



April 30, 2010

1719 W. 17th St., Santa Ana, CA 92706, (714) 834-8180

Animal Bites in Orange County; Updated Rabies Post-Exposure Prophylaxis Regimen

Every year in the U.S. millions of animal bites occur, with most (approximately 80%, or 4.7 million bites) due to dogs, resulting in hundreds of thousands of medical visits.¹ The highest injury rate is among children 5-9 years of age.² In addition to the potentially serious trauma inflicted, there is a risk of infection, including, in some situations, rabies.

Orange County (OC) data for 2009:

- Over 3,000 animal bites were reported to animal care agencies serving OC.
 - Most (77%) of the animal bites were by dogs and 14% were by cats.
 - Over 250 bites by wild animals were reported.
- Of the 519 animals tested for rabies by the OC Public Health Laboratory, 10 bats were positive.
- 189 persons were evaluated by OC Epidemiology for potential exposure to rabies and the need for post-exposure prophylaxis (PEP).
 - 36 were recommended to receive rabies PEP.

All animal bites should be reported to local animal control authorities, even if medical care is not needed, so that the need for testing of the animal for rabies or other interventions can be assessed. Any stray animals or bats should be reported to local animal control authorities. Potential human exposure to a bat or other wild animal should be reported promptly to OC Epidemiology at 714-834-8180 so that the risk of rabies can be evaluated. Animal bites that occurred in another country should also be reported.

Infection following animal bites: The microbiologic make-up of animal bite wounds includes both aerobic and anaerobic bacteria, such as *Pasteurella* species, streptococci, *Staphylococcus aureus* and *S. intermedius*, *Bacteroides*, *Prevotella*, and *Porphyromonas* species, fusobacteria and peptostreptococci.³ Other pathogens of concern include rabies (see below), *Capnocytophaga canimorsus* (sepsis associated with dog bites in immunocompromised); *Francisella tularensis* (tularemia; can be transmitted by cat bites), herpes B virus (monkey bites); and *Streptobacillus moniliformis* or *Spirillum minus* (rat-bite fever).

Rabies: Rabies, a viral infection of the nervous system, is almost universally fatal. The rabies virus is found in an animal's saliva and is usually transmitted to people by a bite from a rabid animal. Although very rare, contamination of the eyes, mouth or an open wound by the saliva of a rabid animal can also transmit rabies. In Orange County, bites from dogs and cats are not usually considered a risk for rabies. Bites from wildlife, including bats, raccoons, skunks, and coyotes, are considered at risk. Bites from small rodents (squirrels, hamsters, chipmunks, rats) and lagomorphs (rabbits) are very unlikely to transmit rabies and rabies PEP would not typically be recommended.

Rabies Postexposure Prophylaxis (PEP) – Updated Regimen: The PEP course for a previously unvaccinated person after a bite from a potentially rabid animal has been reduced from 5 doses of rabies vaccine to 4 doses (days 0, 3, 7, and 14), except in immunocompromised persons for whom the course remains 5 doses.⁴ Rabies PEP (including HRIG) should be initiated as soon as possible after the bite, but if indicated should still be given regardless of the interval since exposure. HRIG should be administered at day 0 when PEP is initiated but can be administered up to and including 7 days after initiation of the vaccine series. Recommendations for prompt wound care and tetanus vaccination (if needed) remain unchanged.

¹ Weiss HB, Friedman DJ, Cohen JH. Incidence of dog bite injuries treated in emergency departments. *JAMA* 1998;279:51-53.

² CDC. Nonfatal Dog-Bite-Related Injuries Treated in Hospital Emergency Department --- United States, 2001. *MMWR* 2003;52:605-610.

³ Bites. In: Mandell GH, Bennett JE, Dolin R, eds.. *Principles and Practice of Infectious Diseases*, 6th ed. Philadelphia, PA: Elsevier, Inc; 2005:3552-6.

⁴ CDC. Use of a Reduced (4-Dose) Vaccine Schedule for Postexposure Prophylaxis to Prevent Human Rabies. *MMWR Recommendations and Reports* 2010;59(RR-2):1-9.

*For comments or suggestions on the newsletter, contact Dr. Michele Cheung at (714) 834-8180.
To receive this newsletter by email, please contact us at epi@ochca.com.*