

What is Rabies?

Rabies is a preventable viral disease of mammals most often transmitted through the bite of a rabid animal. The vast majority of rabies cases reported to the Centers for Disease Control and Prevention (CDC) each year occur in wild animals like raccoons, skunks, bats, and foxes.

The rabies virus infects the central nervous system, ultimately causing disease in the brain and death. The early symptoms of rabies in people are similar to that of many other illnesses, including fever, headache, and general weakness or discomfort. As the disease progresses, more specific symptoms appear and may include insomnia, anxiety, confusion, slight or partial paralysis, excitation, hallucinations, agitation, hypersalivation (increase in saliva), difficulty swallowing, and hydrophobia (fear of water). Death usually occurs within days of the onset of these symptoms.

What are the Signs and Symptoms of Rabies in Humans?

The first symptoms of rabies may be very similar to those of the flu including general weakness or discomfort, fever, or headache. These symptoms may last for days.

There may be also discomfort or a prickling or itching sensation at the site of bite, progressing within days to symptoms of cerebral dysfunction, anxiety, confusion, agitation. As the disease progresses, the person may experience delirium, abnormal behavior, hallucinations, and insomnia.

The acute period of disease typically ends after 2 to 10 days. Once clinical signs of rabies appear, the disease is nearly always fatal, and treatment is typically supportive.

Disease prevention includes administration of both passive antibody, through an injection of human immune globulin and a round of injections with rabies vaccine.

Once a person begins to exhibit signs of the disease, survival is rare. To date less than 10 documented cases of human survival from clinical rabies have been reported and only two have not had a history of pre- or postexposure prophylaxis.

How to Prevent Rabies in Humans?

Rabies in humans is 100% preventable through prompt appropriate medical care. Yet, more than 55,000 people, mostly in Africa and Asia, die from rabies every year - a rate of one person every ten minutes.

The most important global source of rabies in humans is from uncontrolled rabies in dogs. Children are often at greatest risk from rabies. They are more likely to be bitten by dogs, and are also more likely to be severely exposed through multiple bites in high-risk sites on the body. Severe exposures make it more difficult to prevent rabies unless access to good medical care is immediately available.

How is Rabies Diagnosed in Humans?

If you have any questions, please contact Allen County Public Health at 419-228-4457. Health Department staff members are available to answer your questions Monday to Friday from 8:00a.m. to 4:30 p.m. You can also visit www.allencountypublichealth.org and the Centers for Disease Control and Prevention's Web site at www.bt.cdc.gov for additional information.

Several tests are necessary to diagnose rabies ante-mortem (before death) in humans; no single test is sufficient. Tests are performed on samples of saliva, serum, spinal fluid, and skin biopsies of hair follicles at the nape of the neck. Saliva can be tested by virus isolation or reverse transcription followed by polymerase chain reaction (RT-PCR). Serum and spinal fluid are tested for antibodies to rabies virus. Skin biopsy specimens are examined for rabies antigen in the cutaneous nerves at the base of hair follicles.

What Medical Care is there for Rabies in Humans?

Regardless of the risk of rabies, bite wounds can cause serious injury such as nerve or tendon laceration and local and system infection. Your doctor will determine the best way to care for your wound, and will also consider how to treat the wound for the best possible cosmetic results.

For many types of bite wounds, immediate gentle irrigation with water or a dilute water povidone-iodine solution has been shown to markedly decrease the risk of bacterial infection.

Wound cleansing is especially important in rabies prevention since, in animal studies, thorough wound cleansing alone without other postexposure prophylaxis has been shown to markedly reduce the likelihood of rabies.

You should receive a tetanus shot if you have not been immunized in ten years. Decisions regarding the use of antibiotics, and primary wound closure should be decided together with your doctor.

Postexposure Vaccinations

If a person has previously received postexposure vaccinations or received preexposure vaccinations, only two doses of vaccine (on the day of exposure and then 3 days later) are needed. Human rabies immune globulin is not required. Your doctor and local health department will be able to guide you through the process.

For people who have never been vaccinated against rabies previously, postexposure anti-rabies vaccination should always include administration of both passive antibody and vaccine.

The combination of human rabies immune globulin (HRIG) and vaccine is recommended for both bite and nonbite exposures, regardless of the interval between exposure and initiation of treatment.

People who have been previously vaccinated or are receiving preexposure vaccination for rabies should receive only vaccine.

The vaccine should be given at recommended intervals for best results. Talk to your with your doctor or state or local public health officials if you will not be able to have shot at the recommended interval. Rabies prevention is a serious matter and changes should not be made in the schedule of doses.

People cannot transmit rabies to other people unless they themselves are sick with rabies. The prophylaxis you are receiving will protect you from developing rabies, and therefore you cannot expose other people to rabies. You should continue to participate in your normal activities.

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