

# Measles

## Measles



### **What causes measles?**

Measles is caused by a virus.

### **How does measles spread?**

Measles is spread through the air by infectious droplets and is highly contagious.

### **How long does it take to show signs of measles after being exposed?**

It takes an average of 10-12 days from exposure to the first symptom, which is usually fever. The measles rash doesn't usually appear until approximately 14 days after exposure, 2-3 days after the fever begins.

### **What are the symptoms of measles?**

Symptoms include fever, runny nose, cough, loss of appetite, "pink eye," and a rash. The rash usually lasts 5-6 days and begins at the hairline, moves to the face and upper neck, and proceeds down the body.

### **What are possible complications from measles?**

Diarrhea is the most common complication of measles (occurring in 8% of cases), especially in young children. Ear infections occur in 7% of reported cases. Pneumonia, occurring in 6% of reported cases, accounts for 60% of measles-related deaths. Approximately one out of one thousand cases will develop acute encephalitis, an inflammation of the brain. This serious complication can lead to permanent brain damage.

Measles during pregnancy increases the risk of premature labor, miscarriage, and low-birth-weight infants, although birth defects have not been linked to measles exposure.

Measles can be especially severe in persons with compromised immune systems. Measles is more severe in malnourished children, particularly those with vitamin A deficiency. In developing countries, the case-fatality rate may be as high as 25%.

### **How serious is measles?**

Measles can be a serious disease, with 30% of reported cases experiencing one or more complications. Death from measles occurs in approximately 2 per 1,000 reported cases in the United States. Complications from measles are more common among very young children (younger than five years of age) and adults (older than 20 years of age).

# Mumps

## Mumps



### **What causes mumps?**

Mumps is caused by a virus.

### **How does mumps spread?**

Mumps spreads from person to person through the air. It is less contagious than measles or chickenpox.

### **How long does it take to show signs of mumps after being exposed?**

The incubation period of mumps is 14-18 days, but can range from 14-25 days.

### **What are the symptoms of mumps?**

Individuals with mumps usually first feel sick with such nonspecific symptoms as headache, loss of appetite, and low-grade fever.

The most well-known sign of mumps is "parotitis," the swelling of the salivary glands, or parotid glands, below the ear. Parotitis occurs only in 30%-40% of individuals infected with mumps.

Up to 20% of persons with mumps have no symptoms of disease, and another 40%-50% have only nonspecific or respiratory symptoms.

### **How serious is mumps?**

In children, mumps is usually a mild disease. Adults may have more serious disease and more complications.

### **What are possible complications from mumps?**

Central nervous system involvement (meningitis) is common, but is usually not serious. Meningitis (with headache, stiff neck) occurs in up to 15% of people with mumps, but usually resolves without any permanent damage. Up to 50% of postpubertal males experience "orchitis," or testicular inflammation, as a complication of mumps. This may involve pain, swelling, nausea, vomiting, and fever, with tenderness of the area possibly lasting for weeks. Sterility is a rare complication, however.

An increase in spontaneous abortion (miscarriage) has been found among women who developed mumps during the first trimester of pregnancy; however, there is no evidence that mumps causes birth defects. Deafness, in one or both ears, can occur in approximately one per 20,000 reported cases of mumps.

### **Is there a treatment for mumps?**

There is no "cure" for mumps, only supportive treatment (bed rest, fluids, and fever reduction).

# Rubella

## Rubella



### **What causes rubella?**

Rubella is caused by a virus.

### **How does rubella spread?**

Rubella spreads from person to person through the air. Rubella is contagious but less so than measles and chickenpox.

### **How long does it take to show signs of rubella after being exposed?**

The incubation period varies from 12 to 23 days (average, 14 days). Symptoms are often mild and may not be noticed up to half of the time.

### **What are the symptoms of rubella?**

Children with rubella usually first break out in a rash, which starts on the face and progresses down the body. Older children and adults usually first suffer from low-grade fever, swollen glands in the neck or behind the ears, and upper respiratory infection before they develop a rash. Adult women often develop pain and stiffness in their finger, wrist, and knee joints, which may last up to a month. Up to half of people infected with rubella virus have no symptoms at all.

### **How serious is rubella?**

Rubella is usually a mild disease in children; adults tend to have more complications. The main concern with rubella disease, however, is the effect it has on an infected pregnant woman. Rubella infection in the first trimester of pregnancy can lead to fetal death, premature delivery, and serious birth defects.

### **What are possible complications from rubella?**

Encephalitis (brain infection) occurs in one in 6,000 cases, usually in adults. Temporary blood problems, including low platelet levels and hemorrhage, also occur rarely. Up to 70% of adult women with rubella have pain and/or swelling of the joints, which is usually temporary.

The most serious complication of rubella infection is Congenital Rubella Syndrome (CRS), the result when the rubella virus attacks a developing fetus. Up to 85% of infants infected during the first trimester of pregnancy will be born with some type of birth defect, including deafness, eye defects, heart defects, mental retardation, and more. Infection early in the pregnancy (less than 12 weeks gestation) is the most dangerous; defects are rare when infection occurs after 20 weeks gestation.

### **Is there a treatment for rubella?**

There is no "cure" for rubella, only supportive treatment (e.g., bed rest, fluids, and fever reduction).

### **MMR is the vaccine of choice when protection against any of these three**

**diseases.** Since vaccines containing measles, rubella, and mumps vaccine viruses were licensed, the numbers of reported cases of measles, mumps, rubella have decreased by more than 99%.

Children should receive the first dose of MMR vaccine at age 12-15 months. The second dose of MMR vaccine is recommended when children are aged 4-6 years.

### **People born before 1957**

Persons born in 1957 or later and who do not have a medical contraindication should receive at least one dose of MMR vaccine unless they have

- documentation of vaccination with at least one dose of measles-, rubella-, and mumps-containing vaccine or
- other acceptable evidence of immunity to these three diseases

Persons born before 1957 generally can be considered immune to measles and mumps. In addition, persons born before 1957, ***except women who could become pregnant***, generally can be considered immune to rubella.

MMR vaccine may be given to any person born before 1957 for which the vaccine is not contraindicated.

Adults who may be at increased risk for exposure to and transmission of measles, mumps, and rubella should receive special consideration for vaccination. These persons include:

- international travelers,
- persons attending colleges and other post-high school educational institutions,
- persons who work at health-care facilities and,
- all women of childbearing age should be considered susceptible to rubella unless they have received at least one dose of MMR or other live rubella virus vaccine on or after the first birthday or have serologic evidence of immunity.

**For more information on the MMR vaccine, please contact Carroll County Public Health/St. Anthony Home Health Agency at 712-794-5279 or 1-800-684-3020.**

**Need to find your old immunization record and don't know where to start? Follow this link for helpful tips: <http://www.vaccineinformation.org/topics/oldrecords.asp>**

References include:

Centers for Disease Control and Prevention. Measles, Mumps, and Rubella -- Vaccine Use and Strategies for Elimination of Measles, Rubella, and Congenital Rubella Syndrome and Control of Mumps: Recommendations of the Advisory Committee on Immunization Practices (ACIP). Available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/00053391.htm>  
Immunization Action Coalition. Vaccine Information for the Public and Health Professionals. Available at <http://www.vaccineinformation.org/>