

New York State Department of Health

Measles (rubeola, hard measles, red measles)

Updated: September 2008

What is measles?

Measles is a highly contagious viral disease that can be very serious or even fatal. It begins with a fever that lasts for a couple of days, followed by a cough, runny nose, and conjunctivitis (pink eye). A rash starts on the face and upper neck, spreads down the back and trunk, then extends to the arms and hands, as well as the legs and feet. After about five days, the rash fades in the same order it appeared. Serious complications of measles include pneumonia and encephalitis (inflammation of the brain).

Who gets measles?

As a result of widespread immunization, the measles virus does not circulate in the United States. All reported cases of measles in the United States have been brought in from other countries, usually Europe and Asia. Travelers leaving the United States should be immune to measles. Although measles is usually considered a childhood disease, it can be contracted at any age by a person who never had the disease or been vaccinated. Unvaccinated individuals are 22 times more likely to get measles than are those who have two measles vaccines, usually given as measles, mumps and rubella vaccine (MMR).

How is measles spread?

Measles is highly contagious. The measles virus lives in the mucus in the nose and throat of infected people. When they sneeze, cough or talk, droplets spray into the air and the droplets remain active and contagious on infected surfaces for up to two hours.

What are the symptoms of measles?

Measles symptoms generally appear in two stages. In the first stage, which lasts two to four days, the individual may have a runny nose, cough and a slight fever. The eyes may become reddened and sensitive to light while the fever gradually rises each day, often peaking as high as 103° to 105°F. Koplik spots (small bluish white spots surrounded by a reddish area) may also appear on the gums and inside of the cheeks. The second stage begins on the third to seventh day and consists of a red blotchy rash lasting five to six days. The rash usually begins on the face and then spreads downward and outward, reaching the hands and feet. The rash fades in the same order that it appeared, from head to extremities. Other symptoms include weight loss, diarrhea and enlarged lymph glands throughout the body.

How soon do symptoms appear?

Symptoms usually appear in ten to 12 days, although they may occur as early as seven or as late as 18 days after exposure.

When and for how long is a person able to spread measles?

An individual is able to transmit measles from four days prior to and four days after rash onset.

What are the complications associated with measles?

Complications occur in up to 30 percent of all cases and are more common in those younger than five and older than 20 years of age. Pneumonia occurs in up to six percent of reported cases. Encephalitis (inflammation of the brain) may also occur. Other complications include middle ear infection, diarrhea and seizures. Infection of the mother during pregnancy has been associated with an increase in low-birth weight infants, premature labor, miscarriage and birth defects.

What is the treatment for measles?

There is no specific treatment for measles.

Does past infection make a person immune?

Yes. Immunity acquired after contracting the disease is usually permanent.

Is there a vaccine for measles?

Measles-containing vaccine is recommended for anyone born on or after January 1, 1957, who does not have a history of physician-diagnosed measles or a blood test confirming measles immunity. Individuals should receive 2 doses of MMR (measles, mumps, rubella) vaccine for maximum protection. The first dose should be given at 12 to 15 months of age. The second dose should be given at four to six years of age (age of school entry) at the same time as the DTaP and polio booster doses. MMR vaccine is recommended for all measles vaccine doses to provide increased protection against all three vaccine-preventable diseases: measles, mumps and rubella. Unprotected persons can get the vaccine at any age.

In New York State, measles immunizations are required of all children enrolled in pre-kindergarten programs and schools. Healthcare personnel and college students are also required to demonstrate immunity against measles.

Does the MMR vaccine cause autism?

There is no evidence to support that measles-mumps-rubella vaccine (MMR) cause autism.

What can be done to prevent the spread of measles?

Maintaining high levels of measles immunization in the community is critical to controlling the spread of measles. Infected individuals should be excluded from work or school during their infectious period. Measles-containing vaccine should be provided to susceptible contacts within 72 hours of exposure. Immune Globulin (IG) can be given to susceptible persons within six days of exposure.

Revised: December 2008