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CWD Frequently Asked Questions

What is Chronic Wasting Disease?

Chronic wasting disease (CWD) is a transmissible spongiform encephalopathy in cervids (including white-tailed and mule deer, as well as elk, moose, and reindeer/caribou). CWD is characterized by the accumulation of prions in brain cells that eventually cause microscopic holes in the brain, leading to death. Related diseases include: scrapie in sheep and goats; bovine spongiform encephalopathy, or "mad cow disease" in cattle; and Creutzfeldt-Jakob disease in humans (see CWD Fact Sheet). CWD can be transmitted directly through animal-to-animal contact as well as indirectly through contaminated soil, plants, and other materials. It takes at least 16 months for an infected animal to develop clinical signs of disease, and during this time they can appear completely healthy. Once an animal starts showing signs of the disease, it steadily loses body weight until it dies. There is currently no vaccine, treatment, or cure for CWD. To date, CWD has been primarily found in white-tailed deer, elk, mule deer, moose, and reindeer/caribou in North America. The susceptibility of exotic cervids and other wildlife species is currently unknown.

What are the future impacts of CWD to the deer population?

It takes several decades for population effects of CWD to become noticeable. During this time the prevalence of the disease (percentage of the population that is infected) slowly climbs. As disease prevalence rises, the average life span of deer slowly declines because more deer are becoming infected and dying earlier because of CWD. Over time CWD causes a drain on the population because does die at younger ages with less opportunity to reproduce.

What are the signs of CWD?

Deer with CWD can appear healthy for 16 months or more before they begin to show signs of disease. During that time, they can spread CWD to other animals and to the environment. Signs of CWD infection include:

- Listlessness or showing little interest in their surroundings.
- Lack of coordination.
- Frequent lowering of the head.
- Blank facial expressions.
- Walking in set patterns.
- Drooling and grinding of teeth.
- Drinking lots of water and increased urination.
- Low weight.

Other deer diseases may present with similar signs. Only a laboratory test can confirm the presence of CWD. Currently, the only USDA-approved test for CWD is a microscopic examination of the brain and lymph node tissue, which must be acquired after death; there is no reliable live animal test for CWD.

Because of the prolonged incubation period (16 months or more), many CWD positive deer will die of other causes (e.g., hunting, automobiles), prior to showing visible signs of infection. Under relatively low prevalence rates, observations of deer with visible signs of CWD are rare.

Why is the NCWRC testing for CWD?

Protecting the state's deer and elk from the harmful impacts of CWD relies on early detection of the disease and limiting the movement of the infectious prions that cause the disease. As other states have learned, early detection is critical in being able to effectively manage the disease.

CWD has the potential to greatly impact North Carolina's deer and elk populations and the tradition of deer hunting in our state. Robust testing is our most powerful tool to identify CWD wherever it occurs on the landscape and to effectively manage its spread.

How long has the NCWRC been testing for CWD?

The NCWRC has been testing for CWD since 1999 and has tested well over 38,000 deer. Currently, routine statewide surveillance occurs each year. Samples collected come from a variety of sources including vehicle-kills, voluntary hunter submissions and those supplied from cooperating taxidermists and meat processors. Additionally, more intensive surveillance is conducted in areas where CWD has been found.

Where is CWD found?

CWD was first detected in North Carolina in 2022. For an updated list of CWD affected counties, visit ncwildlife.org/CWD. See Map of CWD distribution in North America (USGS website)

What should I do if I see a sick deer?

If you see or harvest a deer exhibiting signs of disease, leave the animal at the site of kill and call your local District Biologist or the NC Wildlife Helpline at 1-866-318-2401.

What precautions can I take for handling, processing, disposing of deer in NC?

The precautions below should be followed when handling any wild game and help to minimize the risk of exposure and transmission of diseases or foodborne illness.

Download printable fact sheet.

General Precautions

- Do not eat any parts from a deer that appears sick.
- Do not eat the eyes, brain, tongue, spinal cord, spleen, tonsils or lymph nodes of any deer.
- If hunting in an area where CWD has been confirmed, have your harvested animal tested for CWD and avoid consuming meat from any animal testing positive. View your test results for deer harvested in North Carolina.

Field Dressing and Home Processing

- Wear rubber or latex gloves at all times.
- Use only knives or utensils selected for the purpose of field dressing and processing. Do not use these utensils for eating.
- Minimize contact with the brain, spinal cord, spleen and lymph nodes as you work.
- Remove all internal organs when field dressing.
- Do not cut through the spinal column except to remove the head. Use a knife designated only for this purpose and ensure that it is thoroughly disinfected after each use.
- Bone out the meat and remove all fat and connective tissue. This will also remove lymph nodes.
- All damaged meat near and around the wound channel should be removed and discarded. If using lead ammo, fragments can travel up to 18 inches depending on bullet type. These fragments can be a potential health problem for pregnant women and children.

- Dispose of any unused deer parts, especially if they were transported away from the site of harvest, either by burial or at a landfill. This will prevent deer or scavengers from coming into contact with potentially infected parts. Never transport deer parts and then dispose of them on the ground, roadside, or in a waterway. Be aware of carcass transportation regulations that apply to CWD Surveillance Areas. Refer to Disposal and Transport of Deer Harvested in North Carolina for more information.
- Process each deer separately, then store each deer's meat in its own labeled containers.
- Thoroughly clean and sanitize equipment and work areas with a 50/50 solution of bleach and water after processing, allowing equipment to soak for 1 hour.

Eating Venison

Never eat meat from a deer that looks sick. Never eat a deer's:

- Brain.
- Tongue.
- Tonsils.
- Eyes.
- Spinal cord.
- Spleen.
- Lymph nodes.

To be sure you've removed all of the parts listed above:

- Gut the deer.
- Remove the head.
- Cut meat from the bone with a knife; don't cut through bones.
- Remove all fat, membranes and tendons from the meat.

Proper Disposal of Deer Harvested in North Carolina

CWD spreads between animals through saliva, urine and feces, either through direct contact or indirectly through environmental contamination, especially in the soil. CWD prions can remain active in the soil for a very long time, even through harsh weather and fire. Soil that contacts contaminated deer parts or fluids can hold CWD prions many years – even decades, causing other deer to contract the disease.

Taking precautions that reduce the movement of potentially infected deer parts or fluids around the landscape is crucial to managing the spread of CWD. Learn how to properly dispose of deer harvested in North Carolina.

What if I hunt in another state and bring my harvest back to NC?

Anyone returning or transporting a deer, elk, moose or reindeer/caribou from any state, Canadian province or foreign country into North Carolina must follow the processing and packaging regulations, which allow the importation of:

- Meat that has been boned out such that no pieces or fragments of bone remain;
- Caped hides with no part of the skull or spinal column attached;
- Antlers, antlers attached to cleaned skull plates, or cleaned skulls free from meat or brain tissue;
- Cleaned lower jawbone(s) with teeth or cleaned teeth; or
- Finished taxidermy products and tanned hides.

See Rules For Importation of Deer Carcasses and Carcass Parts (PDF).

View the video to learn how to prep a skull plate and deer cape for importation into North Carolina.

Should I eat the meat of a CWD positive deer?

The Centers for Disease Control states that to date, there have been no reported cases of CWD infection in people. However, some animal studies suggest CWD poses a risk to certain types of non-human primates. The CDC states it is important to keep the agents of all known prion diseases (also including mad cow disease and scrapie in sheep) from entering the human food chain. For optimal safety, the NCWRC recommends people do NOT eat:

- Meat from a deer that looks sick.
- Any of the following organs: brain, eyes, spinal cord, spleen, tonsils and lymph nodes*.
- Any meat from an animal that tests positive for CWD.

*Normal field dressing coupled with boning out a carcass will remove most (if not all) of these body parts. Cutting away all fatty tissue will remove remaining lymph nodes.

Can CWD prions be destroyed?

The abnormal proteins, or prions, that cause CWD are not easily destroyed. Prions can be frozen for extended periods of time and still be capable of causing CWD. Extremely high temperatures must be sustained for several hours to reliably destroy a prion. Prions cannot be “killed” with typical sanitizing chemicals but may be manually removed with disinfectant and scrubbing. Hunters should wear gloves and use designated tools/utensils to cut or handle high-risk parts such as the spinal cord, brain and other nervous system tissue. These tools/utensils should not be used to process meat intended for consumption and should be thoroughly disinfected between uses.

Once CWD prions have contaminated the ground in an area, they can remain active and capable of causing CWD for years — even decades. For this reason, taking precautions that prevent CWD from being moved to new areas is crucial.

What is the NCWRC doing about CWD?

The agency annually tests a sample of hunter harvested deer statewide for the disease and tests more intensely where the disease has been found. In Surveillance Areas where CWD has been detected the NCWRC has adopted special regulations to increase testing and limit the risk of moving the disease elsewhere.

Statewide rules have also been implemented to limit the spread of CWD in North Carolina; including a ban on the importation of whole carcass or high risk carcass parts of any cervid (deer, elk, moose, caribou/reindeer) harvested in another state and restrictions on the use of certain deer urine based lures/attractants.

Can I get CWD from handling deer meat?

There have not been any reported cases of CWD infection in people. However, the NCWRC recommends hunters follow a list of precautions for handling and processing deer to limit the potential spread of CWD in the environment and reduce the risks of food-borne illness in general.

I’m not a hunter. How can I help?

Don’t give CWD a ride. CWD can easily spread to new areas whenever infected deer or their parts are transported by people. This includes transporting fawns for rehabilitation, as fawns can be infected with CWD by their mother even before birth. Infected deer don’t show visible signs of illness until the late stages of disease, and can shed infectious CWD prions into the environment for 16+ months before becoming physically ill. Because CWD prions can’t die, infected deer parts can spread CWD long after the animal has died. The best way to avoid giving CWD a ride is to leave fawns and deer parts where you found them. Learn more about deer and deer part transport restrictions in NC.

CWD can be spread by:

- Live deer, including newborn fawns
- Whole deer carcasses
- Parts with nervous system tissue attached (anything containing brain, spinal cord, nerves, or lymph nodes). Completely cleaned bones, antlers, teeth, and tanned hides are low risk.
- Body fluids (saliva, urine, feces, blood)

Skip the food handouts. Though deer are naturally social, some human activities cause deer to gather more closely and in larger numbers than they would otherwise. Regularly placing food out for wildlife can attract deer to one location, increasing the chance that CWD spreads. Soil and vegetation around feeding stations can be contaminated by infected feces, urine, and saliva; once CWD prions are present, they are practically impossible to remove or destroy, and can infect healthy deer for years. Both hunter and non-hunters alike can help slow the spread of CWD by eliminating the placement of food items that unnaturally congregate deer. Learn more about CWD-related wildlife feeding restrictions.

NORTH CAROLINA Wildlife RESOURCES COMMISSION

Learn more by visiting ncwildlife.org/CWD

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