

Human pathogen information sheet – vaccinations keep you safe!

What is rubella?

Rubella is highly contagious. The disease is caused by viruses. In childhood, rubella infection usually progresses without complications. If a pregnant woman falls ill, however, the unborn child can suffer severe damage. A vaccination programme has greatly reduced the number of cases seen in Germany.

How is rubella transmitted?

Person-to-person

Rubella viruses can spread only by person-to-person contact and airborne transmission is the commonest route. Coughing, sneezing or talking produces tiny drops of infected saliva: these airborne pathogens can then propagate and be inhaled by others.

Pregnant women who fall ill with rubella can pass the virus on to their unborn child.

What symptoms do the patients show?

In children

Only about half of all cases will result in visible signs of illness. The familiar skin rash starts in the face before then spreading over the entire body. The small, bright red spots then disappear again after 1 to 3 days. Lymph nodes at the nape of the neck and behind the ears may also swell up painfully. Flu-like symptoms, a high temperature and conjunctivitis may also occur. These symptoms then generally clear up completely after one week.

In young people and adults

Cases can be more severe here and the following *complications* can occur:

- ▶ Bronchitis, middle ear infections
- ▶ Young women in particular often suffer from swollen, painful joints
- ▶ Very rarely: encephalitis, inflammation of the heart muscles or pericardium

In pregnant women

One dangerous complication is congenital rubella syndrome (CRS). In this case, the rubella virus is transferred by the pregnant woman to her unborn child. This may cause damage to the child's inner ear, heart, eyes and, less frequently, other organs such as the brain, liver or spleen.

- ▶ In the first 8 weeks of pregnancy, 90% of embryos will suffer birth defects.
- ▶ Birth defects also occur less often at later stages of the pregnancy.
- ▶ Premature and stillbirths may be caused by the viruses as well.
- ▶ Around 15% to 20% of infected unborn children will die.

What's the incubation period – and how long are you infectious?

The first signs of illness occur some 2 to 3 weeks after infection. Patients are infectious one week before the skin rash appears and for up to one week afterwards. Children who have contracted congenital rubella syndrome can continue to excrete large quantities of the virus via their respiratory organs and in their urine for up to a year. After going through rubella, you are protected life-long and cannot catch it again.

Who is most at risk?

As rubella is highly infectious, most people without vaccination contract the disease as an infant or a child. As an adult, cases of rubella are often more serious. Rubella infections are especially dangerous for unborn children if the pregnant woman has no protective antibodies – such as are acquired by vaccination or having survived the illness.

What should I do if someone falls ill?

- ▶ In the acute phase, patients should stay in bed and avoid contact with others, especially pregnant women.
- ▶ Since there is no treatment available for targeting the cause – i.e. rubella – directly, the aim is to alleviate the symptoms.
- ▶ Before visiting your GP, inform surgery staff that you suspect a rubella infection. The surgery team can then take appropriate precautions – especially as regards pregnant women.

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What should I do if someone falls ill?

- ▶ If pregnant women with no immune protection or whose immune status is unknown come into contact with a rubella patient, they should seek the advice of their GP as soon as possible, who will be able to give them further information and monitor their health.
- ▶ Rubella is subject to the regulations of the German Prevention of Infection Act. Persons diagnosed with or suspected to have rubella are temporarily prohibited from attending or working at community facilities such as schools or nurseries. The same also applies to persons living in a household shared with a patient or someone suspected of being ill. Affected persons must inform the community facility of the diagnosed or suspected infection.
- ▶ The competent health authority or the attending doctor will determine when the affected person may resume attending or working at the community facility.

How can I protect myself?

Vaccination

The German Permanent Vaccination Commission (STIKO) recommends vaccination against rubella in combination with vaccination against measles and mumps as the MMR vaccination.

- ▶ A two-stage vaccination is recommended **for children**. Both vaccinations should be completed before the child is two years old. The first vaccination should take place at the age of 11 to 14 months – a practical approach is to administer this injection during the child's U6 early diagnosis exam. The first MMR vaccination can already be given when the child is 9 months old if the child is to be admitted to a community facility before it is 11 months old. The second vaccination should be given no sooner than 4 weeks after the first injection and before the child is 24 months old.
- ▶ **Unvaccinated children and teens** should be vaccinated in a two-step procedure as soon as possible.
- ▶ **Women of childbearing age** should be vaccinated twice before they start their first pregnancy. Vaccination against rubella during pregnancy is no longer possible. There must be at least a 1-month gap between immunisation and pregnancy.
- ▶ For **persons working in health service or community facilities** having contact with pregnant women, infants or toddlers in these facilities, a one-time vaccination against rubella is also recommended if these individuals were not vaccinated against rubella in childhood or if their vaccination status is unclear.

It is important to vaccinate both boys and girls in order to protect pregnant women, since any unvaccinated person is potentially contagious.

Avoid all contact with rubella patients if you do not have adequate immune protection.

Where can I find out more?

Your local health authority can provide you with further advice. Since rubella infections must be reported, they will also have the latest information and be very experienced in dealing with the disease.

More (specialist) information is also available online from the Robert Koch Institute (www.rki.de/roeteln).

For more information about how vaccinations stop infection, visit the website set up by the Federal Centre for Health Education (www.impfen-info.de).



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