



How to Keep Your Clinic and Patients Safe from Rabbit Hemorrhagic Disease

Rabbit Hemorrhagic Disease (RHD) is a non-enveloped calicivirus that is extremely contagious between rabbits of all ages. An outbreak caused by RHD virus serotype 2 (RHDV2) is occurring in the southwestern United States and is associated with high morbidity and mortality rates of about 90%. This virus is spread by direct contact between rabbits and indirectly by fomites and mechanical transfer of virus by humans, dogs, and insects. RHD is very hardy in the environment and survives in carcasses for months through freezing/thaw cycles and extreme heat. This Foreign Animal Disease is not a threat to public health, but it can lead to large die-offs of rabbits. Its presence in California is very worrisome to rabbit owners. Any suspicious cases need to be reported to state agencies.

Clinical Presentation

The incubation period varies from 1-9 days. Death is due to massive internal hemorrhaging and liver impairment. After the onset of clinical signs, death commonly occurs within 6-36 hours.

Clinical signs you may see are:

- Sudden death with or without blood around nares or mouth
- Fever (>104°F), inappetence or anorexia, lethargy or collapse, cyanotic mucous membranes
- Neurological signs may include dull mentation, prostration, ataxia, opisthotonos, paddling, convulsion, paralysis (vocalizations may also be present)
- Respiratory signs may include dyspnea, frothy blood-tinged discharge from nares and/or mouth
- Coagulopathy disorders such as diffuse petechiation, epistaxis, or DIC
- Chronic or subclinical disease may be characterized by severe and generalized jaundice and weight-loss



Cleaning and Disinfection

Proper disinfection and sanitation is essential for protecting rabbits from RHD. It is recommended that your clinic schedule rabbit visits as far apart from one another as reasonably possible and to alternate rooms between rabbit patients. This allows to maximize time between rabbits occupying the same space and to ensure proper cleaning and disinfection. Dogs and cats may serve as fomites for RHD and exam rooms should be properly cleaned and disinfected *before* and *after* a rabbit patient visits the clinic. Very few virions are needed for infection, thus biosecurity practices are the best protection.

Approved disinfectants include:

- sodium hypochlorite (10% household bleach)
- 1% Virkon-S
- 2% One-stroke Environ®

Quaternary ammonium compounds such as Lysol, Chlorox wipes, or Odoban **are not effective** against RHD!

Please refer to the following hyperlink for details on disinfectants: [USDA General Guidance for C&D of RHDV Contaminated Premises](#)

The following steps allow for proper cleaning and disinfection of equipment, cages, and exam rooms.

1. Remove all organic debris
 - a. Dirt, hair, feces, urine, and other grossly visible debris often inactivate most disinfectants
2. Wash the area/item with a soap or detergent and rinse with water
 - a. Thoroughly rinsing the cleaned area is important to remove soap/detergent residues, which can also inactivate some disinfectants
3. Allow the area to air dry, completely

4. Choose an effective disinfectant and follow the instructions on the label regarding contact time and post-rinsing
 - a. Most disinfectants require a **10-minute contact time** for efficacy.
 - b. Bleach requires 5 minutes contact time to be effective.
5. Residual disinfectant should be allowed to dry before being rinsed off.

Examples of potential contaminated fomites that need proper cleaning and disinfection:

Instruments

- Stethoscope
- Thermometer
- Otoscope
- Dental tools

YOU!

- Use gloves and wash your hands often
- Hand sanitizer has not been proven effective
- Clothing should be changed between rabbit patients

Exam room & treatment area

- Exam table, treatment table/bench
- Scale for weighing
- Anesthesia equipment
- Cage floor and walls, cage door
 - Discard all organic bedding (wood, paper, etc.)
- Computer keyboard and mouse, writing pens
- Telephones, smart phones
- Exam room door handles, hospital door handles
- Faucet handles
- Floors - especially high traffic areas in lobby



Vaccine information

Currently, there is no RHD vaccine licensed in the United States. Licensed veterinarians in California can apply for a permit to import the vaccine from Europe.

The CDFA will approve conditional requests to use RHD vaccine in California from CA licensed veterinarians; information regarding the approval process can be provided by emailing AHBFeedback@cdfa.ca.gov. After obtaining an approval letter from CDFA, veterinarians may contact the USDA Center for Veterinary Biologics at (515) 337-6100 or email cvb@usda.gov to apply for a permit.



Suspect RHD?

Due to the rapid decline and death, many of these rabbits will be found in good body condition. A thorough history is vital when RHD is suspected. If you have any suspicion of RHD in a domestic or feral domestic rabbit, please call your regional CDFA Animal Health Branch office. If you suspect RHD in a wild rabbit, please contact the California Department of Fish & Wildlife.

To report dead wild rabbits or hares contact:
 CDFW Wildlife Investigations Lab - (916) 358-2790
or report online at:
<https://wildlife.ca.gov/Conservation/Laboratories/Wildlife-Investigations/Monitoring/Mortality-Report>

To report dead domestic rabbits contact the CDFA Animal Health Branch.

Consult your private veterinarian if your rabbit is sick.

**Animal Health and Food Safety Services
 Animal Health Branch**

Headquarters - (916) 900-5002
 Redding District - (530) 225-2140
 Modesto District - (209) 491-9350
 Tulare District - (559) 685-3500
 Ontario District - (909) 947-4462
USDA-APHIS-VS - (916) 854-3950 or (877) 741-3690

For more information, please click the following:
[Animal Health Branch](#)