Questions and Answers on Chronic Wasting Disease

What is Chronic Wasting Disease (CWD)?

CWD is a neurological (brain and nervous system) disease of deer and elk known to occur in limited geographical locations in North America. The disease belongs to a family of diseases known as transmissible spongiform encephalopathies (TSE). These diseases are caused by an abnormal form of a protein called a prion. CWD is a slow accumulation of abnormal prions in the brain and lymphatic tissues of deer and elk that ultimately results in the death of the animal. While CWD is similar to mad cow disease in cattle and scrapie in sheep, there is no known relationship between CWD and any other TSE of animals or people. In deer and elk there is no practical test of live animals to detect CWD and there is no known treatment or vaccine.

How is it spread?

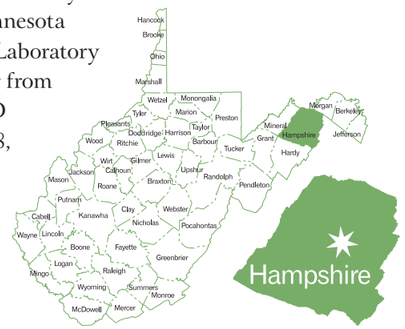
It is not known exactly how CWD is spread. Experimentally, the disease can be spread both directly (animal to animal contact) and indirectly (soil or other surface to animal). It is thought that the most common mode of transmission from an infected animal is via saliva, feces and possibly other body secretions. There is evidence that people moving live infected animals have spread the disease over long distances.

Is it dangerous to humans?

There currently is no evidence that the agent of CWD affects humans. However, public health officials recommend that human exposure to the CWD agent be avoided as they continue to research the disease. This includes not eating meat from known infected animals, or animals that appear sick, and avoid eating the brain, spinal cord, eyes, lymph nodes, spleen, and tonsils where the abnormal prion accumulates.

Where has it been found?

As of January 2008, CWD is known to infect free-ranging deer and elk in portions of Colorado, Illinois, Kansas, Nebraska, New Mexico, New York, South Dakota, Utah, Wisconsin, West Virginia, Wyoming, and Alberta and Saskatchewan, Canada. In addition, CWD has been found in captive/farmed elk and white-tailed deer in Colorado, Kansas, Minnesota, Montana, Nebraska, New York, Oklahoma, South Dakota, Wisconsin, and Alberta and Saskatchewan, Canada. CWD has been found in twenty white-tailed deer in West Virginia. The first deer was a road-kill in Hampshire County. An additional nineteen deer have been confirmed CWD positive from the same area in Hampshire County. One of these deer was hunter harvested in 2006 and six more hunter harvested deer in 2007. The remainder were collected by West Virginia Division of Natural Resources (WVDNR) personnel in cooperation with local landowners to monitor the disease. Since 2002, the WVDNR, Wildlife Resources Section, in cooperation with the SE Cooperative Wildlife Disease Study at the University of Georgia and the Minnesota Veterinary Diagnostic Laboratory has sampled 6,903 deer from West Virginia for CWD and, as of January 2008, the twenty Hampshire County deer are the only animals found thus far to have the abnormal protein associated with CWD.



What is being done about CWD in WV?

The discovery of CWD in Hampshire County, West Virginia represents a significant threat to the state's white-tailed deer. The disease does not cause an immediate widespread die-off of deer but if allowed to spread will cause long-term damage to the herd. Those that have tried to predict the outcome of the disease on a deer population have described the disease as a 30- to 50-year epidemic. Due to the uncertain ramifications that CWD may have on the white-tailed deer resource in West Virginia, the WVDNR is taking actions to gather more information on the prevalence and distribution of the disease in the area surrounding the known infected deer. This goal will be accomplished by increasing the number of deer tested with the help of other state and federal agencies, deer hunters and local landowners. To detect CWD that may be present in only a few animals, a large number of samples need to be tested. Because of the many scientific uncertainties regarding the basic biology and ecology of CWD, there are no proven solutions to combating CWD once present in free-ranging deer. However, baiting and feeding deer is known to increase the spread of diseases transmitted directly from deer to deer so these actives have been banned in Hampshire County. In addition, experiments with heavily infected mule deer carcasses in close quarters with live mule deer have produced infections, thus restrictions on the disposal and transport of deer carcasses from within Hampshire County have been implemented. Other management actions will be adaptive and based on the findings of future surveillance and research.

How can you tell if a deer has CWD?

Infected animals may not show any symptoms of the disease. In some stages of the disease, however, infected animals begin to lose control of bodily functions and display abnormal behavior such as staggering or standing with very poor posture and lose fear of humans. Infected animals become very emaciated (thus wasting disease), appear in very poor body condition, and often stand in or near water and drink excessively. Drooling or excessive salivation may be apparent. However, these symptoms are not unique to CWD and are also characteristic of diseases other than CWD.

What Can Hunters Do?

- If you kill a severely emaciated (very skinny) deer or a deer that is obviously sick contact the WV DNR Wildlife Resources Section office nearest you.
- Don't feed or bait deer. These practices concentrate deer, increase the likelihood of spread of any disease present in the deer herd, and may introduce foreign contaminates via the feed or bait.
- Harvest adequate numbers of antlerless deer to maintain deer populations in balance with natural food supplies. A deer population in balance with available habitat is healthier and better able to fight diseases.
- Use caution in spreading urine based lures in the environment and avoid placing deer lures on the ground or on vegetation where deer can reach them. Placing them out of reach of deer still allows air circulation to disperse the scent.
- If you plan to hunt deer or elk in a state known or suspected to harbor CWD follow that state's rules on removing animals from the area. Bring back only boned out meat and thoroughly cleaned skull plates and antlers.
- If you deer hunt in Hampshire County, please see special WV regulations regarding carcass transport and baiting in the Hunting and Trapping Regulations Summary or online at www.wvdnr.gov. Also, please cooperate with WVDNR requests for information and samples needed for CWD testing.
- If you observe live deer or elk being transported in a truck or trailer notify your local DNR office as soon as possible.

DNR photo

Biologist taking sample of lymph node tissue for testing.