

HANTAVIRUS: RECOGNIZE AND PREVENT

What is Hantavirus?

Hantaviruses are a group of viruses that are carried by rodents. One of them, *Sin Nombre* virus, is found in deer mice in North America. *Sin Nombre* virus is the cause of Hantavirus Pulmonary Syndrome (HPS) in people.

What are the Symptoms of Hantavirus Pulmonary Syndrome (HPS)?

Symptoms begin one to six weeks after inhaling the virus and typically start with 3-5 days of “flu-like” illness including fever, sore muscles, headaches, nausea, vomiting and fatigue. Within a few days the illness rapidly progresses to severe shortness of breath. Hospital care is usually required. It is a serious disease, and about one out of three people diagnosed with HPS die.

Where is Hantavirus Found and How Common is It?

The deer mouse (*Peromyscus maniculatus*) is the main carrier of hantavirus in the western United States; however, all wild rodents should be avoided. Deer mice live in all parts of Montana, but mainly in rural areas. Deer mice pass the virus to each other and some of the population is usually infected, but deer mice do not get sick or have any symptoms. In Montana, about 8% of 471 tested deer mice were infected with hantavirus.

Since infected deer mice live throughout the state, human cases of hantavirus pulmonary syndrome can occur in any part of Montana. Typically, one to five cases are reported each year.



How are People Exposed to Hantavirus?

Deer mice excrete the virus in their urine, saliva and droppings. A person may be exposed to hantavirus by breathing contaminated dust after disturbing or cleaning rodent droppings or nests, or by living or working in rodent-infested settings.

Pets, snakes and predators don't become infected and can't spread hantavirus infection to people or other animals.

In North America, there is no evidence that the disease spreads from one person to another.

How Long Does Hantavirus Remain Infectious in the Environment?

The length of time hantaviruses can remain infectious in the environment is variable and depends on environmental conditions, such as temperature and humidity, whether the virus is indoors or outdoors or exposed to the sun and even on the mouse's diet (which would effect the chemistry of its urine). The bottom line is that you can't tell how old a dropping is, so all rodent droppings should be handled as if they could make you sick. Areas with on-going rodent infestation are particularly risky, and the recommendations for prevention should be followed.

What Does the Deer Mouse Look Like?

The deer mouse is about six inches long from the nose to the tip of its tail. It is grayish to light brown on top with large ears, a white belly and a furry tail that is white on the underside. There are many other types of mice in Montana that don't have those features.

How do I Prevent Hantavirus Pulmonary Syndrome?

Keep rodents out of your home and workplace. Always take precautions in rodent-infested areas. Seal up cracks and gaps in buildings that are larger than 1/4 inch, including window and door sills, under sinks around the pipes, in foundations, attics and any rodent entry hole. Trap indoor rats and mice with snap traps, and remove rodent food sources. Keep food (including pet food) in rodent-proof containers.

Clean up rodent infested areas:

- Wear rubber, latex, vinyl or nitrile gloves.
- Do not stir up dust by vacuuming, sweeping or any other means.
- Thoroughly wet contaminated areas, including trapped mice, droppings and nests with a 10% bleach solution: mix 1 1/2 cups of household bleach in 1 gallon of water (or 1 part bleach to 9 parts water). Once everything is soaked for 10 minutes, remove all of the nest material, mice or droppings with a damp towel and then mop or sponge the area with bleach solution.
- Steam clean or shampoo upholstered furniture and carpets with evidence of rodent exposure.
- Spray dead rodents with disinfectant and then double-bag along with all cleaning materials. Bury, burn or throw out the rodent in appropriate waste disposal system.
- Disinfect gloves with disinfectant or soap and water before taking them off.
- After taking off the clean gloves, thoroughly wash hands with soap and water (or use a waterless alcohol-based hand rub when soap is not available).

For more details see the Centers for Disease Control and Prevention recommendations at <http://www.cdc.gov/rodents/cleaning/index.html>.

What Precautions Should I use Working, Hiking or Camping Outdoors?

- Avoid coming into contact with rodents and rodent burrows or disturbing dens (such as pack rat nests).
- Air out cabins and shelters, then check for signs of rodent infestation. Do not sweep out infested cabins. Instead, use the guidelines above for disinfecting cabins or shelters before sleeping in them.
- Do not pitch tents or place sleeping bags near rodent droppings or burrows.
- If possible, do not sleep on the bare ground; use tents with floors or a ground cloth.
- Keep food in rodent-proof containers!
- Handle trash according to site restrictions and keep it in rodent-proof containers until disposed of.
- Do not handle or feed wild rodents.

What Should I do if I Think I have Been Exposed to Mouse Droppings?

If you have been exposed to rodents or rodent infested buildings and have symptoms of fever, muscle aches and severe shortness of breath, see your health care provider immediately. Inform him/her of possible rodent exposure so that he/she is alerted to the possibility of rodent-borne diseases, such as hantavirus pulmonary syndrome.

Where Can I Get More Information about Hantavirus or HPS?

Call:

- City-County Health Department: 406-454-6950
- Montana Department of Public Health and Human Services (DPHHS), Communicable Disease and Epidemiology: 406-444-0273

Visit Online:

- <http://www.dphhs.mt.gov/publichealth/cdepi/vectorborne.shtml>
- <http://www.cdc.gov/hantavirus/index.html>