



## Chronic Wasting Disease

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Chronic Wasting Disease (CWD) is a transmissible spongiform encephalopathy (TSE) affecting elk and deer (cervids) as well as moose, in North America.

Chronic wasting disease (CWD) is a progressive, fatal, degenerative neurological disease of farmed and free-ranging deer, elk, and moose. It was first recognized in 1967 as a clinical 'wasting' syndrome of unknown cause in captive mule deer in Colorado. CWD belongs to the family of diseases known as transmissible spongiform encephalopathies (TSEs). TSEs include a number of different diseases affecting animals or humans including bovine spongiform encephalopathy (BSE) in cattle, scrapie in sheep and goats, and Creutzfeldt-Jacob disease (CJD) in humans. Although CWD shares certain features with other TSEs, it is a distinct disease affecting only deer, elk, and moose. There is no known treatment or vaccine for CWD.

The agent that causes CWD and other TSEs has not been completely characterized. However, the theory supported by most scientists is that TSE diseases are caused by proteins called prions. The exact mechanism of transmission is unclear. However, 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. The species known to be susceptible to CWD are North American Elk or Wapiti (Cervus canadensis), Red Deer (Cervus elaphus), Mule deer (Odocoileus hemionus), Black-Tailed Deer (Odocoileus hemionus), White-Tailed Deer (Odocoileus virginianus), Sika deer (Cervus nippon), and Moose (Alces alces).

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.

In June 2012, APHIS published an interim final rule that established a national voluntary CWD herd certification program (HCP) as well as interstate movement requirements for farmed and captive cervids. The program's objective is to achieve a national approach that minimizes the risk of introducing, transmitting, and spreading CWD in cervid populations. APHIS published a final rule affirming the CWD interim rule in the

Federal Register on April 29, 2014 following consideration of public comments received. Further details on the national CWD HCP are provided in the section on the Voluntary National CWD Herd Certification Program.

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