

# Rabies

## ***What is Rabies?***

Rabies is transmitted by a virus and is one of the most devastating diseases affecting mammals, including dogs and humans. The danger of a bite from a rabid dog was described in writings dated from the 23<sup>rd</sup> century BC.



## ***How is rabies transmitted?***

The disease is usually transmitted by the bite of an infected animal.

## ***How widespread is Rabies?***

Rabies occurs in every continent except Australia and Antarctica. Most countries are affected with the exception of a few island countries such as Great Britain, Ireland, Japan and Hawaii. Norway, Sweden and the Iberian Peninsula are also free of rabies.

## ***How is the virus transmitted?***

Rabies virus does not survive long outside a mammal's body. The infection is transmitted when one infected animal bites another. In Europe, foxes are the main reservoir while in North America the skunk, fox, raccoon and bat are important sources of infection. In Asia, Africa and Latin America the main reservoir is not wildlife but stray dogs. In these areas, human infection and fatalities are more common.

## ***How long is the incubation period?***

The incubation period can vary from ten days to one year or longer. In dogs, the incubation period is typically two weeks to four months. The speed at which clinical signs develop depends upon:

The site of infection - the nearer the bite is to the brain and spinal cord, the quicker the virus reaches the nervous tissue

1. The severity of the bite
2. The amount of virus injected by the bite

## ***What are the clinical signs?***

Following a bite from a rabid animal, the disease progresses in stages. In the first or prodromal phase the dog undergoes a marked change in temperament. Quiet dogs become agitated and active pets become nervous or shy.

Following this stage, there are two recognized forms of the clinical disease:

**Furious rabies** occurs when the rabid dog becomes highly excitable and displays evidence of a depraved appetite, eating and chewing stones, earth and rubbish (pica). Paralysis eventually sets in and the rabid animal may be unable to eat and drink. Hydrophobia (fear of water) is not a sign of rabies in dogs. This is a feature of human rabies. The dog finally dies in a violent seizure.

**Dumb rabies** is the more common form in dogs. There is progressive paralysis involving the limbs, distortion of the face and a similar difficulty in swallowing. Owners will frequently think the dog has something stuck in the mouth or throat. **Care should be taken in examination since rabies may be transmitted by saliva.** Ultimately the dog becomes comatose and dies.



### ***Is it possible to survive a bite from a rabid animal?***

There are isolated and poorly documented reports of both dogs and people surviving. In some cases, there may have been very little rabies virus present in the saliva at the time the rabid animal bit its victim. In this situation, the victim may not develop rabies.

However, as Louis Pasteur was the first to show, it is possible to interrupt the progression from an infected bite to the onset of signs by the early post-bite use of anti-rabies serum. This antiserum

contains specific immune antibodies to the virus. The most important method for preventing the progression of rabies is by administering a dose of rabies vaccine. The vaccine stimulates the bitten animal to develop its own neutralizing antibodies to the rabies virus. Without vaccination and rapid post-exposure treatment, the chances of survival are poor.

### ***Is vaccination effective?***

Vaccination promotes the production of antibodies but is only effective if given before the virus enters the nervous system. Modern rabies vaccines for dogs, cats, horses and ferrets are extremely safe and effective.

### ***What is the treatment for rabies?***

There is no treatment for a dog with rabies. If rabies is suspected, the dog has to be kept in isolation and prevented from escaping or injuring someone. Your veterinarian is required by law to notify the local and state or provincial animal disease regulatory authorities. These authorities will determine the steps necessary to properly protect the public.

### ***Can I catch rabies?***

Yes, the disease is *zoonotic* or can be transmitted from an animal to man. It is only transmitted by the bite of a rabid animal. The virus is present in the saliva of the infected animal only for a limited time.

If any animal that may be suspicious for rabies bites you, immediately wash and flush the wound thoroughly with soap and water, -and seek immediate medical assistance.

Post exposure rabies treatment with serum or vaccine may be recommended and is very successful if begun quickly.

***Is it possible to vaccinate my dog?***

There are several rabies vaccines approved for dogs, cats, horses and ferrets. Dogs and cats between the ages of twelve and sixteen weeks should be vaccinated. Rabies revaccination is dependent on state or provincial law. Your veterinarian will advise you on the appropriate revaccination intervals and can assist you in obtaining any necessary licenses for your pet.

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*This client information sheet is based on material written by Ernest Ward, DVM.  
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