



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 **may** show progressive loss of weight and body condition, behavioral changes, excessive salivation, increased drinking and urination, depression, loss of muscle control and eventual death. CWD is always fatal for the afflicted animal. Unfortunately, CWD cannot 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 mostly 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, deer and elk populations may not be able to sustain themselves and hunting females of these populations may have to cease in order to maintain desired population levels. This means the number of big game licenses may be reduced or even eliminated depending on population levels.

Where Does CWD Occur?

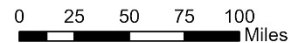
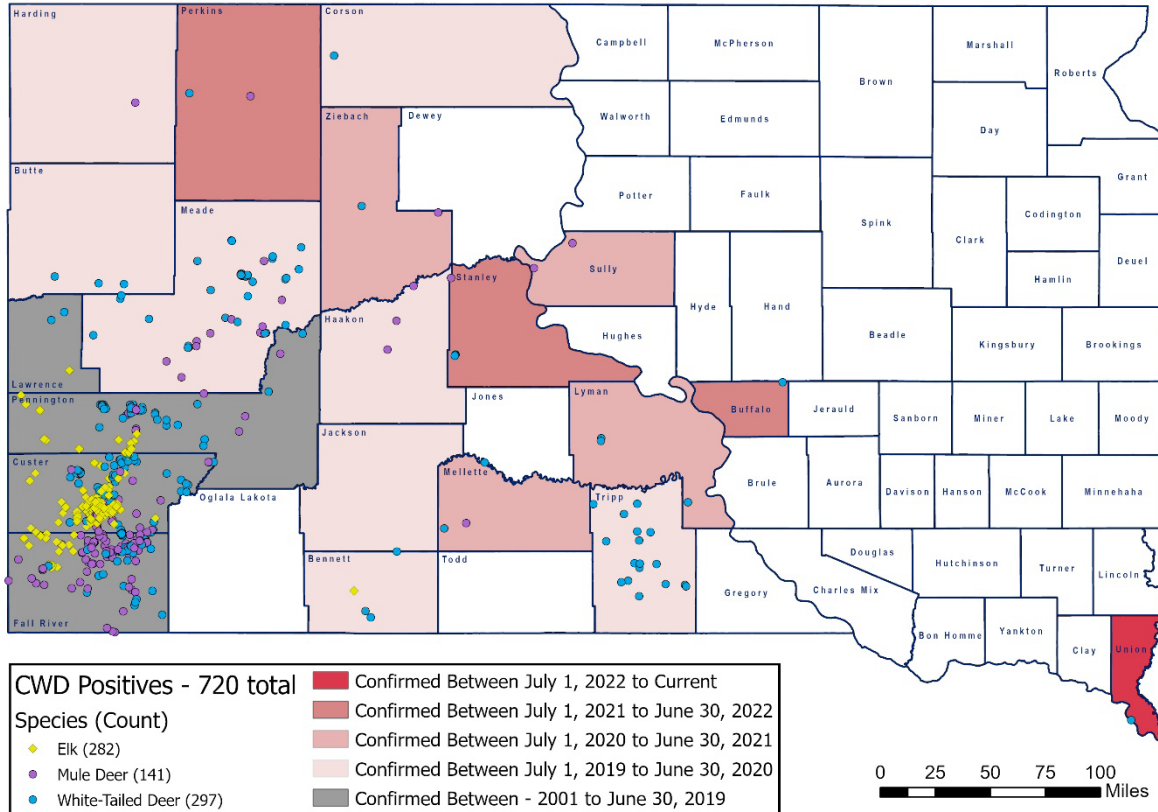
Where is CWD found?

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 seven captive elk herds in the winter of 1997-1998. More recently, CWD was identified in captive elk herds in Meade and Clark counties in 2019, a captive elk in Custer County in October 2020, and a captive deer herd in Haakon County in 2021. CWD was first found in free-ranging wildlife in a white-tailed deer in Fall River County during the 2001 big game hunting season. Since then, in South Dakota, CWD has been detected in free-ranging wildlife in Bennett, Buffalo, Butte, Corson, Custer, Fall River, Haakon, Harding, Jackson, Lyman, Meade, Mellette, Lawrence, Pennington, Perkins, Stanley, Sully, Tripp, Union, and Ziebach counties, including 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.”



Chronic Wasting Disease Positives in South Dakota

2001 - March 2023



How often does CWD occur?

Surveillance from hunter-harvest and testing of sick deer and elk implies CWD is relatively rare in free-roaming cervids when the number of animals present is considered. South Dakota is reporting a total of 59 positive deer and elk (12 mule deer, 23 white-tailed deer and 24 elk) in the testing period of July 1, 2022 to June 30, 2023. A total of 1,042 cervids were tested during this sampling period. As of June 30, 2023, South Dakota has found 722 cases of CWD (439 deer and 283 elk) in free-ranging deer and elk since testing began in 1997. Wind Cave National Park (WICA) accounts for 192 of these animals (177 elk, 15 deer). Thirty-five elk and 12 deer have been found in Custer State Park. A total of 33,918 wild deer and elk have been tested for CWD since 1997.

What is a CWD endemic area?

A CWD endemic area is a geographic area where CWD has been confirmed in free-ranging deer or elk. These areas typically are classified as a hunting unit, or a County in South Dakota.

What is the difference between prevalence rate and presence?

Prevalence rate can be defined as a percentage of cervids (deer, elk or moose) in a population or hunting unit that are infected with CWD. Presence just means that CWD has been documented in a given population or hunting unit.





CWD Testing

How can I submit my own CWD sample for testing?

How do I submit samples from bucks that I may want to have shoulder mounted, European mounted or just keep the antlers?

Options

- If a harvested animal is to be shoulder mounted, animal must be caped **before** head is submitted to a collection area or delivered to a GFP office for sample collection.
- If a hunter desires a European mount, sample must be collected **before** tissue is removed from skull. This sample collection can be conducted by the hunter or at a GFP office with prior arrangements and skull will be returned to hunter at time of sample collection. If this method is utilized, please do not submit frozen heads. Heads put in collection stations with antlers attached **will not** be returned to hunters.
- If a hunter only desires to keep antlers, a V-cut can be conducted and head without antlers can be dropped at a collection station. Removing antlers with this V-cut will not damage the sample.

How long does it take to get CWD testing results?

Time to get results from testing of a CWD sample may vary depending on when samples are collected and when GFP sends samples to the SDSU Diagnostic lab. GFP will send samples to the lab once or twice a week. The process at the lab may take some time to determine results. In most instances, results are determined within a 1-2-week period. In situations during a high-volume sampling period such as the firearm deer seasons when increased samples are sent to the lab, results may take up to 2-3 weeks. Hunters will be notified as soon as possible.

How will I be notified of CWD testing results?

Hunters will be notified of CWD testing results on all samples submitted. It is important that all information requested by GFP is filled out so testing results can be sent to hunters. Hunters will be notified by phone if CWD testing shows that CWD is present in the sample tested. Hunters will be notified either by phone, or e-mail regarding CWD results for any submitted samples. It is very important that information on the submitted samples is completely and accurately filled out, and that all hunters review their current hunter profile to update any information that has recently changed.

CWD Transmission

How is CWD transmitted?

How the abnormal 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 from an infected animal.

Numerous organizations and individual scientists across the United States and Canada are continuing to conduct detailed investigations 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 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 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. Research indicates a five-minute, submerged soak in a 40 percent bleach solution will de-activate prions on stainless steel items.

Is CWD transmissible to domestic livestock?

Research indicates that there is no evidence that CWD can be naturally transmitted to domestic livestock. CWD 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.
- Bovine Spongiform Encephalopathy (BSE, Mad Cow Disease), which is a more recent disease of cattle in Great Britain and Europe. BSE has been found in Canada and 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 (prion disease), public health officials and wildlife management professionals recommend that hunters harvesting deer and elk, 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 wildlife diseases. Such measures include wearing disposable gloves when handling muscle tissue, brain, and spinal cord tissue and cleaning utensils and processing equipment with a minimum 40% bleach solution. CWD poses serious problems for wildlife managers and the implications for free-ranging 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 a CWD endemic area or anywhere in the state and have concerns, you can submit your own sample for testing using the form and instructions found at <https://gfp.sd.gov/cwd-testing/>.

As a game processor or taxidermist, 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 (prion diseases), 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 wildlife diseases. Such measures include wearing disposable gloves when handling muscle tissue, brain, and spinal cord tissue and cleaning utensils and processing equipment with a minimum 40% bleach solution.

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.

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 deer or elk to domestic livestock. However, the disease has been experimentally reproduced in cattle by the direct injection of the infectious agent into their brains.

What's Being Done?

Management of CWD in South Dakota

The South Dakota Game, Fish and Parks (GFP) Commission has adopted management actions and best management practices to address chronic wasting disease in deer and elk herds across the state.

The "Management of Chronic Wasting Disease in South Dakota" is a comprehensive document that provides a historical background, known distribution, surveillance, public outreach, challenges and opportunities, and citizen involvement related to CWD. This document can be found

here: https://gfp.sd.gov/userdocs/docs/management_of_cwd_in_south_dakota_june_2023.pdf

The "South Dakota Chronic Wasting Disease Action Plan" is a concise document that provides management guidance for the GFP Commission and staff. This document can be found here:

https://gfp.sd.gov/userdocs/docs/sd_cwd_action_plan_south_dakota_june_2023.pdf

What is being done about CWD in South Dakota?

Eliminating CWD is difficult, given the limited understanding of its cause and transmission and the lack of any vaccine or treatment.

The Animal Industry Board established specific requirements after CWD was first diagnosed in private, captive elk herds to prevent further introductions or recurrences in private, captive elk and deer herds. Most captive herds that were infected or exposed have been depopulated, and a voluntary cervidae (deer and elk) CWD surveillance and control program for captive cervids is now being implemented.

Joint management strategies for CWD have been aimed at intensified surveillance to determine to what degree CWD occurs in free-roaming animals. GFP, in cooperation with South Dakota State University and Wind Cave National Park, tested hunter-harvested animals, vehicle killed animals, sick animals, and research animals starting in 1997. Recent emphasis has been placed on testing elk in the Black Hills in conjunction with current research on CWD. Emphasis on testing of deer will be for any county that has not had a confirmed CWD case,



and sick animals from anywhere in South Dakota.

South Dakota agencies, in cooperation with citizens of the state, will continue to keep a close watch for the disease and determine its distribution and prevalence. This program will incorporate voluntary testing of hunter-harvested deer and elk, as well as sick deer and elk that are found and reported to GFP. The AIB will continue its CWD control and monitoring program involving private, captive elk and deer herds.

- Ongoing surveillance programs are expensive and draw resources from other wildlife management needs.
- Impacts of CWD on population dynamics of deer and elk are presently unknown. Computer modeling suggests that CWD could substantially reduce infected cervid populations by lowering adult survival rates and destabilizing long-term population dynamics.
- Where it occurs, CWD may alter the management of wild deer and elk populations, and it has already begun to do so.
- Ultimately, public and agency concerns and perceptions about human health risks associated with all TSE's may erode hunter confidence and their willingness to hunt in areas where CWD occurs.

Current Elk Research in the Black Hills

Why are we asking for CWD samples from elk this year?

The objective for collection of tissue samples from elk in the Black Hills is to determine Chronic Wasting Disease prevalence rates in various units throughout the Black Hills. We need to collect a large sample size from several areas across the Black Hills. We are asking for a harvest location to identify specific areas within each unit where CWD prevalence may be impacting the health of the elk population. SDGFP is interested in assessing any impacts that CWD may have to the health of the South Dakota elk population to enhance elk hunting opportunities into the future. Elk are a unique resource in this state that are sought after by many hunters. We are asking for hunter support in collecting as many samples as possible to protect elk hunting for future generations.

All hunters that submit samples for teeth and CWD sampling will be informed of the age of elk and the results of Chronic Wasting Disease testing. It is very important that the license number from your elk tag be written on all samples.

Call 605.877.2537 or 605.484.5493 - We can answer your questions!

Please visit: <https://gfp.sd.gov/elk-samples/> for more information on sample submissions and collection areas.



What Can I Do?

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

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 harvested deer or elk removed from the field should be disposed of with your waste management provider or in a landfill that will bury the carcass. Additionally, CWD can be spread from animal to animal and through the concentration of cervids at feeding and baiting stations. Eliminating feeding and baiting areas can help to stop or slow the spread from animal to animal.

Are there any regulations related to CWD?

Yes, regulations are in place for all deer and elk hunting seasons. Carcass transportation and disposal regulations apply for any harvested deer or elk that will be transported from the county of harvest or from another state back into South Dakota.

In summary, the regulations include the following:

- Hunters are recommended to leave as much of the unusable carcass as possible at the location of the harvest in a discrete location on both public and private lands. Make arrangements with landowner on property where permission has been granted.
- Regulations do not prohibit a hunter from transporting a deer or elk carcass from the harvest location to anywhere in the state.
- If any portion of the carcass is removed from the location of harvest and transported from the county of harvest, the revised regulations will require the hunter to dispose of all carcass remains with a waste management provider, if an allowable trash item, or with a permitted landfill. Game processors and taxidermists, regardless of the location of harvest, are required to dispose of all carcass remains with a waste management provider, if an allowable trash item, or with a permitted landfill.
- If you are not moving a deer or elk carcass from the county of harvest, the regulations do not apply unless the carcass is delivered to a game processor a taxidermist. Returning carcass remains to public lands and using road ditches to dispose of carcass remains is illegal. Make sure permission is granted if disposing on private land.
- Deer or elk carcasses from another state brought back into South Dakota must be disposed of with a waste management provider or landfill that accepts carcass parts.
- Cervid carcasses passing through the State of South Dakota are exempt from any regulations.

If I reside and hunt in the same county, how do these revised regulations affect me?

An individual residing and hunting within the same county is not affected by these new regulations. Only when whole or partial cervid carcass parts are transported from the county of harvest do these transportation and disposal regulations apply. Hunters are encouraged to process as much of the animal in the field (quarter or bone out carcasses) and only carry out as much of the properly tagged animal as necessary. Regardless of where a deer or elk is harvested, hunters should be mindful of proper disposal practices such as with your waste management provider or a permitted landfill.

How does the intrastate (within SD) cervid transportation and carcass disposal regulations affect me if I am staying in a hunting camp, lodge, hotel or at a friend's house?

The transportation and disposal regulations only apply when the whole or partial cervid carcasses and head with antlers leaves the county of harvest. If proof of sex is needed for a specific license, this must accompany the animal to the taxidermist, processor or to the hunter's domicile and then be discarded in an approved landfill. Hunters can stay in deer camps, motels or with family and friends until the carcass arrives at one of the three final destinations described above (taxidermist, game processor or hunters' domicile). The intent of the cervid transportation and carcass disposal regulations are to reduce the possible spread of CWD by movement across the landscape by hunters when not disposed of correctly.



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

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

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

Call your local GFP department office or conservation officer found at <https://gfp.sd.gov/contactus/> or the South Dakota Animal Industry Board at 605.773.3321 (Pierre). Arrangements will be made to investigate the report.

CWD Definitions?

Several terms frequently pop up when discussing CWD. In order to help better understand CWD and the language surrounding CWD this list of common terms will help you speak the language and better understand the information presented.

Agent

The active and efficient cause of a disease; usually refers to a germ such as a virus, bacteria, or prion.

Bovine spongiform encephalopathy (BSE)

A transmissible spongiform encephalopathy (see below) affecting cattle, caused by a prion. Transmission between cattle normally takes place when cattle are fed meat and bone meal originating from cattle that were affected by BSE.

Captive cervid herd

A herd of deer or elk that is confined and managed as a herd of domestic animals would be.

Central nervous system

The brain and spinal cord.

Cervidae, Cervids

A mammal of the family Cervidae, which includes white-tailed deer, mule deer and elk.

Clinical signs

Something abnormal, relevant to disease in an animal, detected and possibly measured by an observer. Animals are considered to have clinical signs instead of "symptoms."

CWD-positive

The designation for an animal that has been determined to have been infected with the CWD prion.

Deboning

Removing cuts of meat from the attached bone.

Disease distribution

The patterns in which cases of disease are found, e.g., geographically, over certain time periods, gender or age of diseased animals, etc.

**Endemic area**

A geographic area in which animals affected with a certain disease would normally be expected to be found.

Exposure

Being subjected to an infectious agent.

Hunter-harvest survey

A surveillance method in which hunters voluntarily submit their harvested deer or elk for CWD-testing.

Lymphoid tissue

Portions of the body that house lymphocytes (certain cells involved in the immune response). Lymphoid tissue can be diffuse in nature, as in certain parts of the intestine; or it can be focused in small organs distributed throughout the body called lymph nodes.

Neurological

Pertaining to the function of the brain, spinal cord, and nerves.

Pathogen/Pathogenic

A germ capable of creating damage to a body function or organ, resulting in illness or disease.

Population dynamics

A branch of knowledge concerned with the sizes of populations and the factors involved in their maintenance, decline, or expansion.

Presence

The documentation of CWD in a given population or hunting unit.

Prevalence/Prevalence rate

The percentage of cervids in a population or hunting unit that are infected with CWD.

Prion

A form of a protein molecule that is closely associated with cells in the nervous system and in lymphoid tissue. When abnormal prions come in contact with normal cellular proteins, they can convert them to the abnormal form. Prions are the smallest and most basic of all infectious agents. They are very resistant to enzymes, chemicals, heat, and normal disinfecting procedures.

Retropharyngeal lymph nodes

Lymph nodes (see above) located in the back of the upper throat of the animal. In harvested deer, they are frequently used as a sample for CWD testing.

Scrapie

A transmissible spongiform encephalopathy that exclusively affects sheep and goats.

Surveillance

The regular monitoring of an animal population for the presence of disease.

Transmissible spongiform encephalopathies (TSE's)

Diseases that are caused by abnormal forms of prions that convert normal cellular proteins to more abnormal prions. The net effect of this conversion is the formation of plaques of protein in nervous or lymphoid tissue (usually the brain), which eventually create spaces or "holes" in that tissue. "Spongiform" refers to the sponge-like appearance of this tissue under



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a microscope, while “encephalopathy” refers to the resulting abnormal function of the brain.

Zoonotic

Describes a disease that can be transmitted from animals to people under natural conditions.

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