

# Prion infectivity found in white and brown fat tissues of mice

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Researchers from the National Institutes of Health and the Scripps Research Institute have found novel prion infectivity in white and brown fat tissues of mice. The study appears December 5 in the open-access journal *PLoS Pathogens*.

Prion diseases, also known as transmissible spongiform encephalopathies, are infectious progressive fatal neurodegenerative diseases which affect humans as well as wild and domestic animals. Distribution of prion infectivity in organs and tissues is important in understanding prion disease pathogenesis and designing strategies to prevent prion infection in animals and humans.

Previous studies in animals including sheep, goats, cattle, deer, mink, hamsters and mice, have found prion infectivity mostly in nervous system tissues such as the brain and spinal cord. The tissues studied here in a mouse model demonstrate a proof of principle that white and brown fat tissues are sites of prion agent deposition and therefore may play a previously unrecognized role in prion infectivity and transmission of prion disease.

The authors state clearly that it will be important to extend their studies to prion-infected large animals, such as cattle, sheep, deer, and elk where they may be potential sources of contamination of human and domestic animal food chains. Results of the current and future studies may merit additional consideration of steps to eliminate from the food chain any fat from ruminants suspected of exposure to or infection with prions.

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