

## **RABIES: WHAT YOU SHOULD KNOW AND HOW TO PROTECT YOURSELF**

Rabies is an acute infectious disease of animals and humans caused by the neurotropic rabies virus. It is characterized by the development of a kind of encephalitis with rapid damage to the central nervous system. In case of delay in providing qualified medical care, death is inevitable.

### *Causes of rabies and ways of infection transmission*

A person can become infected with rabies from an infected animal through:

- bite;
- scratches and microdamages of the skin;
- getting infected saliva on the mucous membranes.

In contact with humans, cats and dogs are most often infected, and in the wild - foxes and wolves. Homeless animals are particularly dangerous, especially dogs, for which the bite is an instinctive reaction to protect the territory, members of the pack or to obtain food.

### *Symptoms of rabies*

In humans, the incubation period of rabies usually lasts 1-3 months, but can vary from one week to a year, depending on a number of factors:

- places, number and depth of bites (the most dangerous bites in the face and head in general);
- the amount and activity of the virus that got into the wound;
- age of the victim (children are more vulnerable than adults).

*The initial symptoms of rabies* are fever and pain, as well as unusual or incomprehensible tingling, tingling or burning sensations at the site of injury.

After the onset of symptoms, the disease almost always ends in death. In the process of spreading the virus by the central nervous system develops progressive fatal inflammation of the brain and spinal cord.

### *There are two forms of this disease: active and paralytic rabies.*

People with active rabies are characterized by hyperactivity, hydrophobia (fear of water) and sometimes aerophobia (fear of drafts or fresh air). Death occurs within a few days as a result of cardiorespiratory arrest. Paralytic rabies accounts for about 30% of all human cases. This form of rabies lasts longer than the previous one with a lighter course. The muscles gradually become paralyzed, starting at the site of the bite or scratch. The coma develops slowly and death ensues.

### *Treatment*

In case of human infection, immediate hospitalization and administration of rabies vaccine are indicated. There should be six such vaccinations: on the day of the doctor's appointment (day 0), and then on the 3rd, 7th, 14th, 30th and 90th days.

*The rabies vaccine prevents the disease in 96-99% of cases.*

It is effective if the course is started no later than the 14th day after the bite or salivation. However, the course of immunization is prescribed even a few months after

contact with a sick or rabies-suspected animal. Antibodies in humans appear only on the 12th-14th day, and their maximum levels are reached only after 30-40 days. Immunity becomes effective approximately two weeks after the end of the vaccination course and remains so throughout the year. In case of dangerous localization of bites (face, neck, head, fingers, perineum), multiple or very deep single bites, salivation of mucous membranes, any damage caused by predators, bats and rodents, when there is a risk of a short incubation period, except vaccines are used and human rabies immunoglobulin. The incubation period can be reduced to 7 days - this is less than the time of post-vaccination immunity. If more than three days have elapsed since contact with the animal, antirabies immunoglobulin is not used.

In general, treatment measures are aimed at reducing the patient's suffering.

The patient is placed in a separate ward and provided maximum peace. Drugs are prescribed to reduce excitability. Fluid loss is replenished by intravenous saline, plasma substitutes, glucose solution. If necessary, carry out artificial lung ventilation.

Medical personnel should wear protective clothing to prevent saliva from entering the skin and mucous membranes.

*Rabies prevention. To prevent rabies you need:*

- regularly vaccinate pets;
- avoid contact with potentially dangerous animals.
- beware of homeless, let alone wild animals that are not afraid to approach you.

*First aid after the bite*

If you are bitten by an animal, consult a doctor immediately!

When the doctor is not available, rinse the wound thoroughly for at least 15 minutes with soapy water, detergents, disinfectants for surgical treatment of wounds or other means (70% alcohol or 5% iodine solution) that neutralize the virus. After that, be sure to seek medical attention.

*People must be vaccinated:*

- who have been bitten by rabid or suspected rabies animals directly or through clothing, even with the slightest damage to the skin;
- bitten by any wild animals (even without suspicion of rabies);
- scratched by animals suspected of rabies or in case of splashing scratches with saliva of such animals, getting it on the mucous membranes;
- who have suffered any microdamage to the skin while working with rabies-infected animals, pathological material, or transporting animal carcasses for examination.

Is the rabies vaccine safe? Yes, it is quite safe. Among the common reactions: pain, swelling and redness at the site of the bite; nausea, dizziness; aches in the body; fever (often after revaccination).

As of 1.01.2020, there are 74,944 doses of rabies vaccine and 3,305 doses of rabies immunoglobulin in Ukraine.

In the last 5 years, 17 people have died of rabies in Ukraine. This was reported in the Ministry of Health

In Ukraine, when conducting preventive vaccinations, there are distinctions between unconditional and conditional indications. According to unconditional indications, it is prescribed for bites caused by clearly rabid, wild and unknown animals, as well as when the diagnosis of rabies in animals remains unclear.

Vaccination according to conditional indications is not carried out in single bites

of healthy animals with localization of wounds on the extremities as well as if these animals are under veterinary supervision.

## REFERENCES

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