



CHRONIC WASTING DISEASE

WHAT IS CHRONIC WASTING DISEASE?

Chronic wasting disease (CWD) is an infectious, degenerative, and fatal neurological disease that causes brain cells to die. CWD affects members of the cervid family such as deer, elk, and moose, and harvested exotic CWD susceptible species such as elk, red deer, sika, moose, and reindeer.

CWD belongs to the group of diseases known as transmissible spongiform encephalopathies (TSEs). TSEs include several different diseases affecting animals or humans. Unlike other infectious diseases, TSEs are not caused by bacteria or viruses, but rather by a naturally occurring protein, that when folded incorrectly, becomes infectious and deadly. Prion protein is a normal cellular protein coded by the PRNP gene. The protein can be found throughout the body of mammals, with the highest concentration in the central nervous system. Although CWD shares certain features with other TSEs, it is a distinct disease affecting only cervids.

As a precaution, it is advised that meat from animals exhibiting clinical signs of CWD should not be consumed. Carcasses that may not show clinical signs, but test positive, should not be consumed. To date, there have been no reported cases of CWD infection in people, according to the Centers for Disease Control and Prevention (CDC). The World Health Organization (WHO) recommends keeping the agents of all known prion diseases from entering the human food chain.

CLINICAL SIGNS

Due to a potentially lengthy incubation period, cervids infected with CWD may not exhibit any visible signs for several years after becoming infected. As the disease progresses, animals with CWD show changes in behavior and appearance.

Clinical signs of CWD may include:

- Progressive weight loss and lack of body fat
- Stumbling or tremors with a lack of coordination
- Excessive thirst, salivation, or urination
- Loss of appetite
- Difficulty swallowing

- Abnormal head posture
- Drooping ears

TRANSMISSION

Cervids can be exposed to CWD by direct animal-to-animal contact, or indirect contact with infected items in the environment (e.g., soil, dust, water, or forage, etc.); or contact with infected inanimate objects (e.g., chutes, trailers, veterinary instruments, feeders, etc.).

Infected animals shed prions through their saliva, urine, feces, blood, or soft antler material. Soil and the surrounding environment can be contaminated through decomposition of infected carcasses. Prions are capable of infecting other animals for years, and as more cervids become infected, the number of infectious CWD prions in the environment can exponentially increase.

DIAGNOSIS

There are two official CWD postmortem tests: Enzyme-linked immunosorbent assay (ELISA) and Immunohistochemistry (IHC). Samples may be collected by a state or federal animal health official, a CWD-certified veterinarian, or a certified CWD postmortem sample collector.

Three types of tissue may be collected for antemortem testing for CWD detection. Antemortem sample collection may only be conducted by a Texas Animal Health Commission (TAHC) authorized CWD antemortem veterinarian.

Following laboratory confirmation, the TAHC and Texas Parks and Wildlife Department (TPWD) work closely with the affected landowner to mitigate disease spread by quarantining the premises to restrict animal movement.

REPORTING DISEASE

Individuals who see a captive or free-ranging exotic cervid showing clinical signs should document the location of the animal and immediately call the TAHC at 800-550-8242. Those who observe free-ranging or captive native cervids exhibiting clinical signs of CWD



should document the location and immediately call their local TPWD or Law Enforcement Division office. Do not attempt to touch, disturb, kill, or remove the animal. All mule deer, white-tailed deer, and other native species suspected of having CWD are under the jurisdiction of TPWD and their regulations and should be reported to TPWD personnel. All exotic CWD susceptible species suspected of having CWD should be reported to the TAHC.

When CWD susceptible species are tested on a premises, the owner must report the test results to the TAHC within 14 days of receiving the test results by either emailing CWD_reports@tahc.texas.gov, writing to TAHC, CWD Susceptible Species Reporting, P.O. Box 12966, Austin, Texas 78711-2966, or by fax at 512-719-0729.

PREVENTION

Producers should follow proper herd management strategies and biosecurity measures to assist in keeping herds free of CWD, to reduce the severity of implications caused by the disease. These strategies may include surveillance, testing all mortalities, quick disease identification, maintaining a closed herd, and recording accurate animal identification.

To protect Texas cervids from CWD, the TAHC and TPWD have regulations in place to prevent the introduction and spread of the disease. TAHC's regulations apply to all free-ranging and captive exotic CWD susceptible species. TAHC regulatory requirements for these susceptible species only include disease surveillance, animal identification and movement reporting, and keeping records on animals harvested or captured on a premises.

The following biosecurity measures may reduce potential exposure of captive cervids to CWD and other infectious diseases:

Monitor and maintain perimeter fences. Repair holes and washouts to prevent the entry of wildlife. Personnel working on the site should have designated boots and outerwear that are not worn elsewhere.

Delivery vehicles and transport vehicles should be cleaned and decontaminated before and after going

onto the site. Producer vehicles such as cars, trucks, transport vehicles, tractors, skid loaders, and ATVs should be cleaned and disinfected before, and after, use on other sites.

Ideally, all veterinary supplies and equipment should be disposable. If that is not possible, great care should be taken to decontaminate instruments between animals and herds. Equipment (feeders, water troughs, chutes, buckets, antler removal equipment, bolus guns, multiple-dose syringes, etc.) should not be shared between herds.

Do not bring cervid carcasses, tissues, or byproducts onto the sites where direct or indirect contact with cervids, or associated equipment, could occur. Remove and properly dispose of all dead animals from the landscape as soon as they are discovered. Do not dispose of carcasses on top of the ground in "dead" piles. Carcasses can attract scavengers, which can spread infectious materials.

TREATMENT

At this time, there is no known treatment or vaccine for CWD.

TESTING REQUIREMENTS

TAHC's rules require all exotic CWD susceptible species mortalities 12 months of age and older to be submitted for CWD testing. This includes deaths from any cause, including those that are hunter-harvested. For herds enrolled in the TAHC Herd Certification Program, all mortalities 12 months of age and older must be submitted for CWD testing via Immunohistochemistry (IHC) test.