



**EPIDEMIOLOGY NEWSLETTER
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PROPHYLAXIS GUIDELINES FOR POSSIBLE RABIES EXPOSURE

Three persons, two cats and a dog in Southern Nevada were exposed to rabid bats in August 2000. All but one of the exposures occurred in Clark County. Although there have been no cases of rabies among domestic animals in Clark County for the past fifteen years, these encounters with rabid bats raise the possibility that unvaccinated animals may be at risk of this serious viral disease. Thus humans may be at risk not only from rabid bats, but potentially from domestic animals.

Rabies is almost always fatal unless prophylaxis is received in a timely manner. Worldwide, there have been only six documented cases of human survival from clinical rabies all of who had been given either pre- or post-exposure prophylaxis¹. Whether or not post-exposure prophylaxis should be administered following a bite or scratch of an animal is problematic. About 40,000 postexposure shots are given annually in the United States. A recent study published in JAMA² suggests that these prophylactic measures may be unnecessary in as many as 40% of these patients. This study also concluded that 6.3% of patients did not receive prophylaxis when indicated.

The endemicity of rabies in the local domestic and wild animal populations should be considered in the decision making process. As stated above, although rabies has not been identified in domestic animals in recent years, three to four wild animal rabies cases are identified per year, almost exclusively in bats. In 1995 and 1996, rabies was also identified in foxes. Circumstances surrounding the biting incident are also important in the decision making process, i.e., whether the attack was provoked. A general guide for rabies prophylaxis has been included for your reference in the table below.

Rabies Postexposure Prophylaxis Guide³

Animal Type	Evaluation and disposition of animal	Postexposure prophylaxis recommendations
Dogs, cats and ferrets	Healthy and available for 10 days observation	Persons should not consider prophylaxis until animal develops clinical signs of rabies*
Dogs, cats and ferrets	Rabid or suspected rabid Unknown (e.g., escaped)	Immediately immunize Consult Clark County Health District (CCHD) Office of Epidemiology
Skunks, raccoons, foxes and most other carnivores; bats	Regard as rabid unless animal proven negative by laboratory tests**	Consider immediate immunization
Livestock, small rodents, lagomorphs (rabbits and hares) large rodents (woodchucks and beavers) and other mammals	Consider individually	Consult CCHD Office of Epidemiology. Bites of squirrels, hamsters, guinea pigs, gerbils, chipmunks, rats, mice and other small rodents, rabbits and hares almost never require antirabies postexposure prophylaxis.

*During the 10 day observation period, begin postexposure prophylaxis at the first sign of rabies in a dog, cat or ferret that has bitten someone. If the animal exhibits clinical signs of rabies, it should be euthanized immediately and tested.

**The animal should be euthanized and tested as soon as possible. Holding for observation is not recommended. Discontinue vaccine if immunofluorescence test results of the animal are negative.

If a decision to use prophylaxis following an animal bite has been made, the following protocol is recommended by the Advisory Committee on Immunization Practices³:

Non-immunized Individuals*

- ◆ Wash the wound thoroughly with soap and water and irrigate it with a virucidal agent such as povidone iodine. Tetanus prophylaxis and measures to control bacterial infection also should be administered as indicated.
- ◆ Administer 20 IU/kg rabies immune globulin (RIG) as soon as possible after exposure to the virus. The RIG should be thoroughly infiltrated in the area around and into the wounds. Any remaining volume should be injected intramuscularly at a site distant from vaccine administration. RIG should not be administered using the same syringe used for vaccine administration.
- ◆ Administer rabies vaccine, at a site different than RIG administration, as soon as possible after exposure (1.0 ml injected in the deltoid area+); four additional injections are necessary, on days 3,7,14, and 28 days after administration of the first dose.

Previously Immunized Individuals*

- ◆ Local wound therapy (thorough washing of the wound with soap and water and irrigation of the wound with a virucidal agent). Tetanus prophylaxis and measures to control bacterial infection also should be administered as indicated.
- ◆ Two 1.0 ml doses of rabies vaccine; one on day 0 and one on day 3.

*If the patient is on corticosteroids, antimalarial medication, or other immunosuppressive agents, see the Physician's Desk Reference for advice regarding drug interactions.

+The deltoid area is the only acceptable site of vaccination for adults and older children. For younger children, the outer aspect of the thigh may be used. Vaccine should never be administered in the gluteal area.

Please contact the Clark County Health District Office of Epidemiology at 383-1378 if you have any questions regarding these protocols. For animal bite exposure risk assessment feel free to contact David Thain, DVM or Ron Anderson, DVM at the Nevada Department of Agriculture, Division of Animal Industry at (775)688-1182 Thain-ext. 261, Anderson-ext. 233.

The Nevada Administrative Code (NAC) 441A.225⁴ requires that a report of an animal bite by a rabies-susceptible animal (any mammal) is to be made to the rabies control authority (animal control). Please refer to the following list for the animal control authority in your area:

- ◆ Clark County Animal Control: 455-7710 then press "0"
- ◆ City of Las Vegas Animal Control: 229-6348 then press "0"
- ◆ City of North Las Vegas Police Department: 633-9111 then press "9"
- ◆ City of Henderson Animal Control: 565-2033
- ◆ Boulder City Animal Control: 293-9283
- ◆ City of Mesquite Animal Control: 346-5268

References

1. Centers for Disease Control- National Center for Infectious Diseases. Rabies: Natural History, Web address: http://www.cdc.gov/ncidod/dvrd/rabies/natural_history/nathist.htm
2. Moran GJ, Talan DA, Mower T, Mewdow M, Ong S, Nakase JY, Pinner RW, and Childs JE. Appropriateness of Rabies Postexposure Prophylaxis Treatment for Animal Exposures. *JAMA* 2000; 284: 1001-1007
3. Centers for Disease Control and Prevention. Human rabies prevention-United States, 1999: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Morb Mortal Wkly Rep.* 1999;48(RR-1):1-21.
4. Nevada Administrative Code: Chapter 441A Communicable Diseases. July 1996.

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