State of Alaska Epidemiology **Bulletin**

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Changes in Human Rabies Vaccine Availability

Background

Since 1980, the Section of Epidemiology has distributed the Aventis Pasteur rabies vaccine, Imovax®, also known as Human Diploid Cell Vaccine (HDCV). Because of recent manufacturer's restrictions and recalls, Epidemiology is unable to consistently maintain an adequate supply of HDCV to meet both pre- and post-exposure needs. Although we currently have a limited stockpile of HDCV to be held in reserve, we have begun to stock the Chiron rabies vaccine product, RabAvert®, which is a Purified Chick Embryo Cell (PCEC) vaccine. Rabies Vaccine Adsorbed manufactured by BioPort Corporation is no longer being produced.

According to the Centers for Disease Control and Prevention (CDC) and the Advisory Committee on Immunization Practices (ACIP), HDCV and PCEC are both highly immunogenic and can be used interchangeably.[1]

Rabies PCEC Vaccine

A copy of the RabAvert® package insert can be found at http://www.rabavert.com/insert.html. Please review the entire package insert prior to administration, and note the following important warnings excerpted below with emphasized added:

Contraindications: [from page 7]
In view of the almost invariably fatal outcome of rabies, there is no contraindication to post-exposure immunization. However, if an alternative product is not available, **care should be taken if the vaccine is to be administered to persons known to be sensitive to processed bovine gelatin, chicken protein, neomycin, chlortetracycline, and amphotericin B** in trace amounts, which may be present in the vaccine and may cause an allergic reaction in such individuals.

Precautions: Hypersensitivity [from page 8]
RabAvert® is produced in chick embryo cell culture. **Persons with a history of anaphylactic, anaphylactoid, or other immediate reactions (e.g., hives, swelling of the mouth and throat, difficulty breathing, hypotension, or shock) subsequent to egg ingestion, should not be immunized with this vaccine**. At present there is no evidence that persons are at increased risk if they have egg hypersensitivities that are not anaphylactic or anaphylactoid in nature; however, in this case, HDCV rabies vaccine should be administered. There is no evidence to indicate that persons with allergies to chickens or feathers are at increased risk of reaction to vaccines produced in chick embryo cell culture.

Since reconstituted RabAvert® contains traces of processed bovine gelatin, chicken protein, neomycin, chlortetracycline and amphotericin B, **the possibility of allergic reactions in individuals sensitive to these substances should be considered** when administering vaccine.

Rabies Pre-Exposure Immunizations

A rabies pre-exposure immunization series consists of three (3) doses of vaccine given on days 0, 7, 21 **or** 28. CDC recommends that persons with certain exposures be routinely considered for the pre-exposure series (Table 1). [Note that rabies is enzootic, and cyclically epizootic, in northern and western Alaska.]

Healthcare providers may contact the Section of Epidemiology for consultation and to request vaccine for patients who meet the criteria listed below. Depending on the availability of rabies vaccine, Epidemiology may need to restrict distribution of vaccine to those persons at highest risk for exposure. There is no charge for the vaccine. As with all vaccine supplied by Epidemiology, healthcare providers may request a nominal administration fee but may not charge for the vaccine itself.

Persons vaccinated against rabies still require follow-up care if they are exposed to a potentially rabid animal. Rabies post-exposure prophylaxis for a previously vaccinated person is simplified and requires fewer doses of vaccine.

CDC has created a rabies Vaccine Information Sheet (VIS), http://www.cdc.gov/nip/publications/VIS/vis-rabies.pdf, that should be given to patients. The VIS is generic and can be used for either HDCV or PCEC.

Rabies Post-Exposure Prophylaxis

Healthcare providers should contact the Section of Epidemiology as before for consultation about rabies post-exposure prophylaxis (PEP). Although PCEC and HDCV are equally efficacious, Epidemiology will make all possible efforts to have HDCV available for PEP patients who have anaphylactic egg hypersensitivities.

Reference

[1]Centers for Disease Control and Prevention. Human Rabies Prevention – United States, 1999 Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 1999:48(RR-1);1-21.

Table 1. Criteria for Rabies Pre-Exposure Immunization.[1]

Risk Categories and Nature of Risk	Typical Populations	Pre-Exposure Recommendations
Continuous: Virus present continuously, often in high concentrations. Specific exposures likely to go unrecognized. Bite, non-bite, or aerosol exposure possible.	Rabies research laboratory workers; rabies biologics production workers.	Primary course; serologic testing every 6 months; booster vaccination depending on antibody titer.
Frequent: Exposure usually episodic with source recognized, but exposure might also be unrecognized. Bite, non-bite, or aerosol exposure possible.	Rabies diagnostic laboratory workers, spelunkers, veterinarians and staff, and animal control and wildlife workers in rabies-epizootic areas.	Primary course; serologic testing every 2 years; booster vaccination depending on antibody titer.
Infrequent (greater than general population): Exposure nearly always episodic with source recognized. Bite or non-bite exposure.	Veterinarians, animal control and wildlife workers in areas with low rabies rates; veterinary students; and travelers visiting areas where rabies is enzootic and immediate access to appropriate medical care, including biologics, is limited.	Primary course; no serologic testing or booster vaccination.
Rare (general populations): Exposure always episodic, with source recognized. Bite or non-bite exposure.	U.S. population at large, including individuals in rabies-epizootic areas.	No pre-exposure immunization necessary.