

What is rabies?

Rabies is a disease caused by the rabies virus. Rabies can affect all mammals, including wild animals, domestic animals (like pets and livestock), and humans.

Who is at risk for rabies?

All mammals, including humans, are susceptible to rabies. If rabies is left untreated, the animal or person will die.

What are the symptoms of rabies?

Early symptoms include irritability, headache, fever and sometimes itching or pain at the site of exposure. The disease eventually progresses to paralysis, spasms of the throat muscles, convulsions, delirium and death. It is important to note that by the time any symptoms appear, rabies cannot be successfully treated.

How soon do symptoms appear?

The time between exposure (usually a bite) and the onset of symptoms, which is called the incubation period, averages one to three months but ranges from days to years.

How is rabies spread?

Rabies is almost always contracted by exposure to a rabid animal. The exposure is typically through a bite, but can also be through saliva contact with broken skin.

Is a human able to spread rabies?

Person to person transmission is extremely rare; however, precautions should be taken to prevent exposure to the saliva of a diseased person. Tissues from diseased individuals must not be used in transplant procedures.

How is a person diagnosed?

Consult a health-care professional. Several tests are necessary to diagnose rabies 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.

What is the treatment?

If you are bitten or scratched, the most effective rabies prevention method is immediate, thorough cleansing of the animal bite or scratch wounds with liberal amounts of soap and water. Your doctor, possibly in consultation with your state or local health department, will decide if you need a rabies vaccination. Decisions to start vaccination, known as post-exposure prophylaxis (PEP), will be based on your type of exposure and the animal

you were exposed to, as well as laboratory and surveillance information for the area where the exposure occurred. Once a health care professional has determined that an exposure has occurred, the patient can be treated.

It's important to remember that rabies is a medical urgency but not an emergency. The treatment for rabies exposure consists of one shot of rabies immune globulin (how much of this is needed will depend on weight of the person who was bitten) and four shots of rabies vaccine.

These shots are administered in the arm on:

- day zero (the day you begin the shots)
- day three
- day seven
- and day 14

Remember, rabies has an almost 100% fatality rate once a person starts showing symptoms. So a person should be seen as soon as possible after the bite/exposure by a health care provider to determine the need for rabies prophylaxis.

What happens if a rabies exposure goes untreated?

Exposure of a human to a rabid animal does not always result in rabies. If prevention treatment is obtained promptly following a rabies exposure, most cases of rabies will be prevented. Untreated cases will invariably result in death. All animal bites, regardless of whether the animal is available for rabies testing, should be evaluated by a health professional to determine if treatment is necessary.

What can be done to prevent the spread of rabies disease?

Exposure to rabies may be minimized by:

- Eliminating contact with all stray dogs and cats
- Having pet dogs, ferrets and cats vaccinated
- Staying away from all wild animals, especially those behaving abnormally
- Avoiding keeping exotic or wild animals as pets
- Wearing protective gloves when working with sick livestock.

Additional Information:

Additional information is available at www.ndhealth.gov or by calling the North Dakota Department of Health at 800.472.2180.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.

Resources:

1. American Academy of Pediatrics. [Children in Out-Of-Home Care]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015: 132-151.
2. American Academy of Pediatrics. [Rabies]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015: 658-666.
3. Control of Communicable Disease Manual, 20th Edition-2015, Heymann, David, MD ed.