

PUBLIC HEALTH REFERENCE SHEET

Post-Exposure Prophylaxis against Rabies



What is rabies post-exposure prophylaxis?

Rabies is a zoonotic disease caused by RNA viruses in the family *Rhabdoviridae*, genus *Lyssavirus*. Rabies virus is present in the saliva and central nervous system (CNS) tissue of rabid animals. If a person has been exposed (or reasonably presumed to have been exposed) to a rabid (or potentially rabid) animal, then Post-Exposure Prophylaxis (PEP) against rabies is warranted for the prevention of human rabies. In the U.S., for individuals who have never been vaccinated against rabies, PEP includes one dose of human rabies immunoglobulin (HRIG) and four doses of rabies vaccine over a 14-day period. For individuals who have been previously vaccinated or are receiving pre-exposure vaccination for rabies should receive only vaccine. In all cases involving rodents, consult the state or local health department before a decision is made to initiate PEP.

When is Post-Exposure Prophylaxis (PEP) against Rabies reportable?

According to the 2022 Armed Forces Reportable Medical Events Guidelines and Case Definitions, cases are reportable when the individual meets exposure criteria for which PEP against rabies is initiated and a full rabies exposure risk assessment is completed. The case definition only includes bites from animals suspected to be infected with rabies for which a healthcare provider recommended PEP against rabies.

What are the exposure criteria for reporting PEP against Rabies?

Exposure is defined as one or more of the following:

- Any bite, scratch, or other situation in which saliva or CNS tissue of a rabid or potentially rabid animal could have entered an open or fresh wound or come in contact with a mucous membrane by entering the eye, mouth, or nose;
- Inadvertent bat contact or circumstances in which bat contact cannot be ruled out; and/or
- Recipient of organ donations from suspected or known human cases of rabies.

Are cases of refusal of post-exposure prophylaxis against rabies reported?

Yes. All cases where a healthcare provider recommended PEP following a suspected exposure to rabies are to be reported to DRSi within 48 hours of the recommendation. Provide an explanation of why the individual refused PEP against rabies.

When are cases of post-exposure prophylaxis against rabies not reportable?

Cases are not reportable when there is a bite from an animal that was fully vaccinated against rabies, (e.g., military working dog), and did not result in a healthcare provider recommendation for PEP against rabies.

What are some public health considerations?

- Specify the type of exposure (bite, scratch, saliva, slept near, or other circumstance).
- Specify the implicated animal species, if known.
- Specify the anatomical site of exposure.
- Document the circumstances under which the case patient was potentially exposed including deployment and duty exposure, occupational activities, environmental exposures, or other high-risk activities.
- Note the patient's rabies immunization history.
- Specify the reasons for discontinuation if PEP was discontinued.

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- Report all cases receiving PEP that met the exposure criteria, even if PEP is subsequently terminated due to the animal being deemed rabies free.

Which animals carry rabies?

Any mammal can contract rabies. The most common wild reservoirs of rabies are raccoon, skunk, bat, fox, and coyote, as well as a feral cat or dog. The following specifies more examples of animals and their contractability of rabies:

- Domestic mammals (cats, dogs, cattle) can contract rabies.
- Ferrets may carry rabies.
- Rodents (chipmunks, rats, mice, hamsters, gerbils, and guinea pigs), rabbits, and hares rarely contract rabies and have not been known to carry rabies in the U.S.
- Squirrels may contract rabies, or suffer from a fatal roundworm brain parasite, which causes signs and symptoms similar to rabies.
- Opossums are resistant to rabies. Hissing, drooling, and swaying are part of the opossum's bluff routine, which is intended to scare away potential predators. Yet, this behavior looks like rabies and is why some believe an opossum is rabid when it is not.

What does an animal infected with rabies look like?

In the "furious" or "rabid" form, wild animals may appear to be agitated, bite, or snap at imaginary and real objects and drool excessively. An old term for rabies was "hydrophobia" due to a rabid animal's apparent inability to swallow water. In the "dumb" form, wild animals may appear tame and seem to have no fear of humans. Non-specific signs include the animal appearing "drunk" or excessively wobbly, circling, seeming partially paralyzed, acting disoriented, or mutilating itself, which may also be indicative of diseases like distemper or lead poisoning.

References:

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