



RUBELLA DISEASE, ETIOLOGY, PATHOGENESIS, CLINIC, DIAGNOSTICS AND MODERN METHODS OF TREATMENT

Turdiyev To'ymurod O'tkir o'g'li

*Faculty of Medicine, Bukhara State Medical Institute named after
Abu Ali Ibn Sina*

Abstract. Rubella is a contagious illness you get from the RuV virus. It causes a rash that usually starts on your face and moves down your body. Congenital rubella syndrome (CRS) is the most serious form of rubella. Anyone can get rubella, but the most serious form of rubella, congenital rubella syndrome, affects newborns born to someone who had rubella during pregnancy.

Keywords: Congenital rubella syndrome (CRS), Rash, low fever, cough, cataracts, glaucoma.

What is rubella (German measles)?

Rubella is a contagious illness you get from the RuV virus. It causes a rash that usually starts on your face and moves down your body. It can cause serious illness in newborns of people who had rubella while pregnant.

Rubella is also called German measles or three-day measles. Even though it causes a rash like measles, rubella happens because of a different virus than measles.

What is congenital rubella syndrome?

Congenital rubella syndrome (CRS) is the most serious form of rubella. It happens when a pregnant person passes rubella to the fetus. This can cause skin, hearing, vision, heart and brain problems in newborns.

Are rubella and measles the same?

No, rubella and measles are different illnesses. They both give you a rash, but different viruses cause them.

Who does rubella affect?

Anyone can get rubella, but the most serious form of rubella, congenital rubella syndrome, affects newborns born to someone who had rubella during pregnancy.

The U.S. eliminated rubella (meaning it's no longer continuously spread) in 2004, but you can still get rubella in other parts of the world.

How common is rubella?

There are about 26,000 cases of rubella worldwide each year. It's most common in Asia, Africa and the Middle East. There are only a few cases diagnosed each year in the U.S. since the disease's elimination.



Symptoms and Causes

What are the symptoms of rubella?

Rubella's prominent symptom is a rash that usually starts on your face and moves down the rest of your body. In young children, a rash is often their first symptom. In older children and adults, the rash can appear a few days after other symptoms start.

Up to 50% of people have no symptoms at all but can still spread rubella to other people.

Symptoms of rubella include:

- Rash.
- Low fever.
- Cough.
- Sore throat.
- Runny nose.
- Headache.
- Pink eye.
- Joint pain.
- Generally feeling unwell (malaise).
- Swollen lymph nodes.

What causes rubella?

The cause of rubella is the RuV virus. Viruses are small shells with a genetic code inside (RNA or DNA). They use cell "machinery" from humans, animals or plants to make more copies of themselves.

Is rubella contagious?

Yes, rubella is contagious — it spreads from person to person when you cough, sneeze or touch surfaces with the virus on them. It can also spread from a pregnant person to the fetus. You can be contagious with rubella without symptoms.

How long am I contagious with rubella?

You're contagious with rubella for about a week before and a week after the rash appears.

Can adults get rubella?

Yes, rubella is contagious and adults can get it from kids or other adults.

What is rubella in pregnancy?

Rubella is most serious in pregnancy. If you're pregnant and get rubella, especially in the first trimester, your child is at high risk for congenital rubella syndrome (CRS). CRS is preventable if you get vaccinated before getting pregnant.

What causes a positive rubella test in pregnancy?

If you're not sick and your healthcare provider does a blood test for rubella before you get pregnant or while you're pregnant, they're looking for antibodies to rubella. Your body makes antibodies when it finds a harmful invader in your body.



If you test positive to a rubella antibody test, it means you either had rubella before or received a vaccination for it. Either way, you're immune to rubella and are unlikely to get it while you're pregnant.

What are the symptoms of congenital rubella syndrome (CRS)?

Symptoms of congenital rubella syndrome are present at birth. If you get rubella while pregnant, your baby could be born with one or more symptoms of CRS, including:

- Vision loss from eye disease, including cataracts and glaucoma.
- Hearing loss.
- Heart defects.
- Neurological (brain) differences, including underdeveloped brain (microcephaly), brain inflammation and learning and behavioral differences.
- Bone disease.
- Low blood counts (thrombocytopenia, hemolytic anemia).
- Thyroid disease.
- Enlarged liver and spleen (hepatosplenomegaly).
- Type 1 diabetes (insulin-dependent diabetes mellitus).

Diagnosis and Tests

How is rubella diagnosed?

To diagnose rubella, your healthcare provider will give you a physical exam and look at your rash if you have one. They might test your blood, pee (urine) or mucus from your nose or throat for signs of rubella.

What tests are used to diagnose rubella?

Tests used to diagnose rubella include:

- **Blood tests.** Your provider will take a sample of blood from your arm with a small needle. They'll look for antibodies to rubella, which would show that you're either currently sick, have had rubella before or are vaccinated against rubella.
- **Nasal or throat swabs.** Your provider will use a soft-tipped stick (swab) to get a sample from your nose or throat. A lab will test the sample for signs of rubella.
- **Urine tests.** You'll pee in a sterile cup. A lab will test your pee (urine) for signs of rubella.

What does it mean if my rubella test is positive?

If your nose, throat or pee is tested and comes back positive, it means you're currently infected with rubella. If your rubella blood test is positive, it means you have antibodies to rubella. Antibodies are special proteins that know how to identify specific invaders, like viruses and bacteria.

If you test positive when you're not sick, having antibodies means you were sick with rubella before or received a vaccination for it. You're likely to be immune to rubella if you have antibodies to it — in other words, your immune system knows how to destroy it before you get sick.



Management and Treatment

How is rubella treated?

There's no specific medicine for treating rubella. It usually gets better on its own. You can treat symptoms at home with over-the-counter medications. Your healthcare provider may suggest quarantining away from others to reduce the spread of rubella.

How do I manage symptoms of rubella?

Most of the time, you can manage the symptoms of rubella at home with over-the-counter medicines, like acetaminophen (also known as paracetamol or under the brand names Tylenol® or Panadol®) or cough and cold medicines. Ask your healthcare provider about the best way to treat your symptoms. Check with your pediatrician before giving medications to your child for rubella.

How is congenital rubella syndrome treated?

The ways to treat congenital rubella syndrome depend on its severity. Some conditions are treatable with medication or surgery. Other damage is permanent, and it's only possible to manage the condition to improve quality of life.

Prevention

How can I prevent rubella?

The best way to prevent rubella is vaccination with the MMR vaccine. It's about 97% effective at preventing rubella infection. That means that out of 100 fully vaccinated people, three or fewer will get rubella. Both children and adults can receive a rubella vaccination.

If you plan on becoming pregnant, you should get vaccinated or tested for rubella antibodies at least one month before trying to get pregnant.

Other ways to protect yourself against rubella include:

- Wash your hands frequently, especially if you're sick.
- Don't share personal items — like cups or utensils — with anyone else.
- Cover your mouth and nose when sneezing or coughing.
- If traveling, know if rubella or other infectious diseases are more common at your destination.

What vaccines are available for rubella?

Rubella vaccination can involve either the MMR or the MMRV vaccine.

- **MMR vaccine.** The MMR vaccine protects against measles, mumps and rubella. Anyone over 12 months old can get the MMR vaccine.
- **MMRV vaccine.** The MMRV vaccine protects against measles, mumps, rubella and chickenpox (varicella). Only children between 12 months and 12 years old can get the MMRV vaccine.

Who can get the rubella vaccine?

Most children and adults over the age of 12 can get vaccinated against rubella. Some people don't need to get the vaccine and others shouldn't get it.

You don't need the rubella vaccine if you:

- Have already been vaccinated (you may need written documentation for travel, school or work).



- Get a blood test that shows you have antibodies to rubella (you're immune to rubella).
- Were born before 1957. That's because anyone born before vaccines became available has almost certainly had rubella.

Experts recommend against getting the rubella vaccine if you:

- Are allergic to anything in the vaccine.
- Are pregnant.
- Have a weakened immune system due to HIV/AIDs, cancer or medications you're taking.
- Have recently had a blood transfusion. Ask your healthcare provider if you should postpone vaccination.
- Have tuberculosis.
- Have gotten other vaccines within the past four weeks.

If you bruise or bleed easily or have a close relative who has immune system problems, ask your provider if you should get the rubella vaccination.

REFERENCES

1. Saodat, A., Vohid, A., Ravshan, N., & Shamshod, A. (2020). MRI study in patients with idiopathic coxarthrosis of the hip joint. *International Journal of Psychosocial Rehabilitation*, 24(2), 410-415.
2. Axmedov, S. J. (2023). EFFECTS OF THE DRUG MILDRONATE. *Innovative Development in Educational Activities*, 2(20), 40-59.
3. Jamshidovich, A. S. (2023). ASCORBIC ACID: ITS ROLE IN IMMUNE SYSTEM, CHRONIC INFLAMMATION DISEASES AND ON THE ANTIOXIDANT EFFECTS. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, 3(11), 57-60.
4. Jamshidovich, A. S. (2023). THE ROLE OF THIOTRIAZOLINE IN THE ORGANISM. *Ta'lim innovatsiyasi va integratsiyasi*, 9(5), 152-155.
5. Jamshidovich, A. S. (2023). HEPTRAL IS USED IN LIVER DISEASES. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 35(3), 76-78.
6. Jamshidovich, A. S. (2023). EFFECT OF TIVORTIN ON CARDIOMYOCYTE CELLS AND ITS ROLE IN MYOCARDIAL INFARCTION. *Gospodarka i Innowacje.*, 42, 255-257.
7. Jamshidovich, A. S. (2024). NEUROPROTECTIVE EFFECT OF CITICOLINE. *EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE*, 4(1), 1-4.
8. Jamshidovich, A. S. (2024). THE ROLE OF TRIMETAZIDINE IN ISCHEMIC CARDIOMYOPATHY. *Journal of new century innovations*, 44(2), 3-8.
9. Jamshidovich, A. S. (2024). ВСЕ ЭФФЕКТЫ ПРЕПАРАТА ИМУДОН. *TADQIQOTLAR*, 31(2), 39-43.
10. Jamshidovich, A. S. (2024). SPECIFIC FEATURES OF THE EFFECT OF THE HEPARIN DRUG. *TADQIQOTLAR*, 31(2), 34-38.
11. Jamshidovich, A. S. (2024). USE OF GLUCOCORTICOSTEROIDS IN PEDIATRIC PRACTICE. *TADQIQOTLAR*, 31(2), 29-33.



12. Jamshidovich, A. S. (2024). РОЛЬ ИНТЕЛЛАНОВОГО СИРОПА И ЦИАНОКОБАЛАМИНА В УЛУЧШЕНИИ ПАМЯТИ. *TADQIQOTLAR*, 31(2), 44-48.
13. Jamshidovich, A. S. (2024). TREATMENT OF POLYNEUROPATHY WITH BERLITHION. *Ta'limning zamonaviy transformatsiyasi*, 4(1), 201-209.
14. Jamshidovich, A. S. (2024). USE OF ASCORIL IN BRONCHIAL ASTHMA. *Ta'limning zamonaviy transformatsiyasi*, 4(1), 191-200.
15. Jamshidovich, A. S. (2024). THE IMPORTANCE OF THE DRUG ARTOXAN. *Ta'limning zamonaviy transformatsiyasi*, 4(1), 182-190.
16. Jamshidovich, A. S. (2024). THE ROLE OF RENGALIN IN CHRONIC BRONCHITIS. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(4), 116-123.
17. Jamshidovich, A. S. (2024). THE ROLE OF ALMAGEL DRUG IN GASTRIC AND DUODENAL WOUND DISEASE. *Ta'limning zamonaviy transformatsiyasi*, 4(1), 173-181.
18. Jamshidovich, A. S. (2024). THE ROLE OF CODELAK BRONCHO SYRUP IN CHILDREN'S PRACTICE. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(4), 109-115.
19. Jamshidovich, A. S. (2024). THE AEVIT DRUG EFFECT. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(4), 124-132.
20. Jamshidovich, A. S. (2024). THE IMPORTANCE OF ALCHEBA DRUG IN POST-STROKE APHASIA. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(4), 132-138.
21. Jamshidovich, A. S. (2024). THE ROLE OF HYALURON CHONDRON DRUG IN OSTEOARTHRITIS. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(4), 139-145.
22. Jamshidovich, A. S. (2024). EFFECT OF SIMETHICONE DROP IN FLATULENCE. *Лучшие интеллектуальные исследования*, 14(1), 95-101.
23. Jamshidovich, A. S. (2024). BENEFITS OF BETADINE SOLUTION. *Лучшие интеллектуальные исследования*, 14(1), 116-122.
24. Jamshidovich, A. S. (2024). EFFECT INHALED GLUCOCORTICOIDS IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND BRONCHIAL ASTHMA. *TADQIQOTLAR*, 31(1), 171-180.
25. Jamshidovich, A. S. (2024). USE OF VIGANTOL IN RICKETS. *Лучшие интеллектуальные исследования*, 14(1), 102-108.
26. Jamshidovich, A. S. (2024). THE VITAPROST DRUG RESULTS. *Лучшие интеллектуальные исследования*, 14(1), 109-115.
27. Jamshidovich, A. S. (2024). THE ROLE OF BISEPTOL DRUG IN URINARY TRACT DISEASE. *Лучшие интеллектуальные исследования*, 14(1), 89-94.
28. Jamshidovich, A. S. (2024). PROPERTIES OF THE DRUG DORMIKIND. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(5), 88-92.
29. Jamshidovich, A. S., & Komilovich, E. B. (2024). IMMUNOMODULATORY FUNCTION OF DIBAZOL DRUG. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(5), 83-87.



30. Jamshidovich, A. S., & Komilovich, E. B. (2024). ADVANTAGES OF THE DRUG NERTRAL. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(5), 98-101.
31. Эргашов, Б. К., & Ахмедов, Ш. Ж. (2024). ГИПЕРТОНИЧЕСКАЯ БОЛЕЗНЬ ЭТИОЛОГИЯ. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(6), 59-69.
32. Komilovich, E. B., & Jamshidovich, A. S. (2024). HYPERTENSION, CLASSIFICATION AND PATHOGENESIS. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(6), 50-58.
33. Komilovich, E. B., & Jamshidovich, A. S. (2024). YURAK ISHEMIYASI. STENOKARDIYADA SHOSHILINCH TIBBIY YORDAM. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(6), 12-20.
34. Komilovich, E. B., & Jamshidovich, A. S. (2024). HYPERTENSION ETIOLOGY. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(6), 32-41.
35. Komilovich, E. B., & Jamshidovich, A. S. (2024). CARDIAC ISCHEMIA. ANGINA NURSING DIAGNOSIS AND CARE. *Journal of new century innovations*, 46(1), 44-52.
36. Jamshidovich, A. S. (2024). IMPORTANT INDICATIONS OF THE DRUG WOBENZYM. *Journal of new century innovations*, 46(1), 29-32.
37. Jamshidovich, A. S. (2024). THE RESULTS OF THE EFFECT OF THE DRUG VALIDOL. *Journal of new century innovations*, 46(1), 19-23.
38. Jamshidovich, A. S. (2024). VIFERON USE IN CHILDREN. *Journal of new century innovations*, 46(1), 24-28.
39. Jamshidovich, A. S. (2024). USE OF DUSPATALIN (MEBEVERINE HYDROCHLORIDE) IN GASTROINTESTINAL DISEASES. *ОБРАЗОВАНИЕ НАУКА И ИННОВАЦИОННЫЕ ИДЕИ В МИРЕ*, 38(5), 93-97.
40. Jamshidovich, A. S. (2024). ЭФФЕКТЫ СИРОПА ДЕПАКИНА (ВАЛЬПРОЕВАЯ КИСЛОТА). *Ta'lim innovatsiyasi va integratsiyasi*, 14(2), 148-152.
41. Jamshidovich, A. S., & Komilovich, E. B. (2024). THE IMPORTANCE OF THE DRUG ALLOCHOL FOR CHRONIC CHOLECYSTITIS. *Ta'lim innovatsiyasi va integratsiyasi*, 14(2), 133-137.
42. Jamshidovich, A. S., & Komilovich, E. B. (2024). ВАЖНЫЕ СВОЙСТВА ПРЕПАРАТА ДЕНОЛ (субцитрат висмута). *Ta'lim innovatsiyasi va integratsiyasi*, 14(2), 143-147.
43. Jamshidovich, A. S., & Komilovich, E. B. (2024). SPECIAL FEATURES OF BUDECTON DRUG. *Ta'lim innovatsiyasi va integratsiyasi*, 14(2), 138-142.
44. Jamshidovich, A. S. (2024). ЭФФЕКТИВНОЕ ВОЗДЕЙСТВИЕ ПРЕПАРАТА КЕЙВЕР. *Ta'lim innovatsiyasi va integratsiyasi*, 15(3), 137-143.
45. Jamshidovich, A. S. (2024). USEFUL PROPERTIES OF THE DRUG YODOFOL. *Ta'lim innovatsiyasi va integratsiyasi*, 15(3), 144-149.
46. Jamshidovich, A. S. (2024). FITOTERAPIYANING AKUSHER-GINEKOLOGIYADA ANAMIYATI. *Лучшие интеллектуальные исследования*, 15(2), 121-125.
47. Jamshidovich, A. S. (2024). THE IMPORTANCE OF THE DRUG DOPROKIN. *Лучшие интеллектуальные исследования*, 15(2), 109-114.



48. Jamshidovich, A. S. (2024). THE EFFECT OF DOSTINEX ON THE BODY. *Лучшие интеллектуальные исследования*, 15(2), 115-120.
49. Jamshidovich, A. S. (2024). РЕЗУЛЬТАТЫ ЭФФЕКТИВНОГО ДЕЙСТВИЯ ПРЕПАРАТА КАНЕФРОН. *Лучшие интеллектуальные исследования*, 15(2), 138-143.
50. Jamshidovich, A. S. (2024). СОВРЕМЕННЫЕ ЭФФЕКТЫ ПРЕПАРАТА ИНДОЛ. *Лучшие интеллектуальные исследования*, 15(2), 126-131.
51. Jamshidovich, A. S. (2024). EFFECT OF ISMIZHEN DRUG ON BODY IMMUNITY. *Лучшие интеллектуальные исследования*, 15(2), 132-137.
52. Jamshidovich, A. S. (2024). POSITIVE EFFECTS OF THE DRUG CARCIL. *Ta'lim innovatsiyasi va integratsiyasi*, 15(3), 127-131.
53. Jamshidovich, A. S. (2024). РЕЗУЛЬТАТЫ ЭФФЕКТИВНОГО ДЕЙСТВИЯ КАВИНТОНА. *Ta'lim innovatsiyasi va integratsiyasi*, 15(3), 132-136.
54. Jamshidovich, A. S. (2024). Современный Эффект Спрея Мометазон. *Research Journal of Trauma and Disability Studies*, 3(3), 62-65.