Measles

Acute Infectious Disease of Childhood

Measles (also called rubeola*), an infectious disease caused by a virus, is highly contagious. It is easily spread by coughing, sneezing, or touching a contaminated surface. Typically considered a childhood disease, measles can also infect adults. After a person is exposed to the measles virus, it takes up to 2 weeks for symptoms to appear. The respiratory symptoms of measles are not specific, so diagnosis may not be made until the characteristic rash appears. Measles can have potentially serious, even fatal, complications. Serious complications are especially likely in young children and people with poor immunity.*

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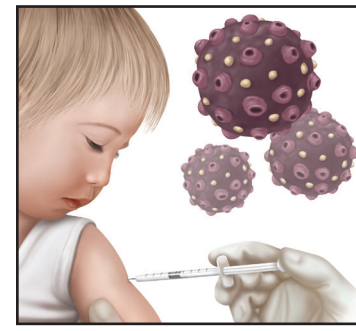
MEDICAL ILLUSTRATION: KRISTEN WIENANDT MARZEJON 2015

Although Measles Is Rare in the U.S., Small Outbreaks Sometimes Occur

Before an effective measles vaccine became available, several million people developed measles each year in the United States, and thousands were hospitalized. Nowadays, measles is seldom seen in the U.S. as a result of the availability of the vaccine. Unfortunately, measles is common in many countries that do not have widespread, effective immunization programs. Small outbreaks of measles occur in the U.S. when travelers with measles enter the country and infect people who have not been vaccinated.



The measles vaccine, usually given in two parts beginning at 12 to 15 months of age, confers lifetime protection.

Disease Spread and Symptoms

Measles may be spread for several days before and after the rash appears. As with other respiratory viruses, the measles virus is spread through the air in droplets, as well as when contaminated surfaces are touched.

The early symptoms of measles are similar to those of other common respiratory viral infections. Initial symptoms include fever, runny nose, sore throat, red eyes, and cough. Two to 3 days after these first symptoms appear, a skin rash begins on the face and upper body, traveling down the arms, chest, and back and finally reaching the legs and feet. As the rash spreads, the fever continues and can worsen. After another 3 to 4 days, the fever improves and the rash begins to slowly fade in a pattern similar to how it first appeared, disappearing from the face and upper body first and from the legs and feet last.

Diagnosis and Treatment

Measles is diagnosed on the basis of a characteristic rash, although a blood test may be used for confirmation. Some patients may also develop small white spots on the lining of the cheeks inside the mouth.

Treatment for a measles infection is aimed at relieving symptoms. Acetaminophen or ibuprofen may be used to reduce fever. Aspirin should not be used to treat a fever in children or adolescents, owing to the risk of Reye syndrome. Replenishing fluids lost through sweating due to a high or prolonged fever is important. Water, juices, electrolyte solutions, sports drinks, and frozen ice pops are good choices for fluid replacement. Measles is caused by a virus, so antibiotics are not effective.

Complications and Prevention

Complications from the measles virus can be serious. Ear infections, laryngitis, and croup are the most common complications; bronchitis, pneumonia, and encephalitis (swelling of the brain) are less common. It is very important for pregnant women to avoid measles exposure because the virus can cause low birthweight, early labor, or miscarriage.

Measles is preventable with the measles vaccine, which is usually given as part of an MMR vaccination (measles, mumps, and rubella) at age 12 to 15 months, with a second dose at age 4 to 6 years. The vaccine contains a weakened live measles virus that stimulates a healthy immune system to fight the measles virus without developing an infection. This immunity prevents infection upon exposure to the measles virus throughout the vaccinated person's lifetime.

People who have not been vaccinated and are exposed to measles can receive the measles vaccine up to 72 hours after exposure. In this case, the vaccine provides at least partial, if not complete, protection against measles infection. An immune booster (immune globulin) affords the same partial protection to pregnant women, people with poor immunity, and infants, if given within 6 days after measles exposure.