella)?

Measles (rubeola) is a serious disease and is sometimes called "hard," "red," or "seven day measles." Individuals infected with measles frequently suffer from ear infections and/or pneumonia. German measles (rubella) is a mild, three-day infection that seldom leads to complications in children. However, rubella may cause birth deformities in babies born to mothers who are infected with the virus during pregnancy.

Where can I get more information?

- Your personal healthcare provider
- Your [local health department](#)
- [Utah Department of Health and Human Services](#)
- [Centers for Disease Control and Prevention \(CDC\)](#)

