

Proper Administration of Rabies PEP

IDPH Summary of the Rabies PEP Regimen

Rabies exposures should be treated as soon as possible. PEP is indicated regardless of the length of the delay, provided that clinical signs of rabies are not present. If clinical signs of fever and encephalitis are present, giving rabies PEP can result in adverse consequences. Because rabies infection makes the blood-brain barrier more permeable, giving rabies vaccine and immune globulin once clinical signs are present can result in an immune response that can cause more damage in the CNS system.

Immunocompetent Persons who have NOT Previously Received Rabies Vaccine

[Use of a Reduced \(4-Dose\) Vaccine Schedule for Post exposure Prophylaxis to Prevent Human Rabies \(ACIP\)](#)

[Rabies PEP for Immunocompetent Individuals Without Previous Rabies Pre-Exposure Vaccination and Without Previous Rabies PEP](#)

[Rabies PEP Immunocompetent Without Previous Vaccine](#)

The following is an excerpt from the ACIP recommendations:

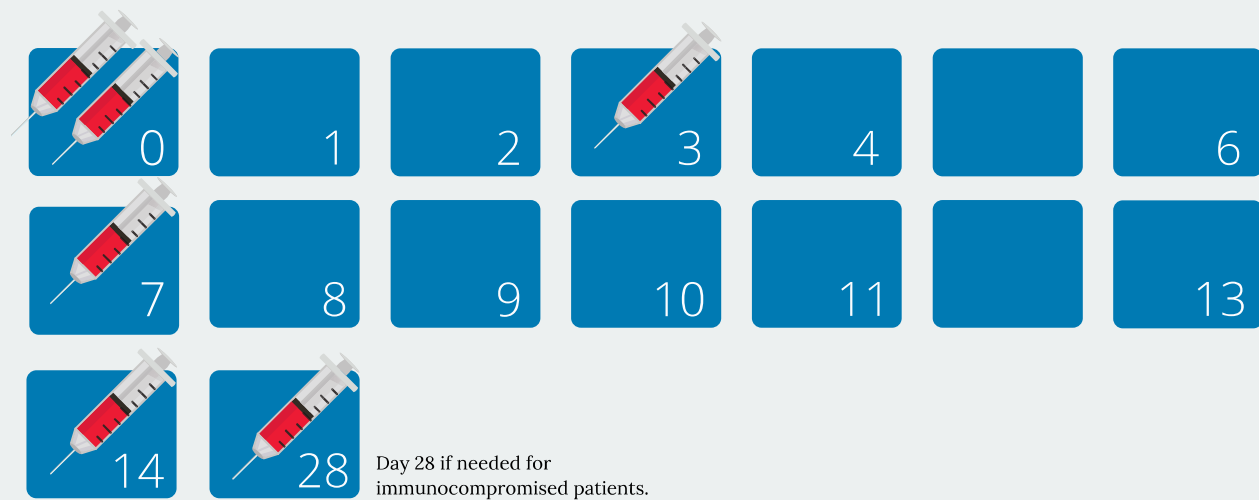
Administer four 1mL vaccine doses of vaccine. The first dose of the four-dose regimen should be administered as soon as possible after exposure. The date of the first dose is considered day 0 of the PEP series. Additional doses are administered on days 3, 7, and 14 after the first vaccination. RabAvert® and ImoVax® are the two U.S. licensed rabies vaccines.

Human Rabies Immune Globulin (HRIG)

Administer HRIG once on day 0 at the time PEP is initiated, in conjunction with the vaccine. If HRIG was not administered when vaccination was begun on day 0, it can be administered up to and including day 7 of the PEP series.

Proper Administration of Rabies PEP, continued

Figure: Vaccine and HRIG Schedule



Immunocompromised Persons

If rabies PEP is needed in immunosuppressed persons, a fifth dose should be given. Sera should be collected on day 15 of the series and at the time of completion of the series for Rapid Fluorescent Foci Inhibition Test (RFFIT) testing. If the person has not responded with antibody production, consult public health authorities as additional vaccination doses may be needed.

Persons Previously Vaccinated for Rabies

A person can be considered previously immunized if they received a full series of post-exposure or pre-exposure AFTER 1980 when the newer vaccines were used regardless of whether a titer was taken. In this case, rabies PEP consists of 2 doses of vaccine at Days 0 and 3. If rabies pre-exposure or post-exposure vaccination was done prior to 1980, the person would have to have had a documented rabies titer by RFFIT to qualify as previously vaccinated. HRIG should not be administered.

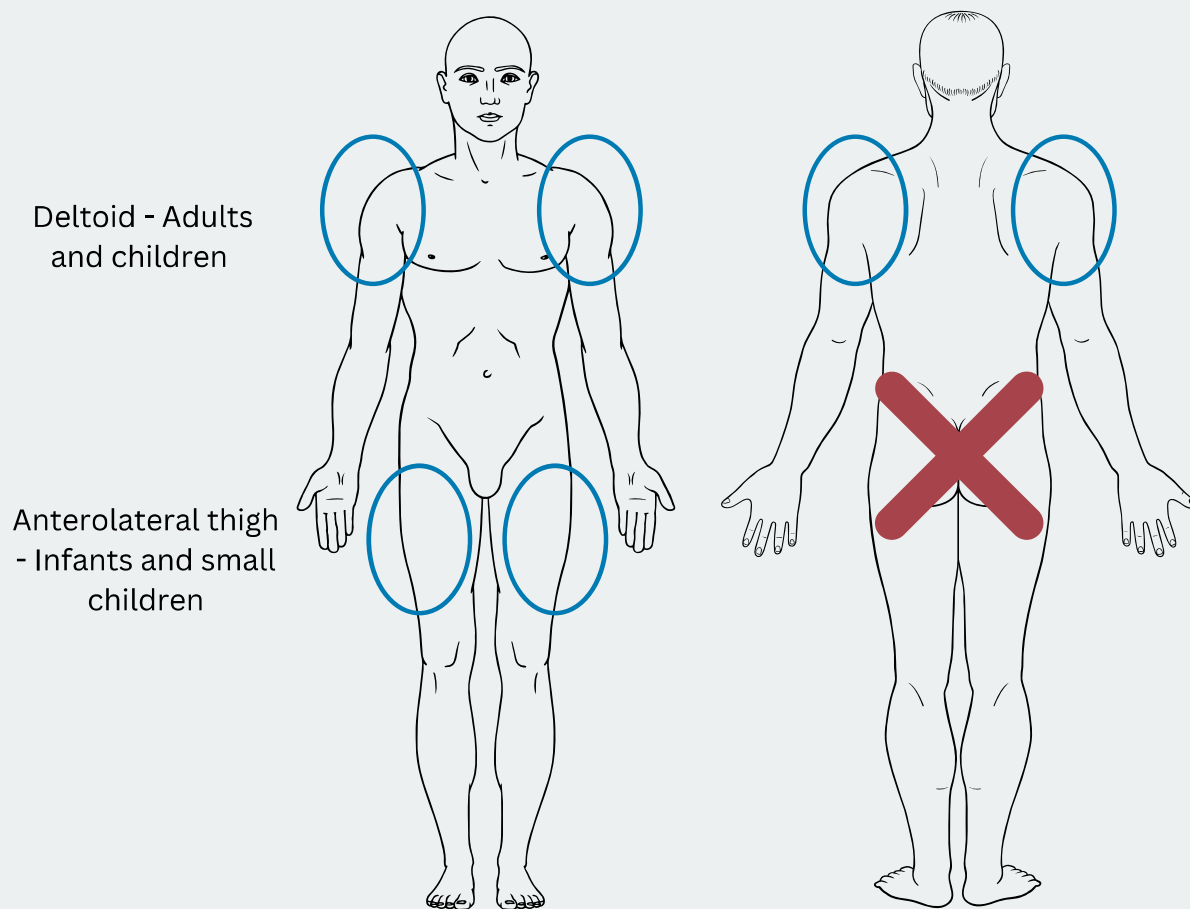
Deviations from Recommended Post-Exposure Vaccination Schedule

Every attempt should be made to adhere to the recommended vaccination schedules. Once vaccination is initiated, delays of a few days for individual doses are unimportant, but the effect of longer lapses of weeks or more is unknown. Most interruptions in the vaccine schedule do not require reinitiation of the entire series. For most minor deviations from the schedule, vaccination can be resumed as though the patient were on schedule.

Proper Administration of Rabies PEP, continued

As much of the RIG dose as is anatomically feasible should be infiltrated in the area around and in the wounds. Any remaining dose should be given intramuscularly. Rabies vaccine should be administered by intramuscular injection into the deltoid muscle in adults and children or the anterolateral thigh in infants. RIG administration into the gluteus is not recommended due to possible damage to the sciatic nerve and possible vaccine failure.

Figure: Human Rabies Immune Globulin and Rabies Vaccine Administration Sites



Proper Administration of Rabies PEP, continued

Table 3. Rabies postexposure prophylaxis guide – United States, 2008

Animal Type	Evaluation and disposition of animal	Postexposure prophylaxis recommendations
Dogs, cats, and ferrets	Healthy and available for 10-day observation	Persons should not begin prophylaxis unless animal develops clinical signs of rabies*
	Rabid or suspected rabid	Immediately begin prophylaxis
	Unknown (e.g. escaped)	Consult public health officials
Skunks, raccoons, foxes, and most other carnivores; bats†	Regarded as rabid unless animal proven negative by laboratory tests‡	
Livestock, small rodents (rabbits and hares), large rodents (woodchucks and beavers) and other mammals	Consider individually	Consult public health officials. Bites from squirrels, hamsters, guinea pigs, gerbils, chipmunks, rats, mice, other small rodents, rabbits and hares almost never require anti-rabies postexposure prophylaxis

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

† Post-exposure prophylaxis should be initiated as soon as possible following exposure to such wildlife. Unless the animal is available for testing and public health authorities are facilitating expeditious laboratory testing, or the animal has already tested negative for rabies. Discontinue vaccine if appropriate laboratory diagnostic test (i.e., the direct fluorescent antibody test) is negative.

‡ The animal should be euthanized and tested as soon as possible. Holding for observation is not recommended.

Table adapted from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5703a1.htm>

Proper Administration of Rabies PEP, continued

Summary of the Rabies PEP Regimen		
Product	Recommended time of administration	Administration details
HRIG	Day 0 (if not administered on day 0 can be given up to and including day 7 of the first dose of vaccine)	20 IU/kg. If anatomically feasible, infiltrate the bite wound with the full dose. Any remaining volume should be given IM at a site distant from vaccine administration. The deltoid, (opposite arm from where vaccine is given) is recommended. If a non-bite exposure occurred, HRIG can be given IM at a site distant from vaccine administration (deltoid opposite arm from where vaccine is given). Not needed for patient previously given full series of rabies PEP or patient pre-exposure vaccinated for rabies.
Rabies vaccine dose 1	Day 0	Administered IM. In deltoid for adults. For small children, anterolateral aspect of the thigh is also acceptable. The gluteal area should NEVER be used because it results in lower titers.
Rabies vaccine dose 2	Day 3	See vaccine dose 1 information
Rabies vaccine dose 3	Day 7	See vaccine dose 1 information
Rabies vaccine dose 4	Day 14	See vaccine dose 1 information
Rabies vaccine dose 5 (immunocompromised patients only)	Day 28	See vaccine dose 1 information

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