

North Carolina Oral Rabies Vaccination Program: Information for Physicians, Veterinarians, and other Health Professionals

What is the Oral Rabies Vaccination (ORV) Program?

Oral rabies vaccination (ORV) provides a way of controlling the spread of rabies by vaccinating wild animals against the disease. Currently, 15 states distribute oral vaccines for raccoons in the United States, while Texas distributes baits for gray fox and coyote. Since 1997, a coalition of federal and state agencies have teamed together to form the Appalachian Ridge ORV treatment zone which is intended to be a barrier preventing the westward spread of rabies. Once completed, this barrier will extend from Lake Erie to the Gulf of Mexico.

Where is the vaccination area within North Carolina? When are baits distributed?

Oral vaccination bait drops are scheduled for parts of four North Carolina counties. Baiting will take place in October 2008 in portions of Buncombe, Jackson, Haywood, Madison, Mitchell, Swain and Yancey counties. The goal is to prevent the spread of raccoon variant rabies into Tennessee via the French Broad and Nolichucky river basins.

What does the bait look like?

For raccoons, the formulation is the coated sachet, which is a plastic packet containing the vaccine coated in fishmeal and oil. The vaccine (died pink) is encased within a white plastic package (sachet) that resembles a fast-food style ketchup or mustard packet.



A label printed in black on each bait reads:

RABIES VACCINE
LIVE VACCINIA VECTOR
DO NOT DISTURB
1-877-722-6725

What type of vaccine is used?

Utilizing recombinant vaccine technology, Raboral V-RG[®] (Merial) combines a noninfectious portion of the rabies virus (rabies glycoprotein) with a living vaccinia virus. The vaccine cannot cause rabies as it contains only the noninfectious surface proteins of the rabies virus, not the viral nuclear material which would be necessary for the virus to replicate and cause an infection.

What is the safety of oral rabies vaccine in animals?

Raboral was extensively evaluated in the laboratory for safety in over 50 vertebrate species with no adverse effects, regardless of route or dose. While the vaccine is not harmful if ingested, it is not approved for use in domestic animals. Parenteral rabies vaccination can be safely administered to a domestic animal even if it recently ingested a dose of oral rabies vaccine.

What if a domestic animal eats a bait?

The bait is not harmful to dogs, cats, or livestock if they find and eat one. However, eating a large number of baits may cause a temporarily upset stomach. The bait has a strong fish odor and is usually unappealing to children.

What is the safety of oral rabies vaccine in humans?

Over 40 million doses of Raboral have been distributed in the United States since 1994, with only one reported case of adverse effects in humans. This case involved a pregnant woman with a history of epidermolytic hyperkeratosis who was exposed to the oral rabies vaccine while removing a bait from her dog's mouth. A localized vaccinia virus infection developed on her forearm within 3 days of the exposure. Swelling and erythema of the forearm surrounding the skin lesions and axillary adenopathy subsequently developed – both of which are typical side effects seen with vaccinia vaccination. The patient made a full recovery and went on to deliver a healthy baby.¹ Therefore, it is advised that physicians consider the possibility of complications due to exposure to vaccinia, particularly if the person is immunocompromised or has dermatological conditions such as eczema. Although it is unlikely for any illness to occur, the North Carolina Department of Health & Human Services can assist in obtaining vaccinia immune globulin if necessary.

What precautions should be taken in the event of vaccine exposure?

Damaged baits can be bagged and disposed of in regular trash. If a person has direct skin contact with the vaccine inside the bait, they should immediately wash the area with soap and water.

Who should be notified in the event of vaccine exposure?

Please call your county health department or the phone number printed on the bait (1-877-722-6725) to report any exposure to the vaccine or bait.

Who else should be notified if a person is exposed to the vaccine?

The North Carolina Department of Health & Human Services - Division of Public Health would appreciate physicians or local health departments notifying the Veterinary Public Health Program office of any potential exposures, including the name and phone number of the person who had contact with or ingested the vaccine. This office can be reached at (919) 733-3410 or by e-mail at vetpublichealth@ncmail.net.

For additional information about Oral Rabies Vaccination, see the USDA Wildlife Services Rabies Management web site at www.aphis.usda.gov/ws/rabies/.



North Carolina Department of Health and Human Services ● Veterinary Public Health
www.ncpublichealth.com

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¹ Rupprecht CE, Blass L, Orciari LA, et al. Human infection due to recombinant vaccinia-rabies glycoprotein virus. *N Engl J Med.* 2001; 345:582-6.