

# Chronic Wasting Disease



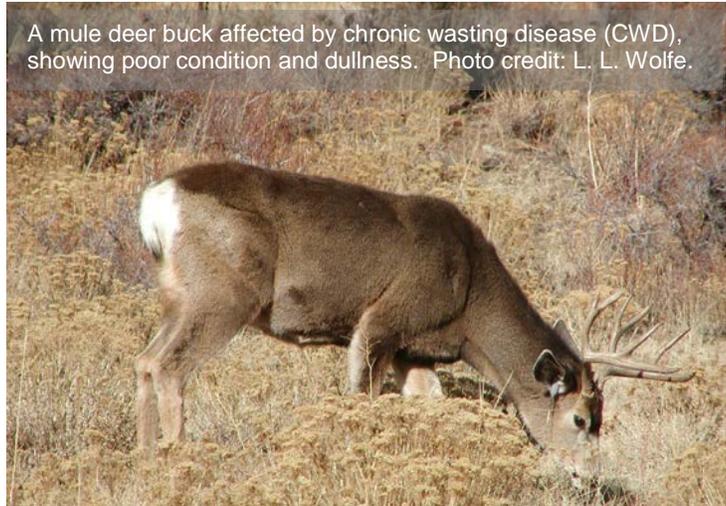
- Chronic wasting disease (CWD) occurs at varying rates of infection in about half of Colorado's deer populations and about one third of the state's elk populations.

## Species Affected in Colorado

- Deer, elk, and moose. (Other species in the deer or "cervid" family affected elsewhere.)
- Species outside the deer family appear to have natural resistance to infection.

## What to Look For

- Adult deer, elk, or moose that appear to be thin or poor-doing, or that seem to lack awareness or concern or to behave oddly.
- Carcasses of adult deer, elk, or moose that appear to be thin.



A mule deer buck affected by chronic wasting disease (CWD), showing poor condition and dullness. Photo credit: L. L. Wolfe.

## Cause & Transmission

Chronic wasting disease is believed to be caused by one or more strains of prion (/ˈprē,än/; a self-propagating disease agent comprised entirely of protein). Infected deer, elk, and moose shed prions in saliva, feces, urine, and probably by other means. Uninfected animals of susceptible species can be infected by direct exposure or indirectly through prions harbored in soil and perhaps in other reservoirs. Once infected, animals typically survive only 2–3 more years. No immunity develops, and infected animals do not recover.

## Implications & Public Health Considerations

In several Colorado deer herds, infection rates among harvested bucks now exceed 10% (1 in 10; see <http://cpw.state.co.us/learn/Maps/CWD-Map-Mule-Deer.pdf>). A growing body of data suggests that unchecked CWD outbreaks impair the long-term performance of affected big game populations. Infection shortens the lifespan of deer and elk. On average, animals also become infected at a younger age as epidemics mount. If infection rates become too high, CWD can affect a herd's ability to sustain itself.

Minimizing human exposure to CWD seems prudent. Although CWD exposure has thus far not been associated with cases of prion disease in humans, public health officials advise against consuming meat or any other tissues from animals known to be infected. As a general rule, hunters should avoid handling carcasses of animals that do not appear to be healthy and report such cases to CPW.

### Additional Information/References:

The First Five (or More) Decades of Chronic Wasting Disease: Lessons for the Five Decades to Come. *Transactions of the North American Wildlife and Natural Resources Conference* 81: in press (2016). <http://cpw.state.co.us/learn/Pages/ResearchCWD.aspx>

Prion diseases. Colorado Department of Public Health & Environment. <https://www.colorado.gov/pacific/cdphe/prion-diseases>