

Hantavirus Pulmonary Syndrome

What is Hantavirus Pulmonary Syndrome?

Hantavirus Pulmonary Syndrome (HPS) is a severe, sometimes fatal, respiratory illness caused by hantaviruses.

How do you get HPS?

Anyone can get HPS by being exposed to rodents with the virus. Rodents shed the virus in their saliva, urine, and feces. Exposures may include:

- Breathing in the virus. This may happen when rodent urine, droppings, or saliva containing hantavirus are stirred up in the air.
- Touching your eyes, nose, or mouth after touching rodent urine, droppings, saliva, or nesting material that contain hantavirus.
- If you get mouse urine, droppings, or saliva directly into an open wound.
- Eating or drinking food or water contaminated with the virus.
- Being bitten by a rodent infected with the virus.

Who can be affected by HPS?

Anyone can get hantavirus. The illness has occurred in all races and age groups.

Can other animals spread HPS?

No. The hantaviruses that cause HPS in the U.S. are not known to be transmitted by any types of animals other than certain species of rodents, particularly the deer mouse. To date, there are no cases of a person getting hantavirus from another person.

What does the deer mouse look like?

The deer mouse is about six inches long to the tip of its tail. It is grayish to light brown on top, with a white belly, large ears, and a furry tail that is white on the underside. In comparison, the house mouse is grayish to light brown entirely (not white on the belly), with scales showing on its tail.

What are the symptoms of HPS infection?

Early Symptoms: The first symptoms are flu-like and may include fever, muscle aches, feeling tired, and/or body aches. Individuals may also experience chills, cough, headaches, nausea, vomiting, or diarrhea.

Late symptoms: Four to 10 days after the early symptoms, the late symptoms of HPS appear. You may experience coughing and shortness of breath. The lungs begin filling with fluid, making breathing difficult. If you have been exposed to rodents and experience these symptoms, notify your health care provider immediately.

How long after exposure will I develop symptoms?

The exact incubation period time is unknown. The early symptoms may develop between 1 to 8 weeks after exposure.

What is the treatment for HPS?

There is no treatment, cure, or vaccine for HPS. However, persons with HPS who are recognized early and receive medical care may do better. The earlier the patient is brought into intensive care, the better.

How do I prevent HPS?

Eliminate or minimize contact with rodents, rodent droppings, urine, and saliva. Make your environment less appealing to rodents and prevent them from entering your home, outbuildings, workplace, and campsite. If you identify evidence of rodent infestation, it is important to take steps to limit your possible exposure.

How should I get rid of dead rodents, droppings, or nests?

- Before you begin, ventilate (air-out) closed buildings or areas inside buildings by opening doors and windows for at least 30 minutes.
- Do not sweep or vacuum urine, droppings, or nests. Use rubber gloves and spray the nest, dead rodents, or droppings until soaked with a household disinfectant solution of 1½ cups of bleach in one gallon of water. Let the area soak for at least five minutes.
- Remove the nest or rodent using a long-handled shovel or rubber gloves. Use a paper towel to pick up droppings or urine. Double bag the rodents, nest, or droppings securely with plastic bags and dispose of them in the trash. Persons in rural areas may bury the waste two to three feet deep. Clean up the area and traps by spraying again with the disinfectant solution. Let the area soak for at least five minutes.
- While still wearing gloves, wipe up the area with paper towels or rags. Double bag all paper towels and rags used in the cleanup. Dispose of them in a tightly covered trash container. Mop or sponge the area with disinfectant or bleach solution. Rugs can be steam cleaned and dirt floors should be sprayed with a disinfectant solution.
- Wash gloved hands with soap and water or spray disinfectant or bleach solution on gloves before taking them off. Wash your hands with soap and water after taking off your gloves. Double bag your gloves and place in a tightly covered trash container.

How do I make my environment less appealing to rodents?

Indoors:

- Keep a clean home, especially in the kitchen (wash dishes, clean counters and floors, keep food covered in rodent proof containers).
- Keep a tight-fitting lid on garbage.
- Put pet food away after use. Do not leave pet food or water bowls out overnight.
- Check inside your house for gaps and holes that a pencil can fit into. Seal them with steel wool, lath, metal, or caulk.
- Set spring traps that will kill mice. Set traps near baseboards because rodents tend to run along walls and in tight spaces rather than out in the open.
- Set Environmental Protection Agency (EPA)-approved rodenticide with bait under plywood or plastic shelter along baseboards. These are sometimes known as “covered bait stations.” Remember to follow product use instructions carefully, since rodenticides are poisonous to pets and people too.

Outdoors:

- Clear brush, grass, and junk from around house foundations to eliminate a source of nesting materials. Keep grass and shrubbery within 100 feet of the home well-trimmed. Elevate hay, woodpiles, and garbage cans to eliminate possible nesting sites. If possible, locate them 100 feet or more from your house.
- Check the outside of your house for gaps and holes. Seal them with cement, lath, metal, hardware cloth, or sheet metal.
- Keep grains and animal feed in thick plastic or metal containers with tight lids.
- Trap rodents outside, too. Poisons or rodenticides may be used as well but be sure to keep them out of reach of children and pets. Encourage the presence of natural predators, such as non-poisonous snakes, owls, and hawks. Remember, getting rid of all rodents is not feasible, but with ongoing effort, you can keep the population very low.