

## BASICS

Rabies is an acute, viral infection of the central nervous system caused by a Rhabdovirus. All mammals, including humans, can become infected with rabies. Once clinical signs appear, rabies is nearly **100% FATAL**.

Rabies is **WIDESPREAD** in NY and raccoons, skunks, bats, foxes, and coyotes make up the vast majority of cases in the United States.

**CLINICAL SIGNS** can vary and are not typical. Many diseases can have similar signs, including distemper. Nonspecific signs may include restlessness, anorexia, difficulty swallowing, vomiting, or diarrhea.

An **ACUTE NEUROLOGIC** period usually follows the nonspecific stage of disease by 1 to 2 days. Animals may show problems with balance, excessive aggression, salivation, incoordination, appearing "tame" or a **LACK OF FEAR**, self-mutilation, agitation, and head tilt.

Animals may appear "dumb" with lethargy, **MILD PARALYSIS**, frequent urination or incontinence, constipation, flaccidity (low muscle tone), and decreased reflexes.

**TRANSMISSION** of the rabies virus is primarily through the **SALIVA** from the bite of an infected animal.

Rabies **DIAGNOSIS** is done by direct fluorescent antibody (FAT) in a specialized laboratory. A specific section of **BRAIN TISSUE** is required to make a definitive diagnosis.

There is **NO** successful medical **TREATMENT** for clinical rabies infection in humans, however prompt vaccination is highly effective at preventing the disease. If bitten by a suspect animal, flush the wound with soap and water. **CONTACT THE LOCAL HEALTH DEPARTMENT.**

Rabies can be controlled by **VACCINATION** of domestic animals and quarantine of domestic animals that may be exposed to rabies.



**ZOONOTIC RISK**

**SALIVA, BRAIN, OR FLUIDS**

**HUMANS & ALL MAMMALS**

## DETAILS

Since about 1990, **RACCOONS** have had the most rabies cases of all wildlife species in New York State. Rabies does not infect birds or reptiles.

Following the incubation period, the disease progresses through a short nonspecific stage. Animals may show **ABNORMALITIES** of the nerves that control the eyes, face, tongue, and other structures of the head. Coma followed by multi-organ failure usually **LEADS TO DEATH**. In dogs, the time from the onset of illness to death is typically 10 days or less. In bats, it may be as long as 18 days.

**TRANSMISSION** occurs during a relatively short period of time during the final stages of the disease. In infected animals the virus travels through the central nervous system to the brain where it replicates and spreads to the **SALIVARY GLANDS** and other tissues. The further the exposure site is from the brain, the longer the virus will take to get there and the longer the incubation period. Typically in domestic animals the incubation period varies from about 1 to 3 months. This period is not certain for most wild animals.

Reports of **NON-BITE EXPOSURES** are less common and include saliva entering an open wound, the eyes, or the mouth. Rare infections have occurred from **INHALATION** of infected particles in a bat cave or laboratory, and through transplantation of infected tissues.

**DIAGNOSIS** In some cases, the entire head can be submitted to the lab for testing. Bats can be submitted whole. Gloves should be worn whenever handling carcasses. Domestic animals that have bitten a person may be **QUARANTINED** for observation at the order of the health department instead of being submitted for testing.

**TREATMENT** Contact the local health department to discuss if vaccines are warranted and arrange for treatment. The vaccine schedule for non-immunized individuals involves injection of rabies vaccine on days 0, 3, 7, and 14 after an exposure. In some cases additional treatment with rabies immunoglobulin at the wound site is given.

People in **HIGH RISK JOBS** receive pre-existing vaccines and require fewer doses after an exposure.

For more information about the medical treatment of rabies exposure in humans, visit the [Centers for Disease Control and Prevention](#).

**PRECAUTIONS AND PREVENTION** Vaccination of dogs, cats, and domesticated ferrets is **REQUIRED** by New York State law no later than four months after birth and a second vaccination is required within one year thereafter. People **AT RISK** for exposure should be vaccinated for rabies. These occupations include veterinarians, wildlife biologists, wildlife rehabilitators, and other animal handlers.

Vaccination of **FREE-RANGING WILDLIFE SPECIES** is expensive but may be implemented to attempt to control rabies in reservoir populations. Oral vaccination programs have been **SUCCESSFUL** in eliminating fox rabies in Europe and Texas. The USDA Wildlife Services has had the National Rabies Management Program in place since 1995 to prevent the further spread of rabies using oral rabies vaccination baits in targeted areas.

**PUBLIC HEALTH** In New York State, the **DEPARTMENT OF HEALTH WADSWORTH CENTER IN ALBANY HANDLES ALL RABIES TESTING**. A designated local county health department official makes the determination if testing is warranted in cases of possible human or domestic animal exposure and authorizes payment of the testing fees. If expedited testing is needed (for instance over a weekend or holiday) the county health department can make a special request to the laboratory. Typically results are available the same day the specimen is received at the lab. **FOR MORE INFORMATION** on the submission of rabies specimens and proper sample collection, visit the [New York State Department of Health, Wadsworth Center](#).

