

Chronic Wasting Disease in Wisconsin's White-tailed Deer Herd

Frequently Asked Questions

What is Chronic Wasting Disease?

CWD is a nervous system disease of deer, moose and elk. It belongs to the family of diseases known as transmissible spongiform encephalopathies (TSEs) or prion diseases. Though it shares certain features with other TSEs, like bovine spongiform encephalopathy (“mad cow disease”) and scrapie in sheep, it is a distinct disease. CWD occurs only in members of the cervid or deer family, both wild and captive. It has been found in deer or elk farms in Colorado, Kansas, Michigan, Minnesota, Montana, Nebraska, New York, Oklahoma, South Dakota, Wisconsin, Wyoming and the Canadian provinces of Alberta and Saskatchewan. CWD has also been detected in wild deer or elk herds in Colorado, Illinois, Kansas, Nebraska, New Mexico, New York, South Dakota, Utah, West Virginia, Wisconsin, Wyoming and the Canadian provinces of Alberta and Saskatchewan.

Why should people outside of the CWD management zone care about the disease?

The DNR believes CWD is a statewide issue, not just a southern Wisconsin issue, for the following reasons:

- White-tailed deer are native to Wisconsin and it is important to preserve our native wildlife.
- Hunters statewide depend on having a healthy deer population; any regional threat is a statewide concern.
- A healthy deer herd is important for hunting traditions. Wisconsin has more than 700,000 deer hunters who have harvested an average of 460,000 deer annually during the past decade. Deer hunting contributes more than 7 million days of recreation every year.
- Deer hunting annually generates more than \$500 million dollars in retail sales and nearly \$1 billion in total impact to the state's economy. A healthy deer herd is critical to the state's economy.
- Without appropriate management where CWD is known to exist right now, the disease will spread to other areas of the state.

Does CWD pose a health risk to humans?

CWD has never been shown to cause illness in humans. For more than two decades CWD has been present in wild populations of mule deer and elk in Colorado. In this time there has been no known occurrence of a human contracting any disease from eating CWD infected meat. Additionally, here in Wisconsin, incidence of Creutzfeldt Jacob Disease (CJD), the prion disease that most commonly infects humans, is detected at the same rate as the rest of the world, about one in a million. However, in Europe, a similar disease of cattle called BSE (also known as “mad cow disease”) is the cause of a fatal nervous system disease in some humans who have eaten tissues from infected cattle. Because of this, the Wisconsin Dept. of

Health and Family Services recommends that people not consume meat from deer that test CWD-positive. Some simple precautions should be taken when field dressing deer in areas where CWD is found:

- **Wear rubber gloves** when field dressing your deer.
- **Bone out the meat** from your deer.
- **Minimize the handling** of brain and spinal tissues.
- **Wash hands and instruments thoroughly** after field dressing is completed.
- **Avoid consuming** brain, spinal cord, eyes, spleen, tonsils and lymph nodes of harvested animals. (Normal field dressing coupled with boning out of a carcass will essentially remove all of these parts.)
- **Request that your animal is processed individually**, without meat from other animals being added to meat from your animal.

How is CWD transmitted?

It is not fully understood how CWD is transmitted between deer. Data to date suggest that it may be transmitted both directly through animal to animal contact as well as indirectly through a contaminated environment. A recent study from Colorado State University, published in the journal *Science*, proved that CWD prions exist in the saliva of infected deer. Additionally, a recent study from the University of Wisconsin, Madison, suggests that the CWD prion can remain infectious for several years in certain types of soil.

What are the DNR's disease surveillance plans for 2008?

Disease surveillance statewide is an essential part of managing CWD. As the DNR continues to work to control the disease, it is critical to monitor for introduction of it into new areas of the state. In addition to continued surveillance in the CWD management zone (CWD-MZ) of southern Wisconsin, the DNR will collect samples in the Northern Region during 2008 hunting seasons.

What are surveillance results to date?

Surveillance results are updated regularly and are most up to date on the DNR web-site at dnr.wi.gov, under "Chronic Wasting Disease in Wisconsin." During the 2007 deer season, more than 8,300 deer were sampled for CWD testing, 134 of which tested positive. Since 2002, the DNR has sampled more than 139,000 deer with 990 testing CWD-positive. Every hunter-harvested deer with CWD in Wisconsin has come from within the CWD-MZ. There are sections within Eastern Iowa County and Western Dane County where as many as 8 to 12 percent of adult deer samples have tested positive for CWD.

Besides testing deer for CWD, what is being done to learn more about the disease?

In Wisconsin, and many other states, research is being conducted on various aspects of CWD. Here is just a handful of the topics being researched:

- The impact of deer dispersal, social behavior, and mortality on the spread of CWD;
- Spatial patterns and prevalence of CWD in southwest and southeast Wisconsin;
- Transmission mechanisms, including the effects of baiting and feeding;
- Susceptibility of other species, such as cattle and scavengers, to CWD;
- Attitudes, behaviors, and desires of hunters and landowners in relation to CWD;
- Analysis of deer density reduction efforts in southwest Wisconsin and changes in deer population size.

What's being done to manage CWD in Wisconsin?

The DNR's main goal is a healthy deer herd. In addition, the department's goals are to minimize the negative impacts of CWD on deer and elk farms, the state's economy, hunters, landowners and other people who depend on healthy wild and farmed populations of deer and elk. Scientific data suggests that when population density is high, CWD is more easily transmitted between deer. Because of this, reducing the density of deer on the landscape is the main method the DNR is using to slow or stop the spread of CWD. Extended seasons, extra seasons, unlimited tagging and sharpshooting are all tools the agency has used to reduce deer numbers. CWD management in Wisconsin combines these tools with testing deer for the disease, allowing us to monitor the spread and prevalence of the disease as we try to control it.

What would happen if we did nothing to manage CWD?

A simulation model suggests that, if left unmanaged over the next ten to thirty years, CWD will spread widely throughout Wisconsin and increase in prevalence to more than 40 percent of adult deer. Colorado's situation supports this model because prevalence in adult male mule deer on some local winter ranges more than doubled between 1997 and 2002 and now exceeds 25-30 percent. To put this in perspective, adult male infection prevalence near the center of the core area in southwest Wisconsin averages about 10 percent. In addition, since CWD was first detected in the wild in 1981 in north central Colorado, the known affected area of the western outbreak has expanded to include most of northern Colorado, eastern Wyoming, and portions of western Nebraska, southwest South Dakota and eastern Utah.

Can CWD be transmitted to livestock?

To date, there has been no documented occurrence of livestock contracting CWD from free-ranging deer or elk. Further, in long-term studies where cattle have been housed in pens with CWD-infected deer and elk, transmission has not occurred. In studies where cattle had CWD-positive material injected directly into their brain, many of the cattle developed CWD. These experiments show that CWD can be transmitted to cattle, but through a very unlikely and extreme route of exposure. In similar experiments where cattle were fed brain material from CWD-affected deer and elk all animals have remained healthy. Since it is hypothesized that animals are infected with CWD by the oral route, this set of experiments may simulate a more natural route of exposure.

Where can I get more information on CWD?

Visit the DNR Web-site at dnr.wi.gov and click on "Chronic Wasting Disease in Wisconsin." Or call the toll-free DNR information line at 1-888-WDNRINFO, 7 a.m. to 10 p.m., seven days a week.

