Rabies prophylaxis: Current recommendations and product availability

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The necessity for preexposure rabies prophylaxis depends on each individual’s risk of being exposed to the rabies virus. According to CDC, “typical” short-stay international travelers and the U.S. population at large are not at high risk for rabies and therefore fall into the infrequent or rare risk categories, respectively. These groups of individuals would only require preexposure rabies vaccination if they were traveling to areas where rabies is enzootic, where immediate access to appropriate medical care is lacking, and/or if they were engaging in activities that would increase their risk for rabies (e.g., spelunking).\(^1\)

For those requiring preexposure prophylaxis, the Advisory Committee on Immunization Practices (ACIP) and the World Health Organization (WHO) recommend a three-dose series of 1 mL i.m. rabies vaccination is recommended.

Previously unvaccinated individuals should receive a one-time injection of human rabies immunoglobulin (HRIG; Imogam Rabies-HT [Sanofi Pasteur] or HyperRAB S/D [BDI Pharma]) to boost the body’s immune response to the rabies virus. An HRIG dose of 20 IU/kg should be administered around the perimeter of the bite wound, with any remaining product administered in the deltoid muscle opposite the rabies vaccine administration site, up to and including day 7 following exposure. Previously vaccinated individuals do not require HRIG.\(^1\)

Previously unvaccinated individuals also should receive 1 mL rabies vaccine administered intramuscularly on days 0, 3, 7, and 14, with an additional dose on day 28 for immunosuppressed individuals only.\(^3\) Previously vaccinated individuals require only two doses of the rabies vaccine given on days 0 and 3. A vaccine regimen started with either Imovax or RabAvert may be continued and interchanged with the other vaccine.\(^1\)

Internationally available products

A patient who is exposed to rabies while traveling abroad may need to start treatment with products that are unavailable in the United States. Instead of HRIG, patients may receive equine rabies immunoglobulin (ERIG). Before giving ERIG, a skin test to detect potentially severe allergic reactions should be done. Otherwise, ERIG is safe and effective.\(^3\) A vaccination series initiated overseas also may involve the vaccine Verorab (Sanofi Pasteur). This vaccine has not been submitted to FDA for review but is considered equally safe and effective compared with products available in the United States.\(^1,2\)

Postexposure prophylaxis of rabies is necessary to prevent mortality, as this infection is nearly 100% fatal if not managed appropriately. The specific management plan for rabies is dependent on patients’ previous vaccination history. Postexposure prophylaxis may consist of HRIG along with vaccine given during a 14- or 28-day period. Preexposure rabies vaccination typically is not administered to individuals but may be indicated for some based on a higher individual risk of exposure (e.g., handling of potentially rabid animals, spelunking) to rabies. Either vaccines or HRIG may be affected by manufacturer supply shortages.

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References