

## Epizootic hemorrhagic disease (EHD)

Epizootic hemorrhagic disease (EHD) is an infectious and often fatal virus in white-tailed deer that was first detected in Ontario in September 2017.

Epizootic hemorrhagic disease (EHD) is an infectious and often fatal virus in white-tailed deer that is characterized by extensive hemorrhages at numerous sites throughout the body. EHD is one of the most common and harmful diseases to affect white-tailed deer in the United States. *Culicoides* midges, commonly referred to as “no-see-ums”, are the carrier of this disease.

**It is important to note that there are no human health concerns** from the EHD virus or from bites to humans from midges of the *Culicoides* species.

Deer hunters, wildlife managers, farmers and livestock owners need to know about EHD because of its ability to cause large-scale outbreaks in deer and its potential implications to the domestic livestock industry. Currently there are no available effective treatments or vaccinations for this disease.

### Symptoms

Deer can develop clinical signs of EHD in as little as 7 days, post-exposure. Infected deer typically show signs of:

- loss of appetite
- loss of fear of people
- weakness
- excessive salivation
- rapid pulse and respiration rate
- signs of fever, including submersing themselves in bodies of water to reduce their body temperature

- a blue tongue from hemorrhaging and the lack of oxygen in the blood due to the effects of the virus
- swelling of neck and head

Deer with this disease are often found dead in or near water bodies which deer may enter, trying to cool themselves.

### How is this disease different from Chronic Wasting Disease (CWD)?

Some symptoms of EHD may be confused with chronic wasting disease (CWD), a disease that has not yet been detected in Ontario through ongoing annual surveillance. Deer with CWD would typically appear emaciated (very skinny), but would not have any swelling in the neck or head and their tongue would not appear blue.

### What the ministry is doing

The Ministry of Natural Resources and Forestry is working with the Canadian Wildlife Health Cooperative (CWHC), Ontario Ministry of Agriculture, Food and Rural Affairs, Canadian Food Inspection Agency and stakeholder organizations to actively monitor for the extent of the EHD virus in Ontario.

### What you can do

Report sightings of deer that appear sick or are found dead as soon as possible to the Natural Resources Information Centre at 1-800-667-1940 or Canadian Wildlife Health Cooperative at 1-866-673-4781.

Because midge larvae develop in water, you can also help by eliminating standing water such as old tires, planters, flowerpot saucers, buckets, trash containers, and by replacing water in bird baths frequently.

### **Impacts to human health**

There are no human health concerns from the EHD virus or from bites to humans from midges of the *Culicoides* species.

Consuming meat from deer that was infected with EHD that is not showing signs of sickness, ulcers, abscess, or other abnormalities is considered safe. However, hunters should, as always, practice proper carcass handling and processing techniques when dressing hunted deer.

### **How is EHD spread?**

The distribution of EHD largely depends on the distribution and abundance of the *Culicoides* biting midges, the level of existing immunity in deer, genetic variations in susceptibility, and seasonal weather patterns.

EHD occurs most often in the southern United States, where occurrence is characterized as frequent and mild, whereas in the north, the disease is less commonly observed, and outbreaks are characterized as infrequent but can be severe, and capable of high mortality as deer herds maintain lower antibody levels due to the infrequency of exposure to the virus.

Outbreaks of the disease in northern US are typically characterized by both

significant outbreaks that occur on a 5-10 year cycle that may affect large areas, and smaller outbreaks that may only involve a few counties. However, in worst-case scenarios, outbreaks have been known to cover hundreds of kilometres.

### **Handling wildlife carcasses**

To diagnose EHD, the entire deer carcass or vital organs must be submitted within 24 hours of death, before decomposition or necrosis starts. Detailed instruction on the submission of deer carcasses to CWHC is available at [www.cwhc-rscf.ca](http://www.cwhc-rscf.ca)

Each municipality is different when it comes to the disposal of wildlife carcasses – call your local city or town for more information about the rules that apply in your local area.

### **More information**

Report any suspicious dead wildlife found on your property:

<https://www.ontario.ca/page/dead-animal-or-fish-found-your-property>

Report and submit sick or dead wildlife to the Canadian Wildlife Health Cooperative: [http://www.cwhc-rscf.ca/report\\_submit.php](http://www.cwhc-rscf.ca/report_submit.php)

Chronic Wasting Disease:

<https://www.ontario.ca/page/chronic-wasting-disease>