Measles (also called rubeola, red measles, or hard measles) is a serious rash illness that may be prevented by vaccination. Measles is a rare disease in Minnesota. Currently, measles most often occurs in susceptible persons (those who have never had measles or measles vaccine) who are traveling into and out of the United States. Once measles cases occur, there may be spread to persons or groups of people who have not been vaccinated.

**CAUSE**

Measles virus.

**SYMPTOMS**

The first symptoms seem like the beginning of a cold with a high fever, watery eyes, runny nose, and cough. A red blotchy rash appears on the third to seventh day, usually beginning on the face (along the hairline), spreading down the trunk and down the arms and legs. The fever may still be present after the rash starts. The rash usually lasts 4 to 7 days. Complications of measles are more common among children younger than 5 years of age and adults 20 years of age and older. These complications can include diarrhea, ear infection, pneumonia, and rarely encephalitis (inflammation of the brain).

**SPREAD**

Measles virus is spread when an infected person coughs, sneezes, or breathes out tiny droplets with measles virus into the air and another susceptible person breathes them in. The virus can sometimes float in the air and infect others for approximately two hours after a person with measles leaves a room. Also spread to susceptible persons by touching contaminated objects and then touching one’s eyes, nose, or mouth.

**INCUBATION**

It takes from 10 to 12 days from the time a person is exposed until cold-like symptoms begin. The time from exposure to when the rash starts is usually 14 days, but may be up to 21 days.

**CONTAGIOUS PERIOD**

From 4 days before to 4 days after the rash starts.

**EXCLUSION**

Childcare and School: Until 4 days after the rash appears. A child with measles should stay at home during this time period and not have any visitors.

Exclude unvaccinated children and staff who are not vaccinated within 72 hours of exposure or given immune globulin (IG) within 6 days of exposure. Susceptible children and staff who do not receive the above prophylaxis may be excluded for 21 days after the onset of rash in the last person who developed measles. Recommendations for exclusion should be done in collaboration with your local/state public health department.

**DIAGNOSIS**

A rash may occur with many viral illnesses. If measles is suspected, swabs from the throat or nose should be collected and a blood test for measles antibody should be done 3 to 5 days after rash begins.

Persons who have been exposed to measles should contact their health care provider.
if they develop cold-like symptoms with a fever and/or rash. They should not go to any health care facility without first calling to notify the clinic of their exposure. Suspected cases will be kept separate from others to prevent further spread.

TREATMENT
Recommend parents/guardians call their health care provider. There is no specific treatment for measles.

PREVENTION/CONTROL

- Minnesota state law requires that all children 15 months of age or older enrolled in a childcare setting or school be vaccinated against measles on or after their first birthday or have a legal exemption. Measles vaccine is usually combined with mumps and rubella vaccine (MMR) and given at 12-15 months of age. A second MMR vaccine is recommended at 4 to 6 years of age, but may be given as soon as four weeks after the first dose. Two doses or a legal exemption are required for kindergarten and seventh grade enrollment.

- Health care providers may choose to vaccinate children 6-12 months of age early if the child will be traveling internationally.

- Unvaccinated persons who have been exposed to measles should call their health care provider or local public health clinic as soon as possible to be vaccinated.

If measles vaccine is given within 72 hours of exposure, it may provide some protection. Encourage parents/guardians to notify the childcare provider or school when their child is vaccinated so their records can be updated.

Immune globulin (IG), if given within 6 days of exposure, can prevent or make the symptoms of measles milder. This should be strongly considered for contacts younger than one year of age, pregnant women who have never had measles or measles vaccine, or persons with a weakened immune system.

- Teach children and staff not to touch their eyes, nose, or mouth.

- Cover nose and mouth with tissue when coughing and sneezing or cough/sneeze into your sleeve. Dispose of used tissues in the trash.

- Wash hands thoroughly with soap and warm running water after contact with secretions from the nose or mouth or handling used tissues. **Thorough handwashing is the best way to prevent the spread of communicable diseases.** If soap and water are not available, use an alcohol-based hand sanitizer.

- Clean and sanitize mouthed toys, objects, and surfaces at least daily and when soiled (see Section 2).

For more information, call Hennepin County HSPHD-Epidemiology at (612) 543-5230 or call your local health department.