

Epizootic Hemorrhagic Disease (EHD)

Hemorrhagic disease is an infectious disease of Whitetailed deer. Outbreaks of HD can cause devastating losses/mortalities on the impacted herds/populations. Pennsylvania has experienced outbreaks in 2002, 2005, 2011, 2012, and 2013. It is caused by either of two closely related viruses, Epizootic Hemorrhagic Disease (EHD) virus or bluetongue virus. Because disease features produced by these viruses are indistinguishable, a general term, hemorrhagic disease, often is used when the specific virus responsible is unknown. Because Epizootic Hemorrhagic Disease (EHD) and bluetongue viruses are transmitted by biting flies, hemorrhagic disease is seasonal and occurs in late summer and early fall.

The Virus

There are 3 subtypes of EHD virus and 5 subtypes of bluetongue virus in North America. Neither are new to North America, as infections in deer were first reported in 1955 and 1968, respectively. Neither EHD nor bluetongue virus is spread by direct contact. Both are transmitted by tiny biting flies. These flies are commonly known as biting midges but also are called local names such as sand gnats, sand flies, no-see-ums, and punkies. Hemorrhagic disease characteristically occurs from mid-August through October, and this seasonality is related to the abundance of biting midges. The onset of freezing temperatures, which stops the midges, brings a sudden end to the outbreaks.

The Victims

Hemorrhagic disease viruses are infectious to a wide range of ruminants. In addition to white-tailed deer, hemorrhagic disease can occur in mule deer, black-tailed deer, bighorn sheep, elk, pronghorn antelope, sheep, and cattle.

Impact to Hunters

Due to devastating losses caused by EHD, many state agencies and wildlife managers must, at times, reevaluate their management practices in response to the losses in the managed population of deer.

North Dakota offered license refunds to hunters due to massive die offs of deer from Epizootic Hemorrhagic Disease (EHD).

Michigan issued an emergency order and reduced deer license availability due to massive die offs of deer from Epizootic Hemorrhagic Disease (EHD).


South Dakota offered refunds to their hunters of their license fees due to massive die offs of deer from Epizootic Hemorrhagic Disease (EHD).

According to Missouri Department of Conservation Resource Scientist, Emily Flinn, some counties may have lost 15 to 20 percent of the deer population to hemorrhagic disease countywide, with localized areas within counties having upwards of 50-percent mortality

"This is a horrible disease for hunters, DNR personnel and other wildlife enthusiasts to see affecting deer." - Brent Rudolph, Michigan DNR deer and elk program leader.

Kip Adams, certified wildlife biologist, when asked about the worst Epizootic Hemorrhagic Disease (EHD) outbreak on record responded "2007 was the worst year on record," but on a more isolated level "the Milk River region of Montana lost 80% of its deer herd." That's not something a whitetail population can recover from over night. The Milk River region will take years to recover. He also noted that, "while not usually a big management concern to wildlife managers, **it can be a big deal for hunters.**"

For more information on Chronic Wasting Disease (CWD) or Epizootic Hemorrhagic Disease (EHD), please contact the North American Deer Farmers Association (NADeFA) at <http://www.nadefa.org>.



Information about CWD



& EHD



Indiana
Deer and Elk Farmers
Association

What is Chronic Wasting Disease (CWD)?

Chronic Wasting Disease (CWD) is a disease found in deer, elk, and moose. CWD belongs to a family of diseases known as transmissible spongiform encephalopathies (TSEs) or prion diseases. Within this family of diseases, there are three predominant variants that affect animals: scrapie, which has been recognized in sheep for more than 200 years; bovine spongiform encephalopathy in cattle; and Chronic Wasting Disease (CWD) in cervids. There has never been even one deer confirmed to have died from Chronic Wasting Disease (CWD) in the State of Pennsylvania.

Chronic Wasting Disease (CWD) Origins

The origin of Chronic Wasting Disease (CWD) is unknown. Chronic Wasting Disease CWD was first recognized in 1967 as a clinical syndrome of unknown source among research mule deer at wildlife research facilities in Colorado.

Chronic Wasting Disease (CWD) Transmission

The mode of transmission is not fully understood, but evidence supports the possibility that the disease is spread through direct animal-to-animal contact or as a result of indirect exposure to prions in the environment (e.g., plants and soil).

Current CWD Research

The National Wildlife Health Institute demonstrated that prions "the infectious, deformed proteins that cause Chronic Wasting Disease (CWD)" can be taken up by plants such as alfalfa, corn and tomatoes. The research further demonstrated that stems and leaves from tainted plants were infectious when injected into laboratory subjects.

National Wildlife Research Center (NWRC) scientists demonstrated that, common North American scavengers, the crow and coyote can pass infective prions in feces and, therefore, could play a role in the geographic spread of CWD in the environment.

"Hunter killed carcasses are a possible source for spreading Chronic Wasting Disease." - Mike Miller, PhD, DVM-Colorado Division of Wildlife Research Center of Fort Collins.

Concerns over Chronic Wasting Disease (CWD)

Dr. Mike Miller, Senior Wildlife Veterinarian for the Colorado Division of Parks and Wildlife and perhaps the World's foremost expert on Chronic Wasting Disease (CWD) declared that there are no real population effects on the deer herd from Chronic Wasting Disease (CWD): "We've not seen any clear indication of dramatic declines in deer or elk numbers on a large geographic scale as a result of Chronic Wasting Disease."

Dr. Michael Samuel, Department of Forest and Wildlife Ecology, University of Wisconsin. "Most of the data on CWD in Wisconsin has been collected in the south central area. Wisconsin has a very high deer density. The deer population in the south central area has more than doubled over the last 25 years. Even with the introduction of CWD, the population seems to be steady."

"Concerns over CWD should not prevent anyone from enjoying deer hunting and consuming meat from healthy animals." - PGC Executive Director Carl Roe October 16, 2012

The World Health Organization has reviewed available scientific information and concluded that currently there is no evidence that Chronic Wasting Disease (CWD) can be transmitted to humans. - Chronic Wasting Disease Alliance

CWD in Pennsylvania

Pennsylvania Game Commission has announced that Chronic Wasting Disease (CWD) has been detected at four different locations in Pennsylvania within the wild herd, as well as, being detected at a single captive deer facility in Adams county. All animals in the captive herd were destroyed following the Pennsylvania Department of Agriculture's successful disease management protocols. The captive cervid industry tests 100% of all animal deaths and in more than 15 months post it's only positive location has remained disease free.

Chronic Wasting Disease (CWD) has been detected in wild or captive deer and/or elk in Colorado, Illinois, Iowa, Kansas, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, New Mexico, New York, North Dakota, Oklahoma, Pennsylvania, South Dakota, Texas, Utah, Virginia, Wisconsin, West Virginia, Wyoming, Alberta and Saskatchewan.

Chronic Wasting Disease (CWD) Monitoring Levels within Indiana as of 2013

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| Indiana captive herd size: | approx. | 13,000 |
| 100% of all captive animal deaths tested annually | | |
| Indiana wild herd size: | approx. | 1.2 Million |
| Indiana 2013 deer harvest: | | 125,635 |
| Indiana wild samples tested: | approx. | 1,026 |
| Less than 1% of Indiana harvested wild deer tested | | |

