

Veterinary advisory: Rabbit hemorrhagic disease virus 2

On June 10, 2022, the Canadian Food Inspection Agency reported two cases of rabbit hemorrhagic disease virus - 2 (RHDV-2) in a household of domestic companion rabbits in Lambton County. Ongoing epidemiological work, including strain typing, is being performed. This virus is extremely contagious to domestic and wild rabbits and hares and may have a significant mortality rate. This is the first time RHDV-2 has been reported in Ontario.

RHDV-2 is not a food safety or significant public health concern for people or non-rabbit domestic animals.

Due to the often rapid course of disease spread, rabbits may be found dead with no outward bodily sign of disease. A thorough history and high index of suspicion is needed to send for diagnostic testing in order to confirm or rule out RHDV-2.

RHDV-2 may present with a variety of clinical signs such as:

- Sudden death, with or without hemorrhage from orifices;
- Frothy nasal discharge, with or without blood and laboured breathing;
- Cyanotic mucus membranes;
- Lethargy or inappetence;
- Fever $>40^{\circ}\text{C}$;
- Neurological signs such as abnormal vocalization, dullness, seizures, ataxia and opisthotonos; and/or
- Signs of liver failure and coagulopathy, such as jaundice, petechiation and weight loss.

Rabbits may also be infected but show no clinical signs and can shed a large amount of virus into the environment, representing a source of RHDV-2 for susceptible rabbits.

Sourcing food from RHDV-2-free jurisdictions and implementing and practicing appropriate biosecurity measures are important aspects of disease prevention. Appropriate biosecurity measures include:

- Keeping all domestic rabbits so that wild rabbits do not have access to their environment;
- Using an appropriate flea and tick treatment as needed and practicing effective fly prevention measures in rabbitries;
- Avoiding visitor contact with rabbits; if this is unavoidable, clean, new footwear, coveralls and hair nets should be used;
- Sourcing all feed from RHDV-2-free jurisdictions or storing hay for at least 8 months prior to use; and

- Regularly cleaning and disinfecting all areas and equipment used for rabbits.

Biosecurity and cleaning and disinfection at veterinary practices is important to prevent the spread of the virus to other rabbits. Disinfectants known to be effective against the virus include:

- sodium hypochlorite (10% household bleach),
- 2% One-stroke Environ[®],
- 1% potassium peroxymonosulfate (Virkon[™] S); and
- accelerated hydrogen peroxide (i.e., Rescue[™], Prevail[™]).

All clinic surfaces and equipment that may come into contact with rabbits and their owners should be disinfected, including stethoscopes, scales, anaesthesia equipment, computer keyboards, point of sale payment machines, etc. All autoclavable equipment should be immediately packaged for autoclaving. Floors should be cleaned with disinfectant immediately, including common areas such as the waiting room. All clinic staff who had contact with an infected rabbit should wear hair coverings and change their scrubs, shoes and masks before seeing additional rabbit patients. If an infected rabbit is seen on an off-site visit, the interior and exterior of the car should be thoroughly disinfected, including gas pedals, tires and soft surfaces that may have had contact with a contaminated piece of clothing or any equipment and samples. Rabbit owners should be encouraged to wait in their car until they can enter directly into the exam room, avoiding potential contact with multiple surfaces and items in the waiting room. Taking payment by cellphone and sending documents by email or letter mail are additional ways to reduce contact with surfaces in the clinic.

RHDV-2 is an Immediately Notifiable disease under the federal *Health of Animals Act* as well as Immediately Notifiable disease under the Ontario *Animal Health Act, 2009*. Attending veterinarians with questions related to rabbit health or who are diagnosing possible cases of RHDV-2 in domestic pet or commercial rabbits may contact an OMAFRA veterinarian through the Agricultural Information Contact Centre at [1-877-424-1300](tel:1-877-424-1300).

Currently there is no vaccine approved for use in Canada but two vaccines are available in Europe; Filovac and Eravac. As of 2021, a vaccine has been approved and manufactured in the United States, Medgene. Veterinarians can request access to these products through the Canadian Centre for Veterinary Biologics - Canadian Food Inspection Agency (Veterinary biologics - Canadian Food Inspection Agency (canada.ca)).

Additional information is available at:

- [CFIA - Rabbit Hemorrhagic Disease Virus-2](#)
- [USDA-APHIS Rabbit Hemorrhagic Disease](#)
- [USDA-APHIS General Guidance for Cleaning and Disinfection of Rabbit Hemorrhagic Disease Virus \(RHDV\) Contaminated Premises](#)