

# RHDV2: What Rabbit Owners Need to Know

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Rabbit Hemorrhagic Disease (RHD) is a fatal disease caused by a calicivirus that affects only rabbits. USDA considers RHD a foreign animal disease and has in recent years detected the Rabbit Hemorrhagic Disease Virus Serotype 2 (RHDV2) in North America. RHDV2 is not known to pose health risks to humans, livestock or pets other than rabbits. The first detected case of RHDV2 was in Washington in February 2018. Ohio saw a case in September 2018 and then again in Washington in July 2019. Until March 2020, it was believed that RHDV2 only affected rabbits of the European species but confirmed cases in the SW area of the U.S. indicate that it is affecting Eastern cottontail rabbits, the most common species in the U.S. (Hreiz, 2020)

## What are the signs and symptoms?

Some visual signs owners might see are swelling, bleeding in the eyes, lethargy, decreased appetite, difficulty breathing or yellowing of the skin. Bleeding from the nose, anus or vent are also signs of possible RHD infection in rabbits. The virus attacks rapidly so most owners might only find dead rabbits that display bleeding from the nose, anus or vent.



Clean, disinfected rabbit facilities are key to decrease the chance that RHDV2 shows up in your barn.

Source: Cassell Prairie Bunnies

## How is RHDV2 transmitted?

The virus can be transmitted by contact with infected rabbits (live or carcasses) and is present in all excretions and secretions from infected animals (USDA APHIS, 2019). It can be transmitted by indirect contact with exposed objects like feeders, water crocks, cages, carriers, etc. Rodents, insects, birds and other animals can serve as the mechanical vector for transfer to rabbits or equipment. Humans can also transmit the virus on shoes and clothes if they have been exposed to the virus.

RHDV2 can additionally be transmitted through infected rabbit's fur and meat as well as contaminated feed and water. Manure and urine contain the virus so bedding can serve as a source of infection if owners aren't following adequate sanitation protocols for cleaning and disposal. The incubation period for RHD is 1-5 days from time of exposure to showing signs of infection.

The RHD virus can be very persistent and is aided by a wide range of viable temperatures and protection by the presence of organic material. Active viruses can survive for multiple days or months on surfaces (USDA APHIS 2020):

- 22-35 days at 72 degrees Fahrenheit
- 3-7 days at 99 degrees Fahrenheit
- can survive freeze-thaw cycles
- Viable virus has been detected in a dry state (like on a cloth or towel) for as long as 105 days

Rabbits that survive an RHD infection may remain a carrier and can shed the virus for 4-6 weeks (Hayhow, 2020).

**Is there a cure?:** Currently there is no cure for RHD once a rabbit is infected. There currently are no licensed vaccines in the United States. Some states seeing confirmed infections are allowing veterinarians to import foreign vaccines, but they are limited to quarantine areas and some can be cost prohibitive to rabbit owners.

**How Do I Stay Updated on RHD Information?**

Updates on confirmed infections and vaccine access are changing rapidly. You can keep up to date on RHD related information at the following websites:

American Rabbit Breeders Association [www.arba.net](http://www.arba.net)

USDA APHIS [www.aphis.usda.gov](http://www.aphis.usda.gov)

**How do I protect my rabbits? Biosecurity Tips**

Strict biosecurity practices in your rabbit facility are the best way to reduce the chance that RHD shows up in your facility. Owners should clean with soap and water to remove organic material (fur, manure, bedding etc.) before applying disinfectant for effective results. This is extremely important and challenging if you have any wood surfaces in your cages. Effective disinfection can be achieved with a 1:10 dilution of household bleach allowing 5 minutes of contact time with the surface you are disinfecting. Quarantine new rabbits or those returning from shows for at least 14 days (best practice would be for 30 days)

- ✓ Sanitize any equipment that leaves your property (carriers going to a show, feeders and crocks loaned to a friend, etc.)
- ✓ Restrict access to anyone (other than family) to your rabbit facility
- ✓ Make sure you disinfect or change clothes and shoes before entering your rabbit facility especially if you have visited a location off your property
- ✓ Restrict wild and feral rabbits and predators from accessing your rabbit facility
- ✓ Wash hands between handling rabbits in different pens or cages
- ✓ If you are handling rabbits that are not yours, make sure you are thoroughly washing your hands and changing clothes.
- ✓ Clean and disinfect equipment, tools, footwear, feed and water containers, cages, etc.
- ✓ Control flies and biting insects
- ✓ Remove brush, grass, weeds, trash, and debris from rabbit facility
- ✓ Protect feed from contamination by flies, birds, rodents, etc.
- ✓ Do not feed grass or other forages that could be contaminated with the virus
- ✓ Do not use forages, branches, etc. for bedding
- ✓ Remove and bury or dispose of dead rabbits promptly
- ✓ Do not transport rabbits into or out of RHD quarantine areas

Owners should take a good look at their biosecurity habits and determine if they need to step up their practices to aid in the prevention of RHD in their rabbit facility.

**How do I report a suspected case of RHDV2?**

If you notice wild or domestic rabbits that seem to die all of a sudden and display bleeding from the nose, anus, or vent; make a report to your state veterinarian. The Ohio Department of Agriculture State Veterinarian reporting number is 614-728-6220. We encourage reporting from all residents if they notice wild rabbits that seem to be dying for no apparent reason around your property.

**Conclusion**

In summary, examining your biosecurity practice and adopting some additional protocols to decrease the chance of RHD making an appearance in your rabbits is important. Educate others to be on the lookout for suddenly dying wild rabbits and provide them the appropriate reporting channels for deaths they suspect might be linked to RHD.

**Sources**

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