



INYO COUNTY PUBLIC HEALTH BRIEF

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Public Health
Prevent. Promote. Protect.

Hantavirus Infects Inyo County Resident

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Dr. Rick Johnson, Public Health Officer for Inyo County, announced today that a local resident of Bishop has been hospitalized with a laboratory confirmed case of hantavirus cardiopulmonary syndrome (HCPS). The individual had been sick with a flu-like illness and pneumonia for about 4 days, and after presenting to Northern Inyo Hospital last Thursday, was quickly flown to Reno for further care. Marvin Moskowitz, Inyo County Environmental Health Director, indicated his department would take the lead role in the investigation into the exposure and source of the infection.

This is the second laboratory confirmed case of hantavirus infection this year in the Eastern Sierra. A Mammoth lakes resident is currently recuperating from a recent infection. Since there have been no reports of influenza in recent weeks, hantavirus needs to be considered in anyone with a serious "influenza-like illness", which includes fever, body and muscle aches, headache, cough, or respiratory difficulty.

Since 1993, when the disease was first recognized in the United States, the Center for Disease Control and Prevention (CDC) has confirmed 534 cases of HPS in 31 states; 36% of the cases were fatal. California has documented over 40 cases, and in about half of these, exposure has been in the Eastern Sierra counties (some residents, some visitors).

Rodents, particularly the deer mouse, carry the virus that causes HCPS, which is typically spread to humans when infectious material from rodents is inhaled. This occurs when fresh droppings, urine, saliva, or nesting materials are disturbed and the air becomes contaminated with the virus. Hantaviruses can live in the environment for 2-3 days at normal room temperature. The UV rays of sunlight will kill the virus. Transmission peaks during the spring and summer months. HCPS in the United States **cannot be transmitted from one person to another**, nor from farm animals, dogs, cats, or rodents purchased at a pet store. _

Rodent control in and around the home remains the primary strategy for preventing hantavirus infection. Recommendations can be summed up as:

SEAL UP holes inside and outside the home to prevent entry by rodents.

TRAP UP - Trap rodents around the home to help reduce the population.

CLEAN UP - urine and droppings, dead rodents or nests, cabins, barns, sheds, or other outbuildings, heavy rodent infestations, food sources and nesting sites

Here are the detailed instructions:

Seal up holes inside and outside the home to prevent entry by rodents.

Prevent rodents from entering the home by checking inside the house for gaps or holes any larger than a pencil could fit into. Potential rodent entry holes can be found inside, under, and behind kitchen cabinets, inside closets, around doors, and under sinks. Seal the holes, using steel wool, lath metal, or caulk. If you do not remember to seal up entry holes in your home, mice will continue to enter.

Prevent rodents from entering the home outside. Clear brush and grass from around the foundation of the home. Check the house for debris and holes that might encourage rodent infestations. Potential rodent entry holes can be found around windows and doors, between the foundation of your house and the ground, and around electrical, plumbing and gas lines. Seal possible entry holes with cement, lath metal, hardware cloth, or sheet metal. Fix gaps in trailer skirtings and use flashing around the base of the house.

Trap rodents around the home to help reduce the population.

Choose an appropriate snap trap. Traps for catching mice are different from those for catching rats. Always read the instructions on the box before setting the trap. A small amount of peanut butter (approximately the size of a pea) should be placed on the bait pan of the snap trap. Position the bait end of the trap next to the wall so it forms a "T" with the wall.

Glue traps and live traps are not recommended. These traps can scare mice that are caught live and cause them to urinate. This may increase your risk of being exposed to hantavirus.

Place traps in outbuildings and in areas that might likely serve as rodent shelters. Natural rodent predators, such as non-poisonous snakes, owls, and hawks, may also be beneficial in the control and reduction of rodents outside the home.

Clean up urine and droppings

Take precautions before and while cleaning rodent-infested areas. Before cleaning a space, ventilate the area by opening the doors and windows for at least 30 minutes to diffuse potentially infectious aerosolized material. Use cross-ventilation and leave the area during the airing-out period.

When you begin cleaning, it is important that you **do not** stir up dust by sweeping or vacuuming up droppings, urine, or nesting materials. Wear rubber, latex, vinyl, or nitrile gloves when cleaning urine and droppings. Spray the urine and droppings with a disinfectant or a [mixture of bleach and water](#) and let soak 5 minutes. The recommended concentration of bleach solution is 1 part bleach to 10 parts water. Use a paper towel to pick up the urine and droppings, and dispose of the waste in the garbage. After the rodent droppings and urine have been removed, disinfect items that might have been contaminated by rodents or their urine and droppings.

Mop floors and clean countertops with disinfectant or bleach solution. Steam clean or shampoo upholstered furniture and carpets with evidence of rodent exposure. Wash any bedding and clothing with laundry detergent in hot water if exposed to rodent urine or droppings. Lastly, before removing gloves used while cleaning, wash gloved hands with soap and water or spray a disinfectant or bleach solution on gloves before taking them off. Wash hands with soap and warm water after removing gloves.

Clean up dead rodents or nests

Wear rubber, latex, vinyl, or nitrile gloves when cleaning up dead rodents or nests. Spray the dead rodent or nest and the surrounding area with a disinfectant or a mixture of bleach and water. Soak rodent, nesting materials or droppings in solution for 5 minutes before wiping up with a paper towel or rag. Place the dead rodent or nesting materials in a plastic bag and seal tightly. Place the full bag in a second plastic bag and seal. Throw the bag into a covered trash can that is regularly emptied.

Wash gloved hands with soap and water or spray a disinfectant or bleach solution on gloves before taking them off. Wash hands with soap and warm water after taking off your gloves.

Clean up cabins, sheds, barns, or other outbuildings

Before attempting to [clean cabins, sheds, barns, or other outbuildings](#), open all doors and windows for 30 minutes to allow for the diffusion of potentially infectious aerosolized material. Wear rubber, latex, vinyl, or nitrile gloves and clean up all rodent urine, droppings, nests, and dead rodents using disinfectant or bleach and water. Mop floors or spray dirt floors with a disinfectant or mixture of bleach and water. Clean countertops, cabinets, and drawers with a disinfectant or a mixture of bleach and water.

Clean up heavy rodent infestation

Special precautions should be used for cleaning homes or buildings with [heavy rodent infestation](#). Also, workers who are either hired specifically to perform a clean-up or asked to do so as part of their work activities should receive specific training about hantavirus from a health agency. The special precautions may also apply to vacant dwellings that have attracted large numbers of rodents and to dwellings and other structures that have been occupied by persons with confirmed hantavirus infection.

Persons involved in the clean-up should wear coveralls (disposable, if possible); rubber boots or disposable shoe covers; rubber, latex, vinyl, or nitrile gloves; protective goggles; and an [appropriate respiratory protection](#) device, such as a half-mask air-purifying (or negative-pressure) respirator with a high-efficiency particulate air (HEPA) filter or a powered air-purifying respirator (PAPR) with HEPA filters. Personal protective gear should be decontaminated upon removal at the end of the day. All potentially infective waste material (including respirator filters) from clean-up operations that cannot be burned or deep buried on site should be double bagged in appropriate plastic bags. The bagged material should then be labeled as infectious (if it is to be transported) and disposed of in accordance with local requirements for infectious waste.

Clean up rodent food sources and nesting sites

[Prevent contact with rodents](#) by cleaning up your home, workplace, or campsite.

Eliminate possible rodent food sources. Keep food in thick plastic or metal containers with tight lids. Clean up spilled food right away and wash dishes and cooking utensils soon after use. Always put pet food away after use and do not leave pet-food or water bowls out overnight. Use a thick plastic or metal garbage can with a tight lid. Keep compost bins 100 feet or more from the house. Keep grains and animal feed in thick plastic or metal containers with tight lids. In the evening, uneaten animal feed should be returned to containers with lids.

If storing trash and food waste inside the home, do so in rodent-proof containers, and frequently clean

the containers with soap and water. Dispose of trash and garbage on a frequent and regular basis, and pick up or eliminate clutter.

Eliminate possible nesting sites outside the home. Elevate hay, woodpiles, and garbage cans at least 1 foot off the ground. Move woodpiles 100 feet or more from the house. Get rid of old trucks, cars, and old tires that mice and rats could use as homes. Keep grass and shrubbery within 100 feet of the home well trimmed.

Resources:

Center for Disease Control and Prevention (CDC):

<http://www.cdc.gov/ncidod/diseases/hanta/hps/noframes/generalinfoindex.htm>

California Department of Public Health:

<http://www.cdph.ca.gov/HealthInfo/discond/Pages/HantavirusPulmonarySyndrome.aspx>

New Brochure: Rodents and Hantavirus

<http://www.cdph.ca.gov/HealthInfo/discond/Documents/RodentsandHantavirus.pdf>

You Tube – Two Little Deer Mice:

<http://www.youtube.com/watch?v=hYQIBnHd7gE>

