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Rabbit Hemorrhagic Disease Virus – AEVC Information as of April 2021

Rabbit hemorrhagic disease virus (RHDV) is a highly contagious virus that has been found in rabbits across the USA, now including Oregon, Washington and California among others. More specifically, RHDV was confirmed in dead rabbits in SE Portland in March 2021. RHDV can cause fatal illness in domestic and wild rabbits, and no treatment has been successful for reversing rabbit hemorrhagic disease. The virus is readily transmitted between a variety of wild animal species (not just rabbits), and the virus is very persistent in the environment unless specific disinfectants are used against it. ***The two best ways to prevent RHDV affecting your rabbits are to practice strict “biosecurity” measures, and to vaccinate your rabbits against RHDV.***

Biosecurity measures include housing rabbits strictly indoors, protecting them against exposure to mosquitoes or flies that could carry virus in from outdoors, not feeding them any outdoor greens that have not been disinfected, and housing your rabbits away from all other rabbits. See the following pages for recommendations regarding biosecurity practices and disinfection.

Vaccination is also a good way to help prevent disease from some strains of RHDV. We have obtained a special permit from the US Department of Agriculture (USDA) to import vaccine into the USA, and are therefore able to vaccinate your rabbit against RHDV as of May 5, 2021. This assumes that your rabbit is not showing a fever or signs of infectious disease at the time that might interfere with vaccine efficacy, and assumes that your rabbit is resident in Oregon. Details of vaccination scheduling are listed here:

- To register as a new client with us, or to refresh your veterinarian-client-patient relationship with us if we have not examined your rabbit within the past year, visit our website at www.avianexoticvetcare.com, click on “new client portal” at the upper right of our home web page, and complete the process including prepayment of a deposit toward your first appointment with us. We will contact you after that form and payment are completed to discuss scheduling your first appointment.
- If you are an existing client with us, and we have examined your rabbit within the past year, then please contact us via email at AEVC.info@gmail.com or call us at 971-361-2209 to schedule an appointment for your rabbit.
- Per Oregon state veterinary regulations, any rabbit vaccinated against RHDV must be permanently identified. Our means of doing this involves implantation of a transponder microchip under the skin, usually in the region above the chest. The microchip implantation procedure is done with use of injected local anesthetics (lidocaine and bupivacaine, similar to novocaine) since the insertion needle is relatively large. We will use a universal sensor to determine whether your rabbit already has a transponder microchip, in which case we would not be needing to place one during the vaccination appointment.
- If your intention is to have your rabbit vaccinated, without a comprehensive discussion of rabbit care and health recommendations, you should anticipate the costs of the vaccination appointment including transponder placement to be approximately \$150. As this amount is higher than the amount of our new client registration prepayment deposit, the additional fees will be collected by us over the phone prior to your vaccination appointment being scheduled and confirmed.
- If your intention is to have your rabbit vaccinated as part of a comprehensive Consultation appointment, you should anticipate the vaccination costs to be \$40-\$115 depending on whether a transponder is also needing to be placed.

Because this disease is believed to be able to be prevented by vaccination, EFFECTIVE MAY 5, 2021, WE ARE REQUIRING ALL OF OUR RABBIT PATIENTS TO BE VACCINATED AGAINST RHDV as an integral part of responsible care. Because of this new policy, and availability of vaccine, we will no longer maintain your rabbit as a patient if

your rabbit has not been vaccinated against RHDV. If your rabbit has been vaccinated elsewhere against RHDV, we will require proof of vaccination. We are instituting this new policy for the protection of not only your rabbit, but for the protection of other rabbits, including in our clinic and in your neighborhood.

Please be assured, we at AEVC are taking many precautions to prevent transmission of infectious agents between our rabbit patients, including the following:

- Checking your rabbit's rectal temperature immediately upon arrival at our clinic. This is due to the common feature of a fever in RHD. If your rabbit has a fever, we will immediately contact you to discuss what can be done next.
- Use of protective thermometer sleeves and sterile individual-use thermometer lubricant for each rabbit.
- Use of a disinfectant known to be effective against viruses of the RHDV category.

For appointments that are for the sole purpose of RHDV vaccination, in addition to the above, we are doing the following:

- You will not be present in the clinic during the appointment; you will be waiting in our parking lot. Only one veterinary assistant/technician and one veterinarian will be working with your rabbit.
- Use of our isolation ward for vaccination appointments.
- Entry and exit to and from that isolation ward is only happening through the back door of our clinic.
- Use of sterile surgical gowns by our veterinary assistants and technicians who are holding your rabbit during its appointment, and use of disposable table coverings that are changed between each appointment.
- Due to the personal protective equipment (PPE) and isolation ward set-up that we are using just for your rabbit, there is a small PPE fee assessed to you as part of the vaccination appointment.

Information about the Filovac VHD K C+V vaccine that we use for RHDV vaccination:

- This vaccine is not licensed in the USA and is being used under a special research and evaluation import permit from the USDA (US Department of Agriculture).
- This vaccine does not guarantee full protection against rabbit hemorrhagic disease. However, the expectation is that the likelihood of protection is high, and that the onset of immunity will occur by 1 week after administration of this vaccine. The expectation is also that immunity will last approximately 1 year. Booster vaccination on an annual basis is therefore recommended, although this can only occur if additional vaccine importation is permitted by the Oregon state veterinarian's office and USDA.
- In production (meat) rabbits, the meat withdrawal time is 21 days, to avoid potential risks to US food supplies.
- Very common adverse reactions seen include:
 - Within 1 day of vaccination, the rabbit can show a temporary increase in body temperature, an increase of up to 3 degrees F (1.6 degrees C).
 - Immunization may be followed by nodule formation at the site of vaccine injection, up to 10mm (almost ½ inch) in diameter, and this nodule may be felt for at least 2 months, then disappear without need for treatment.
 - Other adverse reactions reported from administration of this vaccine include lethargy, digestive upset, anaphylaxis (severe allergic reaction) and death.
- Uncertain efficacy and adverse effects: The efficacy of the vaccine in rabbits younger than 10 weeks of age has not been demonstrated. No reports of abortion after vaccination have been published. It is not absolutely certain whether the vaccine will cause abortion or affect fertility otherwise.
 - There is currently no medical data on the interaction of this vaccine with other medical products.

Despite the possible adverse effects and uncertainties related to vaccination, we strongly believe that vaccination is a necessary part of responsible care for rabbits.

On the day that we are vaccinating your rabbit, we will require you to affirm and sign a form stating the following:

- That if any side effects from the vaccine or the vaccination procedure are found in your rabbit(s), you will not hold Avian and Exotic Veterinary Care, the veterinarian or staff members responsible;
- That you assume full responsibility for any treatment costs associated with vaccination side effects in your rabbit(s);
- That the rabbits to be vaccinated are resident in Oregon or Washington, in human care, and are not feral/wild rabbits;
- And that the rabbits to be vaccinated are eating and passing feces normally today, and that you are not aware of any reason that they are not fit for vaccination.

Oregon Department of Agriculture's up-to-date guidance and information for rabbit owners:

<https://www.oregon.gov/oda/programs/AnimalHealthFeedsLivestockID/AnimalDiseases/Pages/RHDV.aspx>

This website can also be accessed through the shorter web address of <https://oda.direct/rhd>



**OREGON
DEPARTMENT OF
AGRICULTURE**

Rabbit Hemorrhagic Disease (RHD)

Rabbit Hemorrhagic Disease (RHD) is a highly contagious, fatal viral disease in rabbits caused by multiple virus strains. RHD is spread between rabbits by direct contact with infected animals or their urine and feces. RHD does not affect humans or other animals.

Symptoms of RHD in rabbits could include:

- Acute/rapid death
- Fever
- Lethargy
- Lack of appetite
- Congested membranes around the eyes
- Nervousness
- Lack of coordination
- Excitement or paddling
- Difficulty breathing
- Bloody, frothy nasal discharge at death

**IF YOU FIND A SICK OR DEAD RABBIT,
DON'T TOUCH IT, REPORT IT:
1 (800) 347-7028.**

**Find more information online at:
<https://ODA.DIRECT/RHD>**

Protect Your Rabbits

Keep your distance

- ✓ Restrict access to your property and keep your rabbits away from other rabbits.

Keep it clean

- ✓ Wash your hands thoroughly before and after working with your rabbits. Clean and disinfect equipment.

Don't haul disease home

- ✓ Buy rabbits from reputable sources and keep new rabbits separated for at least 30 days.

Don't borrow disease

- ✓ Do not share equipment or supplies with neighbors or other rabbit owners. If you must borrow, disinfect it first.

Know the warning signs

- ✓ Early detection can help prevent the spread of disease.



RHDV Biosecurity Guidance Document

Biosecurity for Rabbit Owners

Rabbit owners and commercial operations should work with their veterinarian or state animal health official to identify their biosecurity risk factors. Customized site-specific biosecurity plans should identify key risk factors, establish best practices and make considerations for vaccination or other tools for disease mitigation and control. Plans may vary based on geographic location, OIE status, confirmation of infection in wildlife or access to vaccine. Key areas for consideration include:

Human Best Practices

- Have indoor and outdoor footwear; don't wear outdoor shoes indoors and vice versa.
- Wash hands before and after handling or caring for rabbits and between groups.
- Don't allow visitors who also have rabbits.
- Don't handle others' rabbits.
- Handle sick rabbits last.
- Follow disposal guidance for dead rabbits.

“Line of Separation” and “Perimeter buffer area”

- Commercial operations may apply these concepts during periods of heightened risk, especially in areas where RHDV has affected wild rabbits.

Housing

- Keep rabbits inside if possible on an impermeable surface.
- If rabbits are housed outdoors, double fence to avoid direct contact with wildlife.
- Prevent direct or indirect contact with wild rabbits.
- House rabbits in hutches or cages off the ground.
- Do not use forage, tree branches or grass for bedding from areas with infected wildlife.

Isolate new rabbits or rabbits returning from a show (see Show/ Exhibition guidance)

- Keep rabbits in separate area for 30 days before allowing contact with your colony.
- Be aware of animal health and CVI requirements for the state of destination.



Clean and Disinfect Equipment (See USDA C&D guidance)

- **CLEANING**

- Remove all visible organic debris from items to be disinfected (cages, feeding equipment, waterers, etc.). Items made of wood are best discarded or burned.
- Wash items thoroughly with soap and water; rinse well and let dry.

- **DISINFECTION**

- Saturate by submersion or spray with 10% household bleach (sodium hypochlorite) OR 1% Virkon-S (by DuPont) OR accelerated hydrogen peroxide products (Rescue, Accel, Virox 5).
- Allow 10 minutes of contact, then rinse and let dry before allowing animal contact.

Control disease vectors

- Flies, rats, cats, dogs, birds, etc. that can move the virus around on their feet or body.
- Fence out scavengers and wildlife (including wild rabbits).

Feeding

- Do not put rabbits down on the ground to eat grass, etc.
- Do not collect outdoor forage and browse to feed rabbits; stay with pelleted feed for now in areas where wild rabbits are infected. Treats can include raw vegetables from grocery stores.
- Source hay from unaffected areas.

Rabbit Health

- Monitor your rabbits closely for going off feed, looking limp/depressed, or behaving differently in any way.
- Call your vet ASAP if you note signs of illness in your rabbits.
- Consider vaccination for RHDV2 where available (see vaccine guidance).

**Report all unusual mass illness and/or death events to the Oregon State Veterinarian
1 (800) 347-7028**



RHDV Disinfectant Selection

For a disinfectant to be effective, it must remain visibly wet on a surface for a specific length of time (the **contact time**). The required contact time depends on the virus you want to kill and the product you are using. Some disinfectants (i.e., **concentrates**) must be diluted before use.

The label of a disinfectant product will list the organisms the disinfectant will kill when used according to label directions. A disinfectant must be tested for efficacy against an organism before it can list that organism on its label. There are currently no disinfectants that specifically list RHDV2, the virus that causes Rabbit Hemorrhagic Disease, on their label, though this may change in the future. However, the U.S. Environmental Protection Agency (EPA) has identified products that are effective against similar or harder-to-kill viruses, and are therefore believed to be effective against RHDV2. Many of these products are registered for sale and distribution in Oregon, and each of them may be marketed under many different trade names by several different companies.

Selecting and Applying the Disinfectant

Before you purchase and/or use a disinfectant with the intention of killing RHDV2, you should confirm that it is believed to be effective against RHDV2 and is registered for sale and distribution in Oregon. When using the product on a surface, you must ensure the surface remains visibly wet for the appropriate contact time. Otherwise, the product may not be effective.

TO DETERMINE IF A SPECIFIC DISINFECTANT IS BELIEVED TO BE EFFECTIVE AGAINST RHDV2

- Locate the EPA Registration Number on the pesticide label. This is often found at the beginning or end of the label. Look for “EPA Reg. No.” followed by two or three sets of numbers.
- Go to EPA’s List O: Disinfectants for Use Against Rabbit Hemorrhagic Disease Virus (hereafter “List O”; <https://www.epa.gov/pesticide-registration/list-o-disinfectants-use-against-rabbit-hemorrhagic-disease-virus-rhdv2>) and search the first two sets of numbers. If the EPA Reg. No. is present on this list, the product is believed by EPA to be effective against RHDV2 when used correctly.

TO DETERMINE IF THE DISINFECTANT UNDER CONSIDERATION IS REGISTERED IN OREGON

- Go to ODA’s pesticide product database (http://oda.state.or.us/dbs/pest_productsL2K/search.lasso), and search for the full EPA Reg. No. (which will have two or three sets of numbers). If the search results return the product name and the company/manufacturer on the label, and the product has a status of “Registered” or “Renewal Pending,” it is typically considered registered in Oregon.

TO ENSURE EFFECTIVENESS AGAINST RHDV2

- Follow the disinfection directions on the label for the virus identified in List O. When using the product, ensure that the surface remains visibly wet for the whole contact time.



Read the label to identify the allowed surfaces and use sites, and whether you must clean the surface before disinfecting it. If required by the label, dilute the product before use. Wear the personal protective equipment (e.g., specific type of gloves) specified on the label. Never use disinfectants on people or animals.

If you are unsure about how to properly apply a product, contact the manufacturer or email the Oregon Department of Agriculture Pesticides Program at pestx@oda.state.or.us. If you are unsure whether a specific product is registered in Oregon or on List O, please email pestx@oda.state.or.us. In your email, please include the product name and EPA Reg. No. along with your question. This email is for disinfectant inquiries, not general RHDV2 inquiries.

¹ For example, if EPA Reg. No. 12345-12 is on List O, you can buy EPA Reg. No. 12345-12-2567 and know you're getting an equivalent product.

¹ If the EPA Reg. No. is NOT present on this list: EPA is continually identifying more products they believe to be effective against RHDV2; check List O regularly for additions.