



Arkansas Department of Health

Pre-exposure Vaccine for Rabies

From: Human Rabies Prevention - United States, 2008 Recommendations of the Advisory Committee on Immunization Practices (ACIP); CDC

Pre-exposure rabies prophylaxis is administered for several reasons. First, although pre-exposure vaccination does not eliminate the need for additional medical evaluation after a rabies exposure, it simplifies management by eliminating the need for RIG and decreasing the number of doses of vaccine needed. Second, pre-exposure prophylaxis might offer partial immunity to persons whose postexposure prophylaxis is delayed. Finally, pre-exposure prophylaxis might provide some protection to persons at risk for unrecognized exposures to rabies.

Pre-exposure vaccination should be offered to persons in high-risk groups, such as veterinarians and their staff, animal handlers, rabies researchers, and certain laboratory workers. Pre-exposure vaccination also should be considered for persons whose activities bring them into frequent contact with rabies virus or potentially rabid bats, raccoons, skunks, cats, dogs, or other species at risk for having rabies. In addition, some international travelers might be candidates for pre-exposure vaccination if they are likely to come in contact with animals in areas where dog or other animal rabies is enzootic and immediate access to appropriate medical care, including rabies vaccine and immune globulin, might be limited. Routine pre-exposure prophylaxis for the general U.S. population or routine travelers to areas where rabies is not enzootic is not recommended.

Vaccines available currently for pre-exposure boosters are:

Human Diploid Cell Vaccine (HDCV), **Imovax® Rabies**
Sanofi Pasteur
Phone: (800) VACCINE (822-2463)
Website: <http://www.vaccineplace.com/products/>

Purified Chick Embryo Cell (PCEC) Vaccine, **RabAvert®**
Novartis Vaccines and Diagnostics
Phone: (800) 244-7668
Website: <http://www.rabavert.com>

Procedures for Pre-exposure Immunization to Rabies

Unvaccinated persons should receive 3 injections of vaccine given intramuscularly (deltoid area) each on day 0, 7, and 21 or 28.

No Serological Testing Required

Essentially all persons tested at CDC 2-4 weeks after completion of pre-exposure rabies prophylaxis according to ACIP guidelines have demonstrated an antibody response to rabies. Therefore, it is not necessary to test serum samples from patients completing pre-exposure prophylaxis to document seroconversion unless the person is immunosuppressed.

Pregnancy

Because of the potential consequences of inadequately treated rabies exposures and limited data which indicate that fetal abnormalities have not been associated with rabies vaccination, pregnancy is not considered a contraindication to post-exposure prophylaxis. If there is substantial risk of exposure to rabies, pre-exposure prophylaxis may also be indicated during pregnancy.

Allergies

Persons with histories of hypersensitivity should be given rabies vaccine with caution. When a patient with a history suggestion hypersensitivity to HDCV must be given vaccine, antihistamines may be given, epinephrine should be readily available to counteract anaphylactic reactions, and the person should be carefully observed.

Pre-exposure Vaccination Boosters

Persons who work with rabies virus in research laboratories or vaccine production facilities (continuous risk category) are at the highest risk for inapparent exposures. Such persons should have a serum sample tested for rabies antibody every 6 months. Booster doses (IM) 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.

The frequent-risk category includes other laboratory workers (e.g., those performing rabies diagnostic testing), spelunkers, **veterinarians and staff**, and animal-control and wildlife officers in areas where animal rabies is enzootic. Persons in this group should have a **serum sample tested for rabies antibody every 2 years; a titer of less than 0.5 IU by the RFFIT indicates a need for a single booster dose of vaccine.**

Veterinarians, veterinary students, and animal-control and wildlife officers working in areas with low rabies rates (infrequent exposure group) and at-risk international travelers do not require routine pre-exposure booster doses of vaccine after completion of primary pre-exposure vaccination.

Serology for Rabies Titers

There are many laboratories that run rabies titers; two of the best known are listed below:

Atlanta Health Associates	(800) 717-5612	http://www.atlantahealth.net/
Kansas State University	(758) 532-4483	http://www.vet.ksu.edu/depts/dmp/service/rabies/

FOR FURTHER INFORMATION, CALL

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