CONDITION

Rubella

Rubella is a contagious viral infection that causes a mild rash but can seriously harm a developing baby during pregnancy.

WHAT IT IS
Contagious viral infection causing a usually mild rash

BODY SYSTEM
Skin, immune system, joints, and developing fetus

MAIN SYMPTOMS
Pink rash, mild fever, swollen glands, joint pain

WHAT CAUSES IT
Infection with the rubella virus

HOW IT IS DIAGNOSED
Rubella antibody blood tests and PCR

MAIN TREATMENT
Supportive care and preventing spread

CAN IT BE CURED?
Yes - infection usually clears naturally

IS IT AN EMERGENCY?
Sometimes - trouble breathing, confusion, or severe bleeding

LONG-TERM OUTLOOK
Most recover fully; pregnancy infection can harm the fetus

Overview

Rubella is an infection caused by the rubella virus. It is also called German measles, although it is not the same as measles.

For most children and adults, rubella is mild. It may cause a pink or red rash, a low fever, swollen glands, and cold-like symptoms. Some people have no symptoms but can still spread the virus.

Rubella matters most during pregnancy. If someone catches it while pregnant, particularly early in pregnancy, the virus can pass to the developing baby. This may cause miscarriage, stillbirth, or congenital rubella syndrome. Congenital means present from birth. The syndrome can affect hearing, eyesight, the heart, and development.

Vaccination has made rubella uncommon in countries with high vaccination rates. Cases can

still occur, including after international travel, and outbreaks are possible where vaccination levels are lower.

Symptoms

Symptoms usually begin about two to three weeks after contact with the virus. They are often mild and may be mistaken for another viral infection.

The most recognizable symptom is a fine pink or red rash. It usually starts on the face and then spreads down the body. The rash often lasts around three days, although its appearance and duration can differ.

Other possible symptoms include:

Joint pain and stiffness are more common in teenagers and adults, particularly women. They may begin around the same time as the rash and can continue after the other symptoms have settled.

Some people do not develop a rash. Others have no noticeable symptoms at all. This means symptoms alone cannot reliably confirm or rule out rubella.

- A low fever
- Swollen or tender glands behind the ears or at the back of the neck
- A runny or blocked nose
- A sore throat or cough
- Red or irritated eyes
- Headache
- Tiredness
- Reduced appetite
- Aching or painful joints

Causes and risk factors

Rubella is caused by the rubella virus. It spreads between people through droplets released from the nose and throat, such as during coughing or sneezing. Close contact with an infected person increases the chance of catching it.

A person can spread rubella before realizing they are unwell. The infectious period generally

begins about seven days before the rash and continues for about seven days after it appears.

Factors that increase the chance of infection include:

A pregnant person can pass the virus through the placenta to the fetus. The placenta is the organ that supplies the fetus with oxygen and nutrients. The risk of serious effects is highest when infection occurs early in pregnancy.

- Not having received rubella-containing vaccination
- Not being immune from a past infection or vaccination
- Close contact with someone who has rubella
- Travel to, or contact with someone from, an area where rubella is circulating
- Living or working in a setting where infections can spread easily

Diagnosis

A rash and swollen glands can suggest rubella, but many other infections cause similar symptoms. A medical history and physical examination are therefore not enough to confirm it.

Diagnosis usually involves a blood test for antibodies. Antibodies are proteins made by the immune system in response to an infection or vaccine. Testing may look for:

IgM results can sometimes be falsely positive, especially in places where rubella is uncommon. The timing of the test also matters. Further testing may be needed before a result is considered confirmed.

A PCR test may be used to find the virus's genetic material in a throat, nose, or urine sample. PCR is most useful when samples are collected at the right time around the start of the rash.

Testing during pregnancy needs careful interpretation. A positive IgG result usually means there is existing immunity, not a current infection. Suspected exposure or a possible recent infection may require repeat testing and assessment by maternity, infectious disease, and public health teams.

- IgM antibodies, which may suggest a recent infection
- IgG antibodies, which can show previous vaccination or infection
- A rise in IgG between two blood samples, which may support recent infection

Treatment and management

There is no specific antiviral medicine that removes the rubella virus. The immune system usually clears the infection without targeted treatment.

For a mild infection, management focuses on comfort and preventing spread. This may include rest, fluids, and suitable medicine for fever or discomfort. A pharmacist or healthcare professional can advise which over-the-counter medicines are appropriate, especially during pregnancy or for children.

Antibiotics like amoxicillin or doxycycline do not treat rubella because antibiotics work against bacteria, not viruses.

If rubella is suspected, avoid close contact with other people and call ahead before attending a clinic. This allows staff to reduce the chance of exposing pregnant people or anyone who may not be immune. Public health teams may become involved because confirmed and suspected cases often require reporting and contact tracing.

People with rubella are generally advised to remain away from work, school, childcare, and public gatherings for seven days after the rash first appears. Local public health advice should be followed.

Pregnant people with possible rubella need prompt specialist assessment. Care may include confirming the infection, reviewing the stage of pregnancy, and discussing testing and monitoring. These discussions should explain the possible outcomes without assuming what decision the person will make.

Babies born with congenital rubella syndrome need coordinated care based on the organs affected. This may involve hearing, eye, heart, developmental, and infectious disease specialists.

Complications

Complications are uncommon in otherwise healthy children and adults, but they can occur.

Temporary joint inflammation may cause pain, stiffness, or swelling. This is more common in adults and can last for several weeks.

A low platelet count is a rare complication. Platelets help the blood clot, so a very low count may cause unusual bruising or bleeding. Inflammation of the brain, called encephalitis, is also rare but serious.

The most important complications occur when rubella is caught during pregnancy. Possible outcomes include:

The likelihood and type of fetal effects are strongly linked to when infection occurs. Infection

in early pregnancy carries the greatest risk. Later infection generally carries a lower risk of major birth differences, but it still requires specialist assessment.

Some effects of congenital rubella syndrome are present at birth. Others, including hearing or developmental difficulties, may become clearer as the child grows.

- Miscarriage or stillbirth
- Hearing loss
- Cataracts or other eye conditions
- Heart defects
- Poor growth
- Learning or developmental difficulties
- Congenital rubella syndrome

Prevention

Rubella is usually preventable through vaccination. The rubella vaccine is commonly given as part of the combined measles, mumps, and rubella vaccine, known as MMR. The routine schedule and number of doses are set by each country's immunization program.

MMR is a live attenuated vaccine. This means it contains weakened viruses that train the immune system without causing the usual infections. It is not given during pregnancy. People found to be non-immune during pregnancy are commonly offered vaccination after the pregnancy.

Public health guidance advises avoiding pregnancy for 28 days after an MMR vaccination. If MMR is accidentally given during pregnancy, this alone is not considered a reason to end the pregnancy, but the maternity team should be told.

Other steps that help limit spread include:

Vaccination after exposure has not been shown to prevent an infection that has already begun. It may still protect against future exposure if the person is eligible for vaccination.

- Staying home during the infectious period
- Avoiding close contact with pregnant people
- Covering coughs and sneezes
- Washing hands regularly

- Calling ahead before visiting a healthcare setting

Living with it and what to expect

Most children and adults recover fully within about a week, although tiredness or joint discomfort may last longer. The rash itself is usually brief.

After infection, people generally develop long-term immunity. A later rash or fever should not automatically be assumed to be rubella because many other conditions can look similar.

Rubella usually does not need long-term follow-up after an uncomplicated recovery. Routine follow-up may be appropriate if joint symptoms continue, test results need clarification, or public health staff are monitoring close contacts.

Pregnancy changes what to expect. Follow-up may continue for weeks or months while specialists assess the pregnancy and discuss the meaning and limits of available tests. No test can always predict exactly how an individual fetus will be affected.

Children with congenital rubella syndrome can have very different needs. Some have one main difficulty, such as hearing loss. Others have several health and developmental concerns requiring long-term support. Early hearing, vision, heart, and developmental assessments can help identify needs as they emerge.

When to get medical help

Seek prompt medical advice if you develop a rash and think you may have rubella. Call before attending in person so the healthcare setting can prevent possible spread.

Contact a maternity or medical service the same day if you are pregnant and:

Do not wait for symptoms after a pregnancy exposure. Rubella can spread before a rash appears, and some infected people have no symptoms.

Arrange routine follow-up if fever or joint symptoms are not settling, the rash changes or returns, or you need help understanding test or vaccination records.

Seek emergency care for trouble breathing, severe confusion, a seizure, loss of consciousness, or significant unexplained bleeding. These are not typical features of uncomplicated rubella and need urgent assessment.

- Have been in close contact with someone who may have rubella
- Develop a new rash or fever

- Are told that a blood test may show recent rubella infection
- Are unsure whether you are immune after a possible exposure

Common questions

Is rubella the same as measles?

No. Rubella and measles are caused by different viruses. Both can cause a rash, but measles is usually more severe. The combined MMR vaccine protects against both infections as well as mumps.

Can adults get rubella?

Yes. Anyone without immunity can catch rubella. Adults may be more likely than children to have joint pain or stiffness. Infection during pregnancy is the main concern because of the possible effects on the fetus.

Can I get rubella if I was vaccinated?

Vaccination provides strong protection, but no vaccine prevents every infection. If you have symptoms or a significant exposure, your vaccination history and laboratory testing may be reviewed rather than assuming that rubella is impossible.

What should I do if I am pregnant and exposed to rubella?

Contact your maternity or medical team promptly, even if you feel well. Do not attend without calling first. Your vaccination records and previous blood tests may show immunity, and further blood testing may be arranged if needed.

How long is rubella contagious?

A person is generally considered contagious from about seven days before the rash begins until seven days after it appears. Public health teams may give more specific instructions based on test results and the circumstances.

Can you have rubella without a rash?

Yes. Some people have mild symptoms without a clear rash, and others have no symptoms. Laboratory testing is needed to confirm suspected infection, particularly during pregnancy or as part of an outbreak investigation.

Sources



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