



Arkansas Department of Health

Procedures for postexposure rabies treatment:

Administration of rabies postexposure prophylaxis is a medical urgency, not a medical emergency. Because rabies biologics are valuable resources that are periodically in short supply, a risk assessment weighing potential adverse consequences associated with administering postexposure prophylaxis along with their severity and likelihood versus the actual risk for the person acquiring rabies should be conducted in each situation involving a possible rabies exposure. Because the balance of benefit and harm will differ among exposed persons on the basis of the risk for infection, recommendations regarding rabies postexposure prophylaxis are dependent upon associated risks including 1) type of exposure, 2) epidemiology of animal rabies in the area where the contact occurred and species of animal involved, and 3) circumstances of the exposure incident. The reliability of this information should be assessed for each incident. The decision of whether to initiate rabies postexposure prophylaxis also depends on the availability of the exposing animal for observation or rabies testing. Because the epidemiology and pathogenesis of rabies are complex, these recommendations cannot be specific for every possible circumstance. Clinicians should seek assistance from local or state public health officials for evaluating exposures or determining the need for postexposure management in situations that are not routine. State and local officials have access to CDC rabies experts for particularly rare situations or difficult decisions.

For persons who have never been vaccinated against rabies previously, postexposure anti-rabies vaccination should always include administration of both passive antibody and vaccine. Persons who have been previously vaccinated or are receiving pre-exposure vaccination for rabies should receive only vaccine. The combination of human rabies immune globulin (HRIG) and vaccine is recommended for both bite and non-bite exposures, regardless of the interval between exposure and initiation of treatment.

- STEP 1: Local treatment of wound: Debridement and thorough cleansing with soap and water PLUS, as indicated, tetanus prophylaxis and measures to control bacterial infections.
- STEP 2: HRIG is administered only ONCE, on the first day of treatment. Administer Human Rabies Immune Globulin (HRIG—product name **Imogam® Rabies-HT** or **HyperRAB™ S/D**) at 20 IU/kg body weight or 1 ml. for each 16 ½ pounds of body weight. EXACT DOSAGE SHOULD BE GIVEN. If possible, the **full dose** should be infiltrated around any wound(s) and any remaining volume should be administered IM at an anatomical site distant from vaccine administration. The anterolateral thigh should be considered to preserve the deltoids for vaccine administration. Also, RIG should not be administered in the same syringe as vaccine. Because RIG might partially suppress active production of antibody, no more than the recommended dose should be given. RIG should not be given in the gluteal muscle.
- STEP 3: Also on the first day of treatment, administer one (1) dose of the Human Diploid Cell Vaccine (HDCV) **Imovax® Rabies** or Purified Chick Embryo Cell Vaccine (PCEC) **RabAvert®**. For adults, the vaccination should always be administered intramuscularly in the deltoid area (arm). For children, the anterolateral aspect of the thigh is also acceptable. The gluteal area should never be used for rabies vaccine injections because observations suggest administration in this area results in lower neutralizing antibody titers. If HRIG was administered in the arm or hand, use the opposite arm for the vaccine.

RABIES POST EXPOSURE PROPHYLAXIS SCHEDULE:

Day 0 (first day)	Human Rabies Immune Globulin (HRIG) Dose varies by weight and is usually several shots given around wound and IM. Not in gluteal muscle.	Rabies Vaccine 1 ML IM in deltoid muscle of arm
Day 3		Rabies Vaccine 1 ML IM in deltoid
Day 7		Rabies Vaccine 1 ML IM in deltoid
Day 14		Rabies Vaccine 1 ML IM in deltoid

ADVERSE REACTIONS:

Rabies Vaccine: (From Human Rabies Prevention -United States, 1999 (ACIP)) "Reactions after vaccination with HDCV, RVA, and PCEC are less serious and less common than with previously available vaccines. In previous studies with HDCV, local reactions (e.g., pain, erythema, and swelling or itching at the injection site) have been reported among 30%-74% of recipients. Systemic reactions (e.g., headache, nausea, abdominal pain, muscle aches, and dizziness) have been reported among 5%-40% of recipients. Three cases of neurologic illness resembling Guillain-Barre syndrome that resolved without sequelae in 12 weeks have been reported...An immune complex-like reaction occurred among approximately 6% of persons who received booster doses of HDCV 2-21 days after administration of the booster dose. The patients developed generalized urticaria, sometimes accompanied by arthralgia, arthritis, angioedema, nausea, vomiting, fever, and malaise. In no cases have these reactions been life-threatening. This reaction occurred less frequently among persons receiving primary vaccination."

Rabies Immune Globulin (Human): "Local pain and low-grade fever might follow receipt of RIG. Although not reported specifically for RIG, angioneurotic edema, nephrotic syndrome, and anaphylaxis have been reported after injection of immune globulin (IG), a product similar in biochemical composition but without antirabies activity. These reactions occur so rarely that a causal relationship between IG and these reactions has not been established. Both formulations of RIG, BayRab™ and Imogam Rabies-HT, undergo multiple viral clearance procedures during preparation. There is no evidence that any viruses have ever been transmitted by commercially available RIG in the United States."

For further information, feel free to call
Susan Weinstein, DVM
Arkansas Public Health Veterinarian
Office: (501) 280-4136