

New York State Department of Health

Rubella (German Measles or Three-Day Measles)

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What is rubella?

Rubella is a highly contagious viral disease characterized by slight fever, mild rash and swollen glands. Although most cases are mild, if rubella is contracted early in pregnancy, it can spread from the mother to her developing baby through the bloodstream and result in birth defects and/or fetal death. As a result of widespread immunization, rubella does not circulate in the United States, but can be contracted through foreign travel.

Who gets rubella?

The number of cases of rubella decreased dramatically in the United States following the introduction of the rubella vaccine in 1969. The decrease was greatest among children. Adults account for an increasing proportion of the few cases that still occur in United States. These are often individuals who remain unvaccinated for religious reasons or are foreign-born immigrants who come from areas where rubella vaccine is not routinely used. Rubella still remains a common disease in many parts of the world and the risk of exposure to rubella outside of the United States is high. Travelers to countries where rubella cases still occur should be immune to rubella.

How is rubella spread?

Rubella is spread by direct contact with nasal or throat secretions of infected individuals. Rubella can also be transmitted by breathing in droplets that are sprayed into the air when an infected person sneezes, coughs or talks.

What are the symptoms of rubella?

Rubella is a mild illness which may present few or no symptoms. Symptoms may include a rash, slight fever, joint aches, headache, discomfort, runny nose, sore throat and reddened eyes. The lymph nodes just behind the ears and at the back of the neck may swell, causing some soreness and/or pain. The rash, which may be itchy, first appears on the face and progresses from head to foot, lasting about three days. As many as half of all rubella cases occur without a rash.

How soon do symptoms appear?

The usual incubation period for rubella is 14 days; with a range of 12 to 23 days.

What are the complications associated with rubella?

Complications occur more frequently in adult women, who may experience arthritis or arthralgia, often affecting the fingers, wrists and knees. These joint symptoms rarely last for more than a month after appearance of the rash.

Up to 85 percent of infants infected with rubella in the first trimester of pregnancy will suffer birth defects and/or neurologic abnormalities (Congenital Rubella Syndrome, CRS).

What is the treatment for rubella?

There is no specific treatment for rubella.

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

Rubella may be transmitted from seven days before to seven days after the rash appears.

Does past infection with rubella make a person immune?

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

What is the vaccine for rubella?

Rubella vaccine is given in combination measles, mumps, rubella (MMR) vaccine and is recommended for anyone born on or after January 1, 1957 who does not have laboratory evidence of rubella immunity. Birth before 1957 is not acceptable evidence of rubella immunity for women who could become pregnant; women of childbearing age should have their immunity checked and receive rubella vaccine if needed.

Although only one dose of rubella-containing vaccine is required as acceptable evidence of immunity to rubella, children should receive two doses of MMR vaccine. Rubella vaccine is first given on or after a child's first birthday as MMR vaccine. Children usually receive the first dose between 12 and 15 months of age and the second dose prior to school entry at four to six years of age.

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

What is the danger of not being immunized against rubella?

Rubella infection is dangerous because of its ability to damage an unborn baby. If rubella immunization was discontinued, immunity to rubella would decline and rubella disease would return. The danger would be to pregnant women who, if infected, could pass the disease to their infants (fetuses) causing CRS.

What can be done to prevent the spread of rubella?

Maintaining high levels of rubella immunization in the community is critical to controlling the spread. Control of the spread of rubella is needed primarily to prevent the birth defects caused by CRS. Therefore, women of childbearing age should have their immunity checked and receive rubella vaccine if needed. Infected individuals should be excluded from work or school during their infectious period.

What is congenital rubella syndrome (CRS)?

Congenital rubella syndrome occurs among at least 25 percent of infants born to women who had rubella during the first three months of pregnancy. Infection of a pregnant woman can result in a miscarriage, stillbirth or the birth of an infant with abnormalities which may include deafness, blindness, cataracts, heart defects, mental retardation, liver and spleen damage.

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