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Chronic Wasting Disease

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What is Chronic Wasting Disease (CWD)?

CWD is a disease that affects the nervous system in white-tailed deer, mule deer, red deer, elk, and moose. The precise origins of CWD are unknown. The condition was first detected in 1967 in a research mule deer herd in Colorado. Today it is present in 22 US states and 2 Canadian provinces. Chronic Wasting Disease is one in a group of diseases called the transmissible spongiform encephalopathies (TSEs), such as scrapie in domestic sheep and goats, and bovine spongiform encephalopathy (BSE) in cattle. CWD cannot be transmitted to humans or livestock. It is caused by type of misfolded protein (prions) which causes host animals to replicate the misfolded protein. Prions interrupt and degrade nerve cells and ultimately eliminate basic nervous system functions, leading to death.

What are the symptoms?

Symptoms appear from 16 to 36 months after infection. These include:

- ◆ Emaciation or generally poor body condition
- ◆ Decreased activity and/or erratic behavior
- ◆ Wide, low stances and blank expressions
- ◆ Excessive drinking and urination
- ◆ Salivation and grinding of teeth
- ◆ Keeping distance from the herd
- ◆ Loss of fear of humans

Because these symptoms are common to a number of diseases, positive diagnosis requires laboratory testing by a trained professional.

How is it spread?

Chronic Wasting Disease is spread among susceptible animals by direct and indirect contact with saliva, urine, feces, or a carcass. These prion-carrying sources are deposited on the ground and in the soil, and can be picked up by other animals during foraging. Research indicates that some plants bind prions and that antler rubs may spread them. Thus, reservoirs of prions in the environment enable transmission. Though mother-offspring transmission is possible, lateral transmission between two animals is the typical route for infection.

Can CWD affect livestock or humans?

No. Although it is good to be cautious, there is no indication that CWD can be transmitted to domestic livestock or humans. While red deer, an exotic livestock animal, can be infected with CWD, traditional livestock, such as cattle, sheep, goats, etc., cannot.

Nevertheless, experts advise hunters to harvest only healthy looking animals. Sickly looking animals should be assessed for diseases and not eaten. Prions accumulate densely in the brain, eyes, tonsils, spine, spleen, and lymph nodes of sick animals. Carefully avoid touching or consuming these parts. In areas affected by CWD, bone out carcasses in a way that removes all nervous system tissue. Be sure not to cut meat with saws or knives that were used to cut bone. To prevent exposing other susceptible animals to infected material, bury the carcass at least 6 feet deep or dispose of it in an approved landfill.

What should I do if I see an animal that might have CWD?

1. Do not attempt to touch, kill, or move the animal in any way.
2. Carefully document the animal's location and any other pertinent details.
3. Immediately contact the nearest Texas Parks and Wildlife Department (TPWD) Game Warden or Wildlife Biologist or the Texas Animal Health Commission (TAHC).
4. If directed to send a sample for testing by TPWD or TAHC, contact your local veterinarian for advice and professional assistance in collecting the sample.
5. Follow any instructions given by those agencies for follow-up.
6. Continue to be vigilant for future cases of potentially infected animals.

What are the recommended treatment and prevention strategies for CWD?

There is no vaccine to prevent infection and, once infected, there are no effective treatments. Although researchers are working to develop such tools, the way to prevent the spread of CWD, for now, is to manage susceptible animal populations. The easiest solutions are to, (1) remove and properly dispose of potentially infected animals, (2) prevent high densities of susceptible animals by continuing to hunt and harvest, and (3) minimize places where susceptible animals congregate, such as feeding stations.

How can I help?

The best way to help is to be vigilant and carefully follow any requests or regulations from Texas Parks and Wildlife or the Texas Animal Health Commission. Preventing CWD provides the best chance to minimizing the spread of the disease. Encourage fellow Texans to remain calm, and work to prevent the spread of misinformation. The resources below provide detailed, factual information on CWD.

Resources:

Texas Parks and Wildlife Department tpwd.texas.gov/huntwild/wild/diseases/cwd/
Texas Animal Health Commission www.tahc.state.tx.us/animal_health/cwd/cwd.html
Texas A&M AgriLife Extension Service: Wildlife and Fisheries Extension Unit www.wildlife.tamu.edu/cwd
Texas Veterinary Medicine Diagnostic Laboratory www.tvmdl.tamu.edu
Chronic Wasting Disease Alliance www.cwd-info.org

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