



Rabbit Hemorrhagic Disease

What is Rabbit Hemorrhagic Disease (RHD)?

RHD, also known as viral hemorrhagic disease, is a highly contagious and fatal disease of Lagomorphs that can be caused by two related Caliciviruses.

- Rabbit Hemorrhagic Disease Virus Serotype 1 (RHDV1 or RHDVa) only affects rabbits in the genus *Oryctolagus*, which includes most domestic rabbits and wild European rabbits.
- Rabbit Hemorrhagic Disease Virus Serotype 2 (RHDV2) affects *Oryctolagus* rabbits and several other species of rabbits, including wild jackrabbits and hares (*Lepus*), wild American cottontails (*Sylvilagus*); other rabbits and pikas (family Ochonotidae) may be susceptible.

RHD is endemic in most parts of Europe, Australia, New Zealand, Cuba, and parts of Asia and Africa. Considered a foreign animal disease, cases caused by RHDV1 occurred in the United States in 2000, 2001, 2005, and 2010, and Canada in 2011. A newer strain, RHDV2 emerged in France in 2010 and has since spread across Europe and Australia. It arrived in southwestern Canada in 2018, leading to cases in domestic rabbits in Ohio, Washington, and New York City. In March 2020 a widespread outbreak of a genetically different strain of RHDV2 emerged in wild and domestic rabbits in the southwestern U.S. and northern Mexico. Since May 2020 it has been spreading in southern California and many other U.S. states, killing both wild and domestic rabbits.

The incubation period for RHD usually ranges from 1 to 5 days but can be up to 9 days. It causes liver inflammation (hepatitis) and prevents the blood from clotting. Rabbits often die suddenly without showing any outward signs of illness, but may also have:

- Lethargy,
- Inappetence,
- Fever,
- Jaundice,
- Spasms or seizures,
- Breathing difficulties,
- Vocalizations, and
- Bleeding from nose, mouth or body orifices.



Death is due to internal hemorrhaging and liver impairment. In the current outbreak, reported average mortality has been about 60% (range 20 to 100%). Rabbits of all ages are affected by RHDV2, while rabbits younger than 8 weeks are usually spared from RHDV1.

Can people or other animals get RHD?

No; RHD viruses are only known to affect lagomorphs of the family Leporidae (rabbits and hares). Other types of Caliciviruses have been found in people, cattle, sea lions, and cats.

Controlling the Spread of RHD

Rabbits may inhale or ingest this virus. It can persist in the environment for 4 months and is transmitted through direct contact with infected domestic or wild rabbits or indirect contact with objects (cages, feeders, grooming equipment, toys), or people and clothing contaminated by rabbit secretions or excretions. Transmission occurs after consumption of contaminated food (such as hay) and water, or exposure to rabbit products (meat, fur, fiber, skins, offal, droppings, urine). Insects, rodents, birds, or domestic animals may become contaminated with virus and transfer it to rabbits. Dogs, coyotes, birds of prey, and other predators can spread the virus by moving infected rabbit carcasses.

Practice good biosecurity to protect your rabbits:

- Whenever possible, house rabbits indoors.
- House outdoor rabbits in hutches or cages off the ground to minimize exposure to wild rabbits.
- Take measures to exclude wild rabbits from your yard, rabbit housing, and feed storage area.
- Do not feed or use hay grown or stored outdoors in areas where wild rabbits are affected by RHD.
- Do not gather forage from outside for your rabbits if RHD is suspected in your area.
- Do not allow your rabbits to graze or roam in the yard if disease is suspected in wild rabbits in your area.
- Restrict visitor entry to your rabbitry; do not allow rabbit owners or visitors from affected areas to handle your rabbits.
- Wash hands with soap and water before and after handling your rabbits.
- Avoid contact with other people's rabbits.
- Avoid shows, fairs, or meetings where rabbits or their owners are comingled; if you do visit, shower and change clothes and shoes before handling your rabbits.
- Purchase rabbits only from rabbitries with known good health status.
- Quarantine new or returning rabbits for 18 days before introducing them to your rabbits.
- Control dogs, cats, coyotes, insects, birds, rodents, and other animals which may carry disease to your rabbits.
- If traveling to affected states or countries, take steps to avoid bringing RHD home to your rabbits.
- Disinfect equipment or supplies purchased from states or countries affected by RHD.

Disinfectants

RHDV is inactivated by 10% bleach (sodium hypochlorite), 1% Virkon™ S (potassium peroxymonosulfate), Rescue™ (accelerated hydrogen peroxide), and several others.

For guidance on cleaning and disinfection follow this link:

https://www.aphis.usda.gov/animal_health/downloads/rhdv-cleaning-guidance.pdf

Can I vaccinate my rabbit against RHD?

Medgene Labs has received Emergency Use Authorization by the USDA for their new vaccine against RHD. California licensed veterinarians may contact Medgene Labs at 605-697-2600 about ordering vaccine. Additional information can be found at their webpage:

<https://medgenelabs.com/rhdv2/>



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.

Report dead domestic rabbits to: CDFA Animal Health Branch Offices

Headquarters - (916) 900-5002
Redding District - (530) 225-2140
Modesto District - (209) 491-9350
Tulare District - (559) 685-3500
Ontario District - (909) 947-5932

USDA-APHIS-VS - (916) 854-3950 or (877) 741-3690

For more information, please click the following:

https://www.cdffa.ca.gov/AHFSS/Animal_Health/RHD.html