



# Rabbit Hemorrhagic Disease

Although historically uncommon in the United States (U.S.), there have been cases of Rabbit Hemorrhagic Disease Virus Serotype 1 (RHDV1) in Iowa (2000), Utah (2001), Illinois (2001), New York (2001), Indiana (2005), Minnesota (2010), and Canada (2011). It is considered endemic to Australia, New Zealand, Cuba, parts of Asia and Africa, as well as most of Europe. Rabbit Hemorrhagic Disease Virus Serotype 2 (RHDV2) emerged in France in 2010 and has since spread across Europe and is endemic in Australia. It came to southwestern Canada in 2018, and subsequently caused cases in Ohio, Washington, and New York City. In early 2020 a widespread outbreak of RHDV2 emerged in wild and domestic rabbits in the southwestern U.S. (New Mexico, Texas, Colorado, Arizona, Nevada) and northern Mexico. Wild rabbits have been important in the continuing spread of this outbreak.

## What is Rabbit Hemorrhagic Disease (RHD)?

RHD, also known as viral hemorrhagic disease, can be caused by two related Caliciviruses.

- RHDV1 only affects rabbits in the genus *Oryctolagus*, which includes most domestic rabbits and wild European rabbits.
- RHDV2 affects *Oryctolagus* and several other species of rabbits including wild jackrabbits and hares (*Lepus*), wild American cottontails (*Sylvilagus*), and other genera of rabbits and as well as Pikas (family Ochonotidae) may be susceptible.

The incubation period for RHD is 1 to 5 days, and it can cause liver inflammation (hepatitis) and prevent the blood from clotting. Rabbits often die suddenly without showing any outward signs of illness, or may show:

- Fever,
- Inappetence,
- Lethargy,
- Spasms,
- Breathing difficulties,
- Blue colored lips or mucous membranes, and/or
- Bleeding from body cavities.



Death is due to massive internal hemorrhaging and liver impairment. Of susceptible rabbits, 80-100% that develop the disease may die. Rabbits of all ages are affected.

## 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

This virus may be inhaled, ingested, or absorbed through scrapes and wounds. It persists in the environment for several months and can be transmitted through direct contact with infected domestic or wild rabbits or by indirect contact with objects (cages, feeders, grooming equipment, etc.) or people and their clothing that have been contaminated by rabbit secretions or excretions. Transmission may occur following consumption of contaminated water and food, or exposure to rabbit products (meat, fur skins, offal). Vermin, such as insects or rodents, or domestic animals and birds may also become contaminated with the virus and transfer it to rabbits. Dogs can spread the virus by moving infected rabbit carcasses between premises.

Follow appropriate biosecurity guidelines to prevent the spread of diseases to your facility including:

- Minimize exposure to wild rabbits and hares by keeping your rabbits in hutches or cages that are elevated off the ground.
- Do not allow your rabbits to graze or roam in a yard if suspect disease in wild rabbits in your area.
- Avoid unnecessary contact with other people's rabbits. If you must have contact with other people's animals, wash your hands or shower and change your clothes prior to handling your rabbits.
- Restrict visitors to your rabbitry and limit the handling of the animals by visitors.
- After visiting a show, fair, or meeting where rabbits were comingled, shower and change clothes before handling your rabbits.
- Know the health status of the rabbitry from which you purchase rabbits.
- Control dogs, coyotes, insects, birds, rodents, and other animals, which may carry disease to your facility.
- Be aware of visitors from other states or countries with rabbit disease and take appropriate precautions.
- If you are planning to travel, be aware of the rabbit disease status of the state or country you are visiting and take steps to avoid introducing RHD to your rabbits.
- Be aware of the rabbit disease status of the state or country of origin of any equipment or supplies that you are purchasing.

## Disinfectants

RHDV is inactivated by 10% bleach (sodium hypochlorite), potassium peroxymonosulfate (such as 1% Virkon-S), and some others. Quaternary ammonium compounds are not effective (including Lysol spray, Clorox wipes, and Odoban) against RHDV.

## Can I vaccinate my rabbit against RHD?

RHD vaccines have not been approved for use in the U.S., but due to the recent outbreak, vaccination has been allowed on a limited emergency basis in affected states. To be effective, vaccines must include antigens for the appropriate serotype, RHDV1 and 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.

### 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](#)

[Hand Washing Why, When, How, and with What?](#)