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Mythbusting Rabies

**University of Illinois College of
Veterinary Medicine Open House
Neurology Booth**

**True or False:
Rabies only affects mammals**

TRUE

Rabies attaches to nerve cells with specific chemicals on their surfaces to gain entry, and non-mammals don't have those to attach to. Thus, the virus is not able to complete a key step in its infection cycle.

Additionally, rabies requires a certain body temperature range to multiply, which some cooler blooded marsupials do not normally reach. This makes it extremely unlikely for these animals, including America's only marsupial, the opossum, to get rabies!



**True or False:
Rabies is only transmitted by
animal bites**

FALSE

Rabies survives in an infected animal's saliva, and must make its way into another host's bloodstream to affect them. Most commonly, this occurs when an infected individual bites another hard enough to draw blood, but other methods of infection are possible: exposure of an open wound or mucous membranes (eyes, nose, mouth) to infectious saliva or nervous tissue.



**True or False:
Common wild vectors for rabies include
skunks, racoons, bats, and foxes**

TRUE

In epidemiology, a vector is any agent which carries and transmits an infectious pathogen into another living organism. Here in the United States, wildlife species that are common vectors of rabies are skunks, racoons, bats, and foxes. Pet interactions with these animals, or stray animals who may have interacted with these species, increases the risk of rabies transmission.

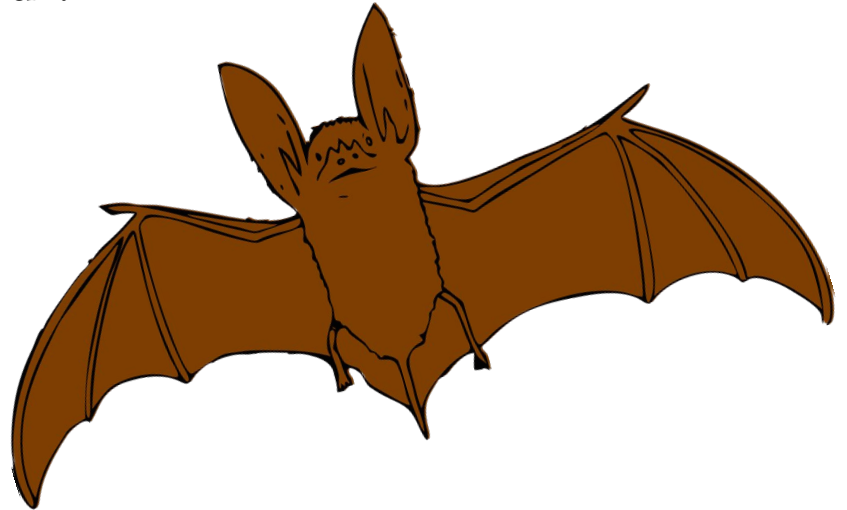
So it is important to keep an eye on your pet's interactions with other animals if you live in a community where these vectors or stray populations are common.



True or False:
**A bite from an animal will
always be obvious**

FALSE

As mentioned previously, one of the main vectors for the rabies virus is the bat. These animals have needle like teeth, that leave very small bite wounds which may not be noticeable on other animals. This is especially true of big animals (like horses and cows), and those with lots of fur!



True or False:
**The symptoms of rabies take
a long time to develop**

TRUE

The rabies virus starts multiplying in the nerves around the inoculation area. When it reaches a certain threshold population, it begins to travel along the spinal cord to the brain, where it settles causing inflammation. It is at this point when the symptoms of rabies become visible to others. This can take anywhere from two to eight weeks in people, depending on how far the site of exposure is from the brain. In smaller animals (such as rodents), this process may only take 24 hours, and in larger animals (such as cows), it can take up to 6 months!

To get to the saliva, the rabies virus must leave the brain and travel down the nerves which supply the salivary glands, and shed into the fluid. This means that a live animal that is showing signs of rabies may not be infectious yet!



**True or False:
Rabies always results in
fearless aggression**

FALSE

There are two phases of clinical presentation. During the first phase, animals experience a change in behavior: mutilating the bite site, avoiding food and water, seeking solitude, and crying out. The second phase may present as either the furious form or the paralytic form. Furious rabies is the picture that most people associate with the disease; animals who become hyperactive to the point of convulsion and irrationally aggressive due to the loss of fear. Paralytic rabies on the other hand results in progressive paralysis starting at the throat, rendering the animal incapable of swallowing (thus the 'profuse' salivation), and incoordination. Both forms eventually lead to coma and...

**True or False:
Rabies is almost always
deadly**

TRUE

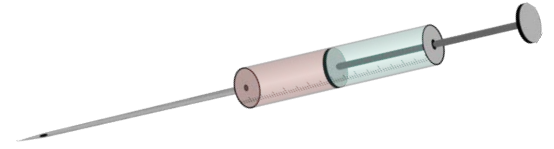
Once neurologic signs present themselves, death is almost certain. There have been a few rare cases of success in human medicine where doctors have induced coma in rabies patients and treated the nervous system with special medications and supported the rest of the body for several months, curing them before revival!



True or False:

There is nothing you can do to protect yourself if you have been bit

FALSE



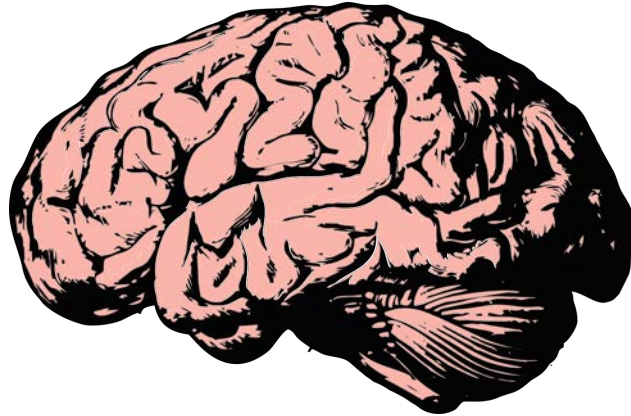
If you believe that you have been exposed to rabies, wash any wounds immediately with soap and water, and seek medical help from a human physician. Once your wounds have been addressed, your doctor will help you to decide whether you need treatment in accordance with state or local health departments. This decision will be based on your type of exposure, whether the animal is available for rabies testing, and any laboratory/surveillance information for the area where you were exposed. Treatment, also known as postexposure prophylaxis (PEP), includes one dose of rabies antibodies and four doses of killed rabies vaccine over a fourteen day period followed by monitoring for clinical signs.

If taken in a timely fashion, these steps should significantly reduce your chances of developing a rabies infection.

**True or False:
Diagnosis of rabies can only
be made after death**

TRUE

The definitive diagnosis for rabies is completed using the whole brain, which cannot be taken from a living individual. Presumptive ruling out of the disease is made by observing companion animals in quarantine for ten days, during which no clinical signs of infection are observed.



True or False:

**Indoor only pets do not need
to be vaccinated for rabies**

FALSE

Anything is possible, even indoor only pets slipping outside and coming into contact with a rabid animal.

To prevent this from happening in the first place, most local governing bodies have required registration of companion animals with up to date rabies vaccination records and veterinarians have made the rabies vaccine part of the gold standard for preventative medicine.



**True or False:
Rabies is preventable**

TRUE



Most human cases of rabies are linked to interactions with unvaccinated pets, so it must be noted that the best way to prevent the spread of rabies is to avoid situations with unknown domestic (or wild) animals that may lead to bites. In other words, if you do not know them, leave them ALONE!

Other ways of preventing rabies include vaccination of pets by licensed veterinarians/wildlife by government agencies, keeping control over your pets interactions with other animals, local shelter TNR/adoption programs, and leaving care of wildlife to animal control and licensed rehabilitators.