



Hantavirus

Hantaviruses exist worldwide, causing infections in rodents and rarely in humans. The virus, which is primarily transmitted from infected rodents, can cause a shorter lifespan in the rodent and severe health outcomes in humans.

General Hantavirus Information

Geographic Distribution

Many different hantaviruses exist throughout North America, with four main strains causing human illnesses throughout the continental US. In the US, the majority of human illnesses have occurred in rural residents of western states.

Hosts

Certain species of rodents serve as the primary hosts for hantaviruses. The deer mouse is the primary host in the Western US while the white-footed mouse is the primary host in the eastern US. The rice and cotton rat also serve as hosts in the southeastern US. Deer mice are responsible for the majority of human infections.

The virus responsible for disease in the United States cannot be transmitted from human to human.

Transmission

Hantaviruses are shed in the urine, feces, and saliva of infected rodents. Infectious particles are then inhaled or ingested by a susceptible host. Rodents can also become infected

through bites of other infected rodents, and humans can be infected through such bites. Sunlight and fresh air will quickly inactivate the virus. Being in enclosed spaces where mice have been increases the risk for human infection by inhaling contaminated dust.

Signs and Symptoms

Rodent hosts infected with hantavirus typically do not show any clinical signs, although they may have a shorter lifespan.

Signs of human infection are typically present 1-7 weeks after exposure and can include:

- Fever
- Aches
- Nausea & vomiting
- Severe respiratory disease
- Shortness of breath

Treatment

If you have the symptoms of hantavirus and were recently exposed to rodents or their droppings, consult your healthcare provider.

There is no specific treatment for hantavirus but supportive care can improve clinical outcomes.

Prevention and Control

In wildlife, scientists have shown that natural habitats with more species of rodents and natural predators have lower rates of hantavirus infection in deer mice populations, so protecting natural ecosystems might be important to preventing hantavirus spread.

To prevent the disease while visiting the parks:

- Avoid contact with rodents or their droppings
- Tell park staff if you see rodents inside buildings
- Never bring food into your tent-cabins or tents while in a park

One Health and Hantavirus

Human impacts on the environment, including land development, climate change, and the removal of natural predators, are affecting mouse behavior and habitats. Some of these changes to the land, air, and water promote the transmission and spread of diseases such as hantavirus in mouse populations and can thereby increase human risk.

By protecting natural environments and their ecological properties and processes, we can help protect ourselves from hantavirus – this is One Health in action.



More Information

One Health Coordinator, Biological Resources Division and Office of Public Health
PublicHealthProgram@nps.gov

1201 Oakridge Drive, Suite 200, Fort Collins, CO 80525

www.cdc.gov/hantavirus



CREDIT: CHANNEL ISLANDS NATIONAL

The deer mouse is native to most parks in the US.