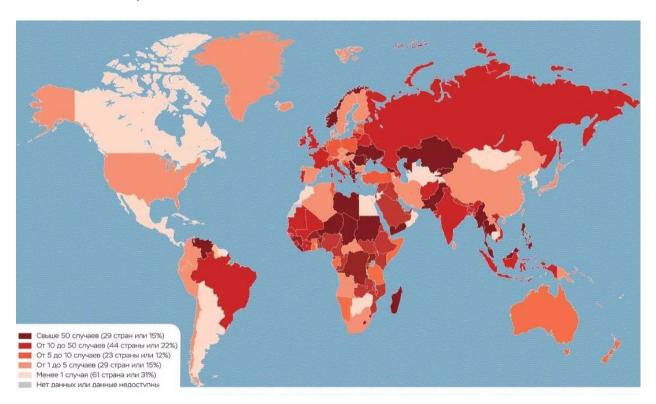
## **Features of the Course of Measles in Adults**

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**Summary**: WHO experts believe that the incidence of measles in Europe and Uzbekistan has reached a historical maximum over the past ten years. The measles situation in the world, including in European countries, has remained unfavorable for three years now. The European Center for Disease Prevention and Control associates this frightening trend with a decrease in the global vaccination rate to 78% instead of the required 90-95%.

**Keywords:** children, exanthema, erythtema infectiosum.

WHO experts believe that the incidence of measles in Europe has reached a historic high in recent years. The measles situation in the world, including in European countries, has remained unfavorable for three years now.



Measles is a highly contagious anthroponotic viral infection with an aspiration mechanism of pathogen transmission. It is characterized by febrile, intoxication and exanthema syndromes, the presence of catarrhal phenomena, enanthema and often occurs with primary and/or secondary complications.

Etiology - the causative agent of measles is an RNA genomic virus belonging to the paramyxovirus family. Pathogen not persistent in the environment, but it can be kept alive for several hours in aerosols. By In terms of its epidemiology, measles is a typical droplet infection. The source of infection is sick people. The greatest danger in terms of transmission of infection is represented by patients in the catarrhal period (on average 4 days before the appearance of the rash and until the 5th day from the appearance of the rash). The incubation period for measles is more often only 10–14

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days. One of the most dangerous viral infections for adults is measles, the contagiousness index (morbidity after contact with the pathogen) which is 90–95%, and the disease is tolerated by adults significantly harder than children. At the onset of measles, damage to the epithelial cells of the respiratory tract dominates with the development relevant clinical manifestations. Measles virus, located in the mucous membrane of the upper respiratory tract pathways and in the nasopharyngeal mucus, is released from the body when coughing, sneezing, talking and even breathing in the form tiny aerosol droplets. Measles symptoms do not appear immediately after infection. Classic clinical the course of measles is divided into periods: incubation (from 7 to 21 days), catarrhal (the first symptoms of measles: increased body temperature, cough, runny nose) and periods of rashes, pigmentation and recovery (reconvalescence).

The first manifestations of measles (prodromal stage) are nonspecific symptoms: fever, cough, runny nose, conjunctivitis. At the end of the prodromal period, Belsky-Filatov-Koplik spots appear on the buccal mucosa, which are specific for measles. They look like gray-white grains surrounded hyperemia located at the level of the second molars. These rash elements persist for several days, they begin to disappear when rashes appear on the skin. Measles rashes are characterized by stages: first, the rash appears on the face, behind the ears, on the scalp, then moves to the torso and arms, and then spreads to the legs. Morphologically, the rashes are erythematous, maculopapular view. The rash lasts up to 5 days, then it fades away, leaving behind pigmentation that disappears within 2–3 weeks Simultaneously with pigmentation, pityriasis-like peeling appears, most pronounced on the face and torso

Measles can have typical or atypical presentations. Atypical include:

- 1. **Erased form.** In this case, the disease occurs in a very mild form, without pronounced specific clinical manifestations. Patients note a slight increase in body temperature and cold symptoms (sore throat, cough, weakness). Sometimes an erased form of the disease occurs after measles vaccination or administration of gamma globulin.
- 2. **Hemorrhagic form,** when the disease is accompanied by multiple hemorrhages on the skin and blood in the urine and stool. Due to the hemorrhagic form, death often occurs due to large blood loss. With timely hospitalization and correct treatment, the prognosis of the disease is favorable.
- 3. **Hypertoxic form**, which occurs against the background of severe intoxication of the body and manifests itself temperatures up to 40 °C and above, symptoms of meningoencephalitis, cardiac and respiratory failure.

Atypical manifestations are more common in adults. The course of measles in adults has its own characteristics: more pronounced intoxication syndrome (weakness, sweating, drowsiness, lethargy); from catarrhal phenomena (nasal congestion, conjunctivitis, cough, sore throat and discomfort in the throat) prevail more often dry cough and there is a violation of the phasing of rashes. Measles in adults is diagnosed based on characteristic symptoms and laboratory results . According to clinical recommendations, serological and molecular biological methods are used for laboratory diagnosis of infection. Blood testing is carried out by enzyme immunoassay analysis (ELISA), and to determine antibodies (IgM, IgG) to the measles virus, blood is taken on the 5th day from the beginning rashes. The polymerase chain reaction method is used to identify and determine the type of virus (PCR). To conduct the study, material is collected (nasopharyngeal swabs, urine, cerebrospinal fluid) 1–3 days after the rash. In some cases, special virological diagnostic methods are used (virus microscopy, immunofluorescence reaction).

A general blood test for measles is characterized by a decrease in the number of leukocytes, an increase in erythrocyte sedimentation rate. If a secondary bacterial infection occurs, then the results studies note neutrophilic leukocytosis. It is also recommended to perform a biochemical analysis blood and general urine analysis: they will help determine the presence and severity of liver damage and urinary system. When managing a patient with measles, monitoring of clinical and biochemical parameters is mandatory, blood tests over time. If necessary, additional diagnostics are carried out -

analysis of the spinal cord fluids, radiography and computed tomography of the chest, electrocardiography (ECG), consultations with an ENT doctor, neurologist and other specialists as indicated.

A feature of the interaction between the measles virus and the human immune system is the development of transient secondary immunodeficiency, which implies a high risk of severe complications (bacterial and/or viral etiology), which can be destructive. More often Acute and chronic diseases of the ENT organs occur, the most common of which is otitis media, which occurs in 7–9% of patients; lesions of the digestive system (enterocolitis, diarrhea, hepatitis, pancreatitis) and urinary system (pyelonephritis, cystitis, glomerulonephritis), as well as diseases central nervous system, most often occurring in the form of acute infectious and post-infectious encephalitis with a frequency of 0.01–0.02%. Complications are observed in the form of infectious pathology of the lower respiratory tract, where pneumonia occurs in 1-6% of patients and can be either viral or bacterial etiology. Symptoms such as constant unmotivated weakness, headaches, dry cough, changes in auscultation pattern, prolonged fever and repeated rise in temperature allow be wary of the presence of pneumonia. Computed tomography gives an objective picture organs of the chest, a bacteriological examination of sputum should also be carried out (if there is wet cough, with proper and correct collection of biomaterial), PCR study for respiratory viruses and bacteria to clarify the etiology. Specific treatment measles does not exist, so therapy for this infectious disease is aimed at alleviating the patient's condition and combating secondary infections and complications. The patient is prescribed antipyretic drugs to reduce fever, eliminate symptoms of intoxication and inflammation. For etiotropic therapy, it is recommended to use interferons (interferon-alpha) and human immunoglobulin is normal in severe forms of infection. For detoxification therapy in moderate and severe forms, electrolyte solutions are indicated; for mild cases, oral rehydration. Symptomatic therapy is aimed at relieving symptoms (decongestants, antitussives and expectorants, antipyretics, antihistamine therapy). At development of complications, therapy is carried out aimed at preventing them, including antibacterial therapy Such groups of antimicrobial drugs as macrolides and fluoroquinolones of the III and IV generations are preferred against pneumonia caused by mycoplasma and chlamydial infections, while how bacterial pneumonia (streptococcal, staphylococcal, etc.) with measles can be successfully treated beta-lactam antibiotics.

According to O. V. Tsvirkun [8], measles outbreaks mainly formed in hospitals (59%), in families (40%), less often (1%) at the place of residence or in orphanages, which indicates the need for more careful compliance with the rules of epidemic surveillance, timely identification and isolation of the patient, as well as careful monitoring of contacts, timely immunoprophylaxis.

When isolating a patient at home, daily wet cleaning is required, if possible, limiting the patient's contact with family members as much as possible, and prohibiting the patient from visiting relatives or friends.

All contacts are subject to medical observation until 21 days from the moment the patient is identified. Hospitalization of patients is carried out in case of severe disease and for epidemic indications (persons living in hostels, hotels, hostels, etc., decreed groups of persons). Sick are hospitalized in a separate box and subject to strict bed rest. Persons hospitalized in hospital, must be discharged no earlier than 5 days after the appearance of the rash. Medical staff, Anyone in contact with a measles patient must observe all safety measures before visiting the box: be vaccinated or have a high protective antibody titer, it is mandatory to wear caps, gloves, masks and special medical clothing. After discharge from the hospital or treatment in isolation at home, patients are subject to mandatory dispensary registration at the place of attachment to the clinic for a period of 1 month. The frequency of mandatory control examinations by a doctor is once every two weeks. Blood and urine tests are performed after 2 and 4 weeks, respectively, ECG and other laboratory and instrumental research methods according to indications, such as and consultations with narrow specialists [10]. After 1 month of medical supervision in the presence of good laboratory results indicators, the absence of complications, the patient is subject to removal from the dispensary register. It is well known that the most important and effective way to prevent measles is vaccination. Main and The only correct method

of preventing the disease is active immunization. High quality vaccination carried out according to the terms of the National Vaccination Calendar in compliance with all standards, and regular revaccination, an increase in protective antibody titers lead to the impossibility of contracting an infection, and persons Those vaccinated once, as a rule, suffer a mild or atypical form of the disease. The vaccine is given to children who have not had measles from the age of 12 months. Revaccination is carried out once at 6 years before entering school. Adolescents and adults under 35 years of age are also subject to immunization against measles. sick, not vaccinated and vaccinated once, who do not have information about preventive vaccinations against measles.

The duration of post-vaccination immunity is up to 8–10 years. Recommended every 10 years revaccination for patients with low titers of protective antibodies.

In a timely manner, it is imperative to isolate the sick family member in a separate room, provide him with an individual set of dishes, bed linen and care.

As a non-specific preventive measure, it is recommended to wear a medical mask in public places (metro, shops and shopping centers, prefectures, clinics), especially during the epidemic season, maintaining healthy lifestyle, balanced diet high in proteins and vitamins, adherence to work and rest regime, hardening, avoiding hypothermia and drafts. Timely treatment of chronic diseases that contribute to the deterioration of the immune system and increased susceptibility to pathogenic bacteria and viruses.

## Conclusion

Timely identification and isolation of patients, correct hospitalization according to clinical and epidemiological indications, competent tactics for managing the patient and contact persons will help stop the growth of morbidity and transmission infections, prevent the risk of complications and deaths, and active vaccine prevention population with widespread immunization coverage will lead to complete elimination and elimination of measles.

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