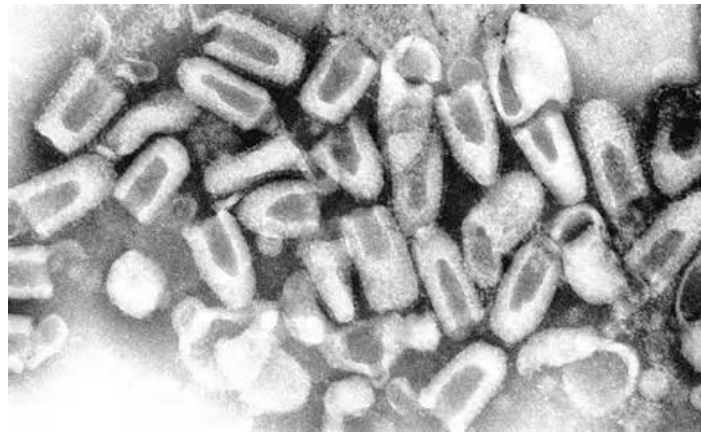


Rabies

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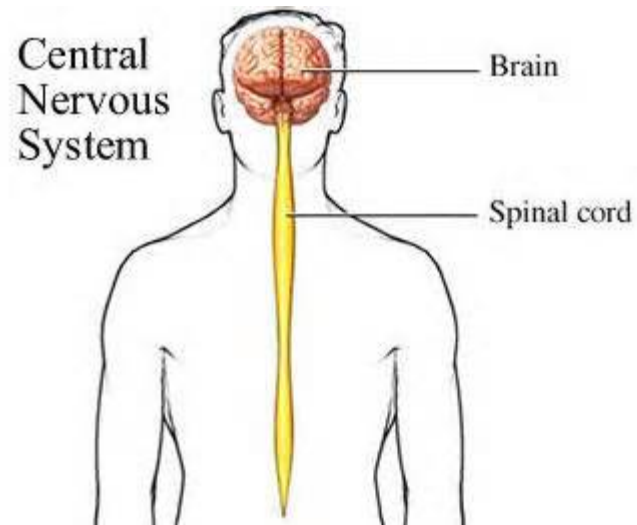
- Defined: Rabies is a preventable viral disease of mammals most often transmitted through the bite of a rabid animal



Rabies Virus

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The rabies virus infects the central nervous system, ultimately causing disease in the brain and death



General Symptoms

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- Fever
- Headache
- Weakness
- Discomfort

* Usually exhibited for 2-10 days



More Severe Symptoms

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- Insomnia
- Anxiety
- Confusion
- Slight or Partial Paralysis
- Hallucinations



More Severe Symptoms

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- Excitation
 - Agitation
 - Hypersalivation
 - Difficulty Swallowing
 - Hydrophobia
- * Death usually occurs within days of the onset of the more severe symptoms



Rabies Cases

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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



Rabid Animals By Frequency

- Raccoons
- Skunks
- Bats
- Foxes
- Rodents & Lagomorphs



- The rabies virus is transmitted through saliva or brain/nervous system tissue. You can only get rabies by coming in contact with these specific bodily excretions and tissues
- Rabies is transmitted only when the virus is introduced into a bite wound, open cuts in skin, or onto mucous membranes such as the mouth or eyes

Bite

- Any penetration of the skin by teeth constitutes a bite exposure

Nonbite

- The contamination of open wounds, abrasions, mucous membranes or, theoretically, scratches (potentially contaminated with infectious material from a rabid animal) constitutes a nonbite exposure

The following does not constitute exposure:

- Petting
- Handling an animal
- Contact with blood
- Contact with urine or feces



Incubation Period

- This is the period of time from the exposure to rabies virus until the animal finally becomes sick and/or acts differently and is capable of infecting other animals or people
- The incubation period can be as short as two weeks or in very rare cases as long as one year



Incubation Period

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- During the incubation period, the animal cannot transmit rabies and its behavior remains normal
- During the incubation period, there may be time for the vaccine to prevent the animal from developing disease and prevent it from shedding or transmitting virus



Wound Care

- Wash wounds immediately with soap & water



This is the most effective way to decrease the chance of infection

Rabies Facts

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- Approximately 120,000 animals or more are tested for rabies each year in the United States
- Approximately 6% are found to be rabid; the proportion of positive animals depends largely on the species of animal and ranges from $<1\%$ in domestic animals to $>10\%$ of wildlife species



- Visit your veterinarian with your pet on a regular basis and keep rabies vaccinations up-to-date for all cats, ferrets, and dogs
- Maintain control of your pets by keeping cats and ferrets indoors and keeping dogs under direct supervision



Rabies Prevention

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- Spay or neuter your pets to help reduce the number of unwanted pets that may not be properly cared for or vaccinated regularly
- Call animal control to remove all stray animals from your neighborhood since these animals may be unvaccinated or ill



Rabies Prevention

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- If traveling to a country where there is an increased incidence in rabies, especially in canine populations, rabies pre-exposure vaccination may be recommended
- Rabies vaccination should also be considered if you will be spending lots of time outdoors in rural areas or plan to handle animals



Pre-Exposure Vaccination

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- People who work with rabies in laboratory settings and animal control and wildlife officers are just a few of the people who should consider rabies pre-exposure vaccinations
- If you are traveling to a country where rabies is widespread, you should consult your doctor about the possibility of receiving pre-exposure vaccination against rabies



Consider pre-exposure vaccination if:

- Your planned activity will bring you into contact with wild or domestic animals, for example if you are a biologist, veterinarian, or agriculture specialist working with animals
- You will be visiting remote areas where medical care is difficult to obtain or may be delayed, for example, hiking through remote villages where dogs are common
- Your stay is longer than 1 month in an area where dog rabies is common; the longer your stay, the greater the chance of an encounter with an animal

Pre-Exposure Vaccination

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Although pre-exposure vaccination does not eliminate the need for additional therapy after a rabies exposure, it simplifies management by eliminating the need for rabies immune globulin and decreasing the number of doses of vaccine needed



Primary Vaccinations

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Type	Name	Route	Indications
Human Diploid Cell Vaccine (HDCV)	Imovax® Rabies	Intramuscular	Pre-exposure or Postexposure
Purified Chick Embryo Cell Vaccine (PCEC)	RabAvert®	Intramuscular	Pre-exposure or Postexposure



Primary Vaccination

Three 1.0-mL injections of HDCV or PCEC vaccine should be administered intramuscularly (deltoid area) -- one injection per day on days 0, 7, and 21 or 28



Continuous Risk

- People who work with rabies virus in research laboratories or vaccine production facilities are at the highest risk for unapparent exposures
- Such persons should have a serum sample tested for rabies antibody every six months; Intramuscular booster doses of vaccine should be administered to maintain a serum titer corresponding to at least complete neutralization at a 1:5 serum dilution by the RFFIT (Rapid Fluorescent Focus Inhibition Test for rabies)

Frequent Risk

- This group includes other laboratory workers such as those performing rabies diagnostic testing, spelunkers, veterinarians and staff, and animal-control and wildlife officers in areas where animal rabies is enzootic as well as persons who frequently handle bats, regardless of location in the United States

Frequent Risk

- Persons in the frequent risk group should have a serum sample tested for rabies antibody every 2 years; if the titer is less than complete neutralization at a 1:5 serum dilution by the RFFIT, the person also should receive a single booster dose of vaccine

Infrequent risk

- Veterinarians, veterinary students, and terrestrial animal-control and wildlife officers working in areas where rabies is uncommon to rare (infrequent exposure group) and at-risk international travelers fall into this category and do not require pre-exposure booster doses of vaccine after completion of primary pre-exposure vaccination

- Any animal bitten or scratched by either a wild, carnivorous mammal or a bat that is not available for testing should be regarded as having been exposed to rabies
- Unvaccinated dogs, cats, and ferrets exposed to a rabid animal should be euthanized immediately; if the owner is unwilling to have this done, the animal should be placed in strict isolation for 6 months and vaccinated 1 month before being released

What is the risk for my pet?

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- Animals with expired vaccinations need to be evaluated on a case-by-case basis; dogs and cats that are currently vaccinated are kept under observation for 45 days
- Small mammals such as squirrels, rats, mice, hamsters, guinea pigs, gerbils, chipmunks, rabbits and hares are almost never found to be infected with rabies and have not been known to cause rabies among humans

What is the risk for my pet?

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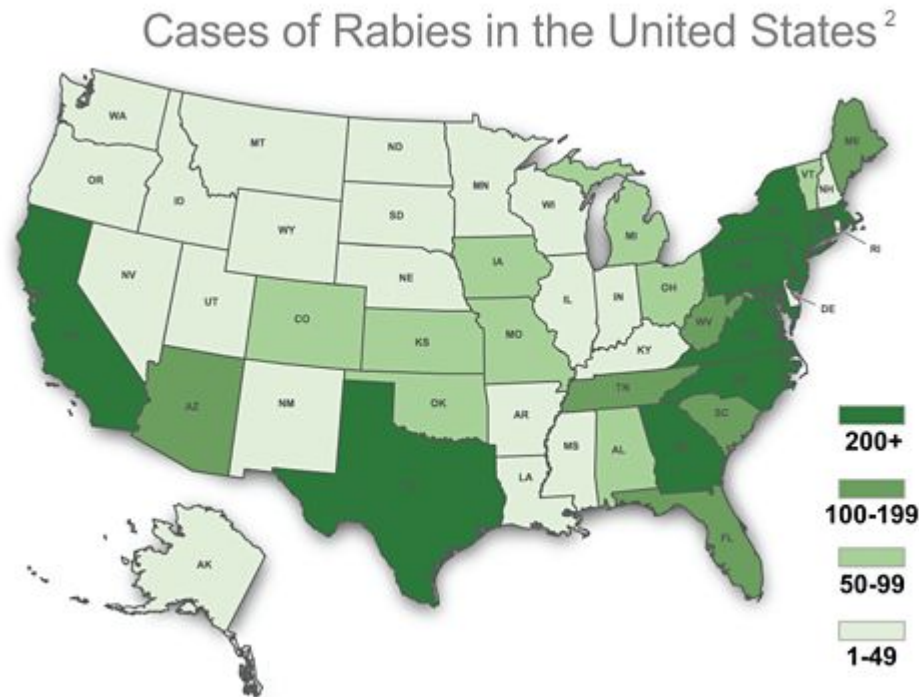
- Bites by these animals are usually not considered a risk of rabies unless the animal was sick or behaving in any unusual manner



Is rabies prevalent in my area?

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- Each state collects specific information about rabies, and is the best source for information on rabies in your area



Is rabies prevalent in my area?

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- In addition, the CDC publishes rabies surveillance data every year for the United States.
- The report, entitled Rabies Surveillance in the United States, contains information about the number of cases of rabies reported to CDC during the year, the animals reported rabid, maps showing where cases were reported for wild and domestic animals, and distribution maps showing outbreaks of rabies associated with specific animals

Centers For Disease Control & Prevention (CDC) –
www.cdc.gov

PA Department of Agriculture -
www.agriculture.state.pa.us

Questions?

