

Study: No chronic wasting disease transmissibility in macaques

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Chronic wasting disease (CWD) did not cross the species barrier to infect cynomolgus macaque monkeys during a lengthy investigation by National Institutes of Health scientists exploring risks to humans.

CWD is a type of brain-damaging and fatal prion [disease](#) found in deer, elk and moose; in humans, prion diseases can take more than a decade to develop. In the study, appearing in the *Journal of Virology*, 14 macaques were cerebrally and orally exposed to brain matter from CWD-infected deer and elk, and then monitored for up to 13 years. Macaques often are used to model [human prion diseases](#) because they are genetically similar to humans and are susceptible to several types of prion diseases known to infect people.

Researchers screened tissues for prion disease using several tests—including the highly sensitive RT-QuIC assay—and found "no clinical, pathological or biochemical evidence suggesting that CWD was transmitted" to macaques, according to their paper. RT-QuIC is Real-Time Quaking-Induced Conversion, developed at Rocky Mountain Laboratories in Hamilton, Montana, part of the NIH's National Institute of Allergy and Infectious Diseases.

A key public health concern is whether people who consume meat or products from CWD-infected animals are susceptible to prion disease. CWD was first identified in 1967 in captive deer held in Colorado wildlife facilities. CWD has been gradually spreading in U.S. wildlife and is now found in 25 states as well as in Canada. The disease also has been found in South Korea, Norway and Finland.

Human prion diseases include fatal insomnia; kuru; Gerstmann-Straussler-Scheinker syndrome; and variant, familial and sporadic Creutzfeldt Jakob disease (CJD). Sporadic CJD is the most common human [prion disease](#), affecting about one in one

million people annually worldwide. Other prion diseases include scrapie in sheep and [bovine spongiform encephalopathy](#), or [mad cow disease](#), in cattle.

Despite these findings, researchers suggest that people err on the side of caution and not consume meat from game animals that appear ill or thin, or are confirmed carriers of CWD.

More information: Brent Race et al, Lack of Transmission of Chronic Wasting Disease to Cynomolgus Macaques, *Journal of Virology* (2018). [DOI: 10.1128/JVI.00550-18](https://doi.org/10.1128/JVI.00550-18)

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