



Mahoning County

DISTRICT BOARD OF HEALTH

50 Westchester Drive, Youngstown, Ohio 44515

(330) 270-2855
Laboratory Services (330) 270-2841
Tuberculosis Clinic (330) 744-4246
Nursing FAX (330) 270-2860
Environmental FAX (330) 270-2859
<http://www.mahoning-health.org>

Update on Rabies Prevention

- Purpose** The purpose of this document is to update area physicians on current approaches to prevention of human rabies related to bites and other potentially risky animal contact.
- Background** Despite efforts to contain raccoon rabies at the Pennsylvania border and the Ohio River, rabies appears to have become established among raccoons in our region. This increases the risk that pets and people may be exposed to rabid animals and emphasizes how important it is for all physicians to be knowledgeable of rabies best practices.
- Bites** Domestic and wild animals potentially carrying rabies include:
- o Cats, dogs, ferrets
 - o Skunks, raccoons, foxes, bats, groundhogs
 - o Horses, cows, and other livestock
- Indoor Bat Contact** A bite has been recognized in <10% of bat strain-associated human rabies cases occurring in the U.S. over the past 25 years. If the bat cannot be captured it may be advisable to proceed with rabies post-exposure treatment even if no bite is documented.
- Captured Animal** Captured animals (including bats found in a bedroom) should be evaluated for rabies risk. Stray biting cats, dogs, and ferrets may be killed by order of the health commissioner and tested for rabies without a 10 day quarantine. Prior vaccination of the animal, while probably reducing risk, does not eliminate the need for observation. If not sacrificed for brain examination, *cats, dogs, and ferrets* must be observed under quarantine for 10 days, but there is no data supporting the use of quarantine for animals other than cats, dogs, or ferrets. Other biting animals must be evaluated by the Ohio Department of Health laboratory to establish whether or not rabies is present in brain tissue.
- Animal Gets Sick** Any sign of illness in the animal should lead to immediate rabies prophylaxis for the bite victim; treatment should not be delayed for the results of animal brain examination.
- Animal Stays Well** If these animals remain alive and healthy for 10 days then there is no need for human rabies prophylaxis to be given.
- Animal Not Found** If a domestic biting animal cannot be located within a reasonable period of time, then prophylaxis should generally be given even if the bite is felt to have been provoked. Advice may be sought from the local board of health, and either the local dog warden (for dogs) or a private trapper may be consulted for assistance in capturing a biting animal.
- Reporting Bites** All bites by dogs or other mammals should be reported to the local board of health of the health district in which the bite occurred so that appropriate observation procedures can be arranged (Ohio Administrative Code 3701-2-08). Phone numbers for local boards of health are given at the end of this document.

IMPORTANT NOTICE

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My fax number: _____

- Unusual Animals** Surveillance reports from Ohio and other states confirm spillover of rabies into unusual species. Rabies has recently been confirmed in chipmunks, groundhogs, muskrats, otters, beavers, bobcats, coyotes, and whitetail deer. When evaluating bites from or exposures to animals not usually thought to carry rabies you may wish to consult public health authorities.
- Vaccinated Wildlife** While some wild animals kept as pets (e.g. skunks) may be given rabies vaccine, there is no evidence that such vaccination will reduce human risk of rabies. These animals should generally be killed and examined if a human bite occurs.
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Logistics of caring for an exposed patient

- A Medical Urgency** Rabies exposure is a *medical urgency* but not an emergency. Any bites should be scrubbed as soon as possible with soap and water and irrigated with an antiviral solution such as povidone-iodine. Tetanus prevention and other bite management (including antibiotic administration where indicated) should be accomplished expeditiously.
- If No Prior Vaccine** The following recommendations apply only to those persons who have not previously received rabies vaccine. For persons who have been previously vaccinated somewhat different recommendations apply. The very useful 1999 ACIP advisory can be found at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056176.htm>.
- Communication** If quarantine of the biting animal is appropriate (cat, dog, ferret) and arranged, it is important that communication be established that will ensure appropriate animal investigation and – where indicated – timely patient treatment in the event of the animal’s sickening or death. *When the head of the biting animal has been sent for rabies examination it is equally important to ensure that any human victims can be rapidly contacted when results, positive or negative, become available.*

For those persons needing rabies prophylaxis the following apply:

- Rabies Globulin** Rabies Immune Globulin (RIG) should be given in every case. If there is a known bite site, as much as physically possible of the RIG should be given in that site, and the remainder (if any) is given intramuscularly. The dose is 20 IU/Kg. If there is no known bite (as in a bedroom bat exposure) all the RIG should be given intramuscularly. If unavailable at the time of initial rabies vaccine administration, RIG can be given as long as seven days after vaccine. RIG is made by two manufacturers whose telephone numbers are given below.
- Rabies Vaccine** Rabies vaccine should ideally be administered at the same time as RIG and as soon as feasible after a decision is made to initiate rabies prophylaxis. Vaccine is given intramuscularly in the deltoid or (for infants) in the vastus lateralis. Currently-available vaccines should *never* be given in the gluteal muscles or in the abdominal muscles. Two preparations are currently available, effective, and associated with a very low incidence of significant adverse effects: Human diploid cell vaccine, and purified chick embryo vaccine.
- RIG & Vaccine** *Proper simultaneous administration of RIG and vaccine will not decrease antibody response.* However, RIG and vaccine must *not* be given with the same syringe or needle or in the same site.

Rabies biologics - from MMWR:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/00056176.htm#00003658.htm>

All telephone numbers in the table below are correct as of 4/24/2006

Human rabies vaccine	Product name	Manufacturer
Human diploid cell vaccine (HFCV) Intramuscular	Imovax Rabies	Sanofi-Pasteur Phone: (800) VACCINE (822-2463)
Purified chick embryo cell vaccine (PCEC) Intramuscular	RabAvert	Novartis Phone: CHIRON (800) 244-7668
Rabies immune globulin (RIG) Connaught Laboratories, Inc.	Imogam Rabies-HT	Sanofi-Pasteur Phone: (800) VACCINE (822-2463)
	BayRab	Bayer Corporation Pharmaceutical Div. Phone: (800) 288-8370

Getting Biologics Most area ERs have a supply of RIG and vaccine or can obtain this quickly from a nearby facility. Patients should probably call ahead to confirm vaccine availability before selecting an ER facility.

Timing The first dose of vaccine (and RIG) is given on day "0". Subsequent vaccine doses (without RIG) are given on day 3, 7, 14, and 28. Vaccination should generally be continued with the brand begun on day 0.

Ordering Vaccine While the first dose of vaccine is generally given in the ER, the remaining 4 doses are almost always given in private physicians' offices. The earlier that you order vaccine the more likely it is that the vaccine will be available on the day it is needed. Suppliers will "overnight" vaccine, but if you take care to order it on day 0 you will have it on day 3 when the second dose is due. Delays in administration pose risk to patients and should be avoided. Some ERs may be willing to "trade" doses to allow you to keep to the required timetable in the event of shipping delays.

Help with Costs Rabies vaccine and RIG are both costly. Most insurance companies will reimburse for vaccine costs and administration. For Mahoning County residents who are medically indigent there are County funds available to purchase rabies vaccine and RIG. For further information contact the Mahoning County District Board of Health at (330) 270-2855, ext. 125.

Contact Info Prevention and control of rabies remains an important public health goal for the local Boards of Health in Mahoning County. This communication is intended to provide you with useful information for clinical care.

Phone numbers for reporting: Youngstown – (330) 743-3333, Struthers (330) 755-7977
Mahoning County District Board of Health - Director of Environmental Health (330) 270-2855 ext. 116, Medical Director (330) 270-2855 ext. 174, Assistant Nursing Director (330) 270-28552855 ext. 117

Dog Warden Mahoning County Dog Warden – (330) 740-2405
Ohio Dept. of Health Ohio Department of Health – Zoonotic Disease Program - 1-888-722-4371

This Message Is From Larry Frisch MD, MPH, Linda Ewing RN, NP, Mary Helen Smith, RS, Richard Setty RS
Mahoning County District Board of Health July 20, 2006
Please contact us if you have further questions or need literature references.