

# Rabbit Haemorrhagic Disease Virus 2

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## Rabbit haemorrhagic disease virus 2

Rabbit Haemorrhagic Disease Virus 2 (RHDV2) was found in wild rabbits in Australian Capital Territory in May 2015, and has since been discovered across New South Wales, South Australia and Victoria. It has a similar mode of death to RHDV1, but the two are separate viruses. RHDV2 is most closely related to the European RHDV strain which is reported to have successfully spread through Europe in recent years.

In contrast to the endemic strain, RHDV2 affects very young rabbits including nestlings. It also has lower observed mortality rates and the disease process can take on a more chronic or subacute course.

All RHDV strains can spread easily by contact between infected rabbits (via faeces, urine, saliva, nasal and eye secretions and mating) and fomites including hay, food, clothing, shoes, people, cages, equipment, dust, insects, wild birds and rodents.

RHDV is caused by a Calicivirus which is extremely hardy and can survive in the environment and remain infectious for three and a half months at temperatures greater than 25°C and for as long as seven and half months at temperatures above 4°C. Disinfectants that can be used to decontaminate any equipment include 10% bleach, 10% sodium hydroxide or parvocide disinfectants. Autoclaving will also kill the virus.

## Veterinary Management of suspect RHDV2 cases

A vaccine specifically against the RHDV2 strain is currently being developed in Australia. It is thought that the existing vaccine (Cylap®) provides partial protection against this strain.

A rigorous vaccination program may assist in protecting against RHDV2. Vaccinate all rabbits in the household. Vaccinate breeding animals before the start of the breeding season to ensure the young animals are protected by maternal antibodies.

The vaccination protocol recommended by the Australian Veterinary Association (AVA) is currently:

**Kittens:** 4, 8, 12 weeks of age, then every 6 months

**Adults:** 2 vaccinations 2-4 weeks apart, then every 6 months

**This protocol is off-label.** Cylap® is not registered for 6 monthly use.

Implement good biosecurity including:

- preventing contact between domestic and wild rabbits,
- avoid cutting grass and feeding it to rabbits if there is the risk of contamination from wild rabbits,
- washing hands between handling rabbits,
- good insect control is also important and will help reduce the risks of introduction of both RHDV and myxomatosis,
- infected rabbits should be isolated and disposed of in a manner that will minimise environmental contamination,
- all cages and equipment should be thoroughly cleaned and disinfected.

## Vaccine development for RHDV2

Scientists are currently undertaking research to develop a new generation of vaccines to protect domestic rabbits against RHDV2. The goal is to have a vaccine that will cover the known strains of rabbit haemorrhagic disease virus (including RHDV1 and RHDV2) that are circulating in Australia.

However, any vaccine development needs to involve a commercial manufacturer and requires a range of approvals from regulatory authorities. There are a number of aspects that need to be addressed to ensure that any updated RHDV vaccine is both safe and effective for domestic rabbits. The research underway will assist in meeting these requirements.

## Laboratory samples for diagnosis and surveillance

Any veterinarian who suspects a domestic rabbit may have RHDV2 should submit a fresh or frozen (not formalin-fixed) 1g liver sample to Pathology Services at the Elizabeth Macarthur Agricultural Institute (EMAI).

See <https://www.dpi.nsw.gov.au/about-us/services/laboratory-services/veterinary/veterinary-test-list> for details of how to pack and send the samples. Please put on the submission form for "RHDV2 surveillance"

## Further information

For all rabbit health concerns contact your private veterinarian. This includes talking to your veterinarian about the right vaccination protocol for your rabbit.

Further information on the protection of pet rabbits is available at:

- [PestSmart Connect](#)
- [Australian Veterinary Association](#)
- [NSW Department of Primary Industries](#)

For information on rabbit biosecurity contact Ofir Schwarzmann, Veterinary Officer, NSW DPI, on (02) 6391 4612 or [ofir.schwarzmann@dpi.nsw.gov.au](mailto:ofir.schwarzmann@dpi.nsw.gov.au)

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