



CWD is a neurological disease that affects farmed and free-ranging deer, elk and moose.

Submitting a sample and selecting a test for Chronic Wasting Disease



Protecting Animal and Human Health through Diagnostics

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In July 2012, the Texas Parks and Wildlife Department and the Texas Animal Health Commission jointly reported that samples taken from two mule deer in far West Texas were confirmed positive for Chronic Wasting Disease (CWD).

Detection of the disease resulted from regionally focused deer-sample collections implemented after the disease was detected in the Hueco Mountains of New Mexico during the 2011-12 hunting season. Tissue samples were initially tested by TVMDL's College Station laboratory, with confirmation by the National Veterinary Services Laboratory in Ames, Iowa.

CWD is a progressive, fatal, degenerative neurological disease of farmed and free-ranging deer, elk, and moose that was first recognized in 1967. There is no known

treatment or vaccine for CWD.

Only laboratories approved by the U.S. Department of Agriculture (USDA) may perform diagnostic testing for CWD. TVMDL conducts approved CWD testing at its Amarillo and College Station labs.

TVMDL offers the following guidance about submitting a sample and selecting a diagnostic test for CWD. Producers and animal owners should always consult with their veterinarians.

Submitting a sample

There are two reasons to submit a sample for CWD testing:

- To comply with certification programs from the Texas Animal Health Commission or the Texas Parks and Wildlife Department.

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About TVMDL: The Texas A&M Veterinary Medical Diagnostic Laboratory protects animal and human health through diagnostics.

An agency of the Texas A&M University System, TVMDL comprises two full-service laboratories, in College Station and Amarillo, and two poultry laboratories, in Center and Gonzales.

TVMDL is among 12 core laboratories in the National Animal Health Laboratory Network, a group of state and regional laboratories designed to provide a nationwide surge testing, response, and recovery capacity in the event of an animal disease outbreak.

• **TVMDL-College Station**

PO Drawer 3040
College Station, TX 77841-3040

1 Sippel Road, TAMU 4471
College Station, TX 77843-4471

Tel. 979.845.3414
Fax. 979.845.1794

• **TVMDL-Amarillo**

PO Box 3200
Amarillo, TX 79116-3200

6610 Amarillo Blvd. West
Amarillo, TX 79106

Tel. 806.353.7478
Fax. 806.359.0636

• **TVMDL-Gonzales**

Sam and Sally Glass
Poultry Diagnostic Laboratory
PO Box 84
Gonzales, TX 78629

1162 East Sarah DeWitt Dr.
Gonzales, TX 78629

Tel. 830.672.2834
Fax. 830.672.2835

• **TVMDL-Center**

635 Malone Dr.
Center, TX 75935

Tel. 936.598.4451
Fax. 936.598.2741

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• As part of herd disease surveillance.

Samples for CWD testing should be collected by a veterinarian accredited in regulatory programs. The veterinarian should collect the obex and retropharyngeal lymph nodes. It is important to submit both in case there is a location error with the obex. The tissues should be submitted in 10-percent buffered formalin.

A second option is to collect and submit the entire head, which should be properly chilled for transport using only ice packs. Laboratory technicians at TVMDL will remove the obex and retropharyngeal lymph nodes, and prepare them for testing.

Selecting a diagnostic test

Veterinarians should request an immunohistochemistry test, which remains the approved diagnostic test for CWD, according to the U.S. Department of Agriculture. Immunohistochemistry utilizes antibody-based staining and microscopic evaluation of the tissue. This test is specific and sensitive. It also allows the pathologist to confirm that the correct tissue and location within the obex and/or lymph nodes are present for evaluation.

The average turnaround time for a CWD test at TVMDL is 10 business days. However, caseload may affect turnaround time. Clients may call Diagnostic Services at TVMDL's Amarillo lab (806-353-7478) or its College Station lab (979-845-3414) for an estimate of turnaround time for a specific submission.

About CWD

The species known to be susceptible to CWD are elk, red deer, mule deer, black-tailed deer, white-tailed deer, sika deer and moose.

The agent that causes CWD has

not been completely characterized. However, the theory supported by most scientists is that Transmissible Spongiform Encephalopathy (TSE) diseases are caused by proteins called prions.

The exact mechanism of transmission is unclear. Evidence suggests CWD is transmitted directly from one animal to another through saliva, feces, and urine containing abnormal prions shed in those body fluids and tissues, or indirectly through environmental contamination.

CWD is a slow and progressive disease. Because the disease has a long incubation period, deer, elk, and moose infected with CWD may not produce any visible signs of the disease for a number of years after they become infected.

As the disease progresses, deer, elk, and moose with CWD show changes in behavior and appearance. These clinical signs may include progressive weight loss, stumbling, tremors, lack of coordination, depression, blank facial expressions, excessive salivation and drooling, loss of appetite, excessive thirst and urination, listlessness, teeth grinding, abnormal head posture, and drooping ears. Unfortunately, these signs are not specific to CWD and can occur with other diseases or malnutrition.

For additional information

• The online guide to Chronic Wasting Disease from the U.S. Department of Agriculture's Animal and Plant Health Inspection Service: http://www.aphis.usda.gov/animal_health/animal_diseases/cwd/

• The CWD information website of the Texas Parks and Wildlife Department: <http://www.tpwd.state.tx.us/huntwild/wild/diseases/cwd/>

• The information website of the Chronic Wasting Disease Alliance: <http://www.cwd-info.org/>. 8/13