



Hantavirus



What is Hantavirus?

Technically termed rodent-borne hemorrhagic fevers, these are zoonotic diseases causing several serious syndromes in humans. They are caused by two groups of RNA viruses; of which only one virus in the genus Hantavirus will be discussed. Rodents are primarily responsible for the transmission of the virus and they are generally chronically infected, usually asymptomatic, and shed the virus over long periods of time.

Where is Hantavirus found?

These zoonotic diseases are worldwide in distribution and the particular disease covered herein was first discovered in the southwest U.S. in 1993. From 1993-January 2017, 728 cases throughout the U.S. have been recorded with 96% of cases found west of the Mississippi river. In Wyoming, 14 cases have been reported including 7 deaths from 1999-2017.

How is it spread?

Hantavirus is primarily a disease carried by deer mice and is transmitted via direct contact from one mouse to the next. Human exposure is most commonly associated with the inhalation of particles containing the virus. When fresh rodent urine, feces, or nesting materials are disturbed, tiny particles containing the virus get into the air.

What are some clinical signs of disease?

There are few, if any, clinical signs or lesions of infected rodents.

How does this disease affect me?

In humans, the incubation time for this virus is 1–6 weeks. Early symptoms will include fatigue, fever, muscle aches, headaches, dizziness, chills, nausea, vomiting and diarrhea. After 4–10 days following early symptoms, coughing, shortness of breath, tremendous breathing difficulty can appear with the development of pneumonia. Anyone who develop symptoms suggestive of disease should immediately seek medical attention. The physician should contact local health authorities promptly if hantavirus-associated illness is suspected.

This disease normally affects middle-aged adults (mean age of 38 years), but can affect all ages. The fatality rate in the United States is 35%. Biologists should be aware of this disease when handling rodents or when occupying rodent-infested buildings. Caution should be exercised when opening and cleaning previously unused buildings, house cleaning, or entering crawl spaces that are inhabited with mice. Persons involved in any clean-up of rodent-infested structures should wear coveralls (disposable, if possible), rubber boots or disposable shoe covers, rubber or plastic gloves, protective goggles, and an appropriate respiratory protection device, such as a half-mask air-purifying (or negative-pressure) respirator with a 197 high-efficiency particulate air (HEPA) filter or a powered air-purifying respirator (PAPR) with HEPA filters. Wetting down areas for cleanup with a bleach solution can help limit aerosolization of the virus. Personal protective gear should be decontaminated upon removal at the end of the day.

Information for outdoor recreationists:

When renting cabins or using trail shelters always be aware of contamination from rodents as this can be a source of Hantavirus infection. Hantavirus has not been seen in dogs and cats in the U.S.

For additional information on Hantavirus or any other wildlife disease, please contact the WGFD Wildlife Health Laboratory at 307-745-5865.