



CHRONIC WASTING DISEASE FREQUENTLY ASKED QUESTIONS

ONLINE AT: gfp.sd.gov/chronic-wasting-disease/

Chronic Wasting Disease (CWD)

What is CWD?

Chronic wasting disease (CWD) is a fatal brain disease of deer, elk, and moose that is caused by an abnormal protein called a prion. Animals infected with CWD show progressive loss of weight and body condition, behavioral changes, excessive salivation, increased drinking and urination, depression, loss of muscle control and eventual death. Chronic wasting disease is always fatal for the afflicted animal. The disease can not be diagnosed by observation of physical symptoms because many big game diseases affect animals in similar ways.

What is a prion?

A prion is defined as an abnormal form of cellular protein that is most commonly found in the central nervous system and in lymphoid tissue. The prion “infects” the host animal by promoting conversion of normal cellular protein to the abnormal form.

What does this mean to the future of these wildlife populations in South Dakota?

Research in Wyoming and Colorado has shown that if prevalence of CWD gets to high levels, population may not be able to sustain themselves and hunting of these populations may have to cease in order to maintain desired population levels.

Where Does CWD Occur?

Where is CWD found?

CWD was first described in a Colorado Division of Wildlife captive deer research facility in 1967 and a few years later in a similar Wyoming research facility. CWD was first identified in South Dakota in 7 captive cervid herds in the winter of 1997-1998. CWD was first found in free-roaming wildlife in a white-tailed deer in Fall River County during the 2001 big game hunting season. In South Dakota, CWD has only been detected in free-roaming wildlife in Lawrence, Pennington, Custer, and Fall River counties, Custer State Park, and Wind Cave National Park. A map of the known distribution of CWD within free-ranging deer and elk can be found at the bottom of <https://gfp.sd.gov/chronic-wasting-disease/> under “Related Maps.”

How often does CWD occur?

Surveillance by hunter-harvest survey and testing of sickly deer and elk implies CWD is relatively rare in free-roaming cervids when the number of animals present is considered. Thus far, in South Dakota, twenty years of surveillance and testing of wild deer and elk have shown 203 CWD positive deer and 194 CWD positive elk out of 27,063 deer and elk tested. Of the 397 positive animals, Wind Cave National Park has discovered 126 elk and 10 deer that tested positive. Custer State Park has discovered 24 elk and 2 deer that have tested positive. In the 2017-2018 sampling period, 37 animals (12 deer, 25 elk) were found that were infected with CWD.



CWD Testing

How can I submit my own CWD sample for testing?

Hunters with licenses to harvest animals in South Dakota priority surveillance areas will be mailed information on how to submit CWD samples. Hunters who harvest deer or elk outside of priority surveillance areas can still have their animal tested for CWD by following the process outlined below. As a voluntary submission, hunters will be responsible for the cost of shipping and any professional sample collection costs, unless the hunter delivers a sample to a GFP Office. South Dakota Game, Fish and Parks (GFP) will pay for the testing cost of the sample at South Dakota State University Animal Disease and Research Diagnostics Lab (SDSU ADRDL). Results will be sent to both the hunter and GFP. These results will supplement GFP's surveillance effort across the state.

Submission Steps

- Fill out the South Dakota Chronic Wasting Disease Hunter Submission Form.
https://gfp.sd.gov/userdocs/docs/Chronic_Wasting_Disease-Hunter_Submission_Form_.pdf
- Collect only the retropharyngeal lymph nodes, located in the throat area, as demonstrated in videos found at <https://gfp.sd.gov/cwd-testing/>. Extraction can easily be performed with a field knife, but some veterinarians will extract samples for a small fee as well.
- Once removed, place lymph nodes in a sealed bag (Ziploc or similar). Place sealed bag into another sealed bag, then wrap in a paper towel. Place the wrapped sample with a cold ice pack and the submission form (in separate sealed bag) into a small box and send via your choice of postal carrier. Choose a carrier that will deliver your sample within 24-48 hours. Ship samples during the week (Mon-Thurs) and avoid shipping on weekends and holidays. Use a carrier that offers tracking of your package.
- Package delivery address is listed below, and at the bottom of the Chronic Wasting Disease Hunter Submission Form. Results are usually available 7-10 days.

Send samples to:

South Dakota State University
Animal Disease Research and Diagnostic Lab
Box 2175, 1155 North Campus Drive
Brookings, SD 57007

What is the difference between prevalence rate and presence?

Prevalence rate can be defined as a percentage of cervids in a population or hunting unit that are infected with chronic wasting disease.

Presence just means that CWD has been documented in a given population or hunting unit.

CWD Transmission

How is CWD transmitted?

How the pathogenic prion is transmitted from diseased animals to healthy ones is believed to be through direct animal to animal contact and/or contamination of feed or water sources with saliva, urine, and/or feces.

Numerous organizations and individual scientists across the United States and Canada are continuing to conduct detailed investigations in an effort to obtain a definitive answer to the route of transmission. Evidence shows that infected carcasses may serve as a source of infection. CWD seems more likely to occur in areas where deer or elk are crowded or where they congregate at man-made feed and water stations. Artificial feeding of deer and elk will likely compound the problem.



Is CWD transmissible to humans?

Public health officials and the Center for Disease Control in Atlanta, Georgia have found no link between CWD and any neurological disease in humans. Visit the Center for Disease Control and Prevention website at <https://www.cdc.gov/prions/cwd/prevention.html> for more information.

To minimize their risk of exposure to CWD, hunters should:

- Consult with their state wildlife agencies to identify areas where CWD occurs and take appropriate precautions when hunting in such areas.
- Avoid eating meat from deer and elk that look sick or that test positive for CWD.
- Consider having the deer or elk tested for CWD before consuming the meat if the animal was harvested from an area known to have CWD-positive animals. Information about testing is available from most state wildlife agencies.
- Wear gloves, bone-out the meat from the animal, and minimize handling of the brain and spinal cord tissues when field dressing an animal.

Is CWD transmissible to domestic livestock?

According to experts, there's no evidence that CWD can be naturally transmitted to domestic livestock. Chronic wasting disease is similar in some respects to two known livestock diseases:

- Scrapie, which affects domestic sheep and goats worldwide and has been recognized for over 200 years; and Bovine Spongiform Encephalopathy (BSE), which is a more recent disease of cattle in Great Britain and Europe. BSE has been found in Canada, and in the United States.

Though there are similarities, there is no evidence suggesting either scrapie or BSE is caused by contact or close association with wild deer or elk.

How Does CWD Impact Me?

As a hunter, what do I need to be the most concerned about?

In the absence of complete information on risk, and in light of similarities of animal and human TSEs, public health officials and wildlife management professionals recommend that hunters harvesting deer and elk in the endemic area, as well as meat processors and taxidermists handling cervid carcasses, should take some common sense measures to avoid exposure to the CWD agent and to other known zoonotic pathogens. CWD poses serious problems for wildlife managers, and the implications for free-roaming deer and elk are significant.

Can I tell if an animal has CWD based on physical appearance or behavior?

An animal does not necessarily have to display clinical signs or look unhealthy for it to test positive for CWD. In fact, it is possible to harvest a healthy-looking animal that has CWD. If you harvest a deer or elk in one of the identified CWD areas on the map or anywhere in the state and have concerns, you have the ability to submit your own sample for testing using the form and instructions found at <https://gfp.sd.gov/cwd-testing/>.

As a taxidermist, what do I need to be the most concerned about?

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As a non-hunter, how does this impact me?

Impacts of CWD on population dynamics of deer and elk are presently unknown. Computer modeling and research suggests that CWD infected cervid populations could be substantially reduced by lowering adult survival rates and destabilizing long-term population dynamics. This would potentially reduce the ability to view deer and elk by non-hunters.

Feeding wildlife for viewing purposes is a popular pastime for hunters and non-hunters alike. The concentration of wildlife at feeding and baiting stations increases the likelihood of disease transfer amongst wildlife visiting these locations. Feeding of certain wildlife may have to be stopped through specific laws in order to help protect wildlife species.

As a landowner or producer, do I need to be concerned that this will transmit to my livestock herds (or domestic pets)?

Cattle and other domestic livestock appear to be resistant to natural infection. There are no reported cases of natural transmission of CWD from infected elk or deer to domestic livestock. However, the disease has been experimentally reproduced in cattle by the direct injection of the infectious agent into their brains.

What Can I Do?

What can I do to help slow the spread of CWD?

CWD can be spread from animal to animal and through the concentration of cervids at feeding and baiting stations. Eliminating the feeding and baiting areas can help to stop or slow the spread from animal to animal. Additionally, hunters who hunt in areas that are known to have CWD can assist in the reduction of CWD spread by deboning meat in the field and leaving the carcass at the harvest site. Research has shown that infected carcasses do pose a threat to the spread of CWD, and thus should be disposed of with your waste management provider or in a landfill that will bury the carcass.

How do I find out if there is a permitted waste facility near me?

Appropriate disposal of carcasses by hunters is not only ethical and the right thing to do; using a licensed landfill is a practice that helps reduce the risk of chronic wasting disease (CWD) transmission and establishment into geographic areas currently not known to have CWD. A map of licensed landfills can be found at the bottom of <https://gfp.sd.gov/chronic-wasting-disease/> under "Related Maps". If a licensed landfill is not located near your residence, please contact your waste management provider to learn more on proper disposal options.

What should I do if I suspect a deer or elk has CWD?

Call our department at 605.394.2391 (Rapid City) or 605.773.3387 (Pierre) or the Animal Industry Board at 605.773.3321 (Pierre). Arrangements will be made to investigate the report.