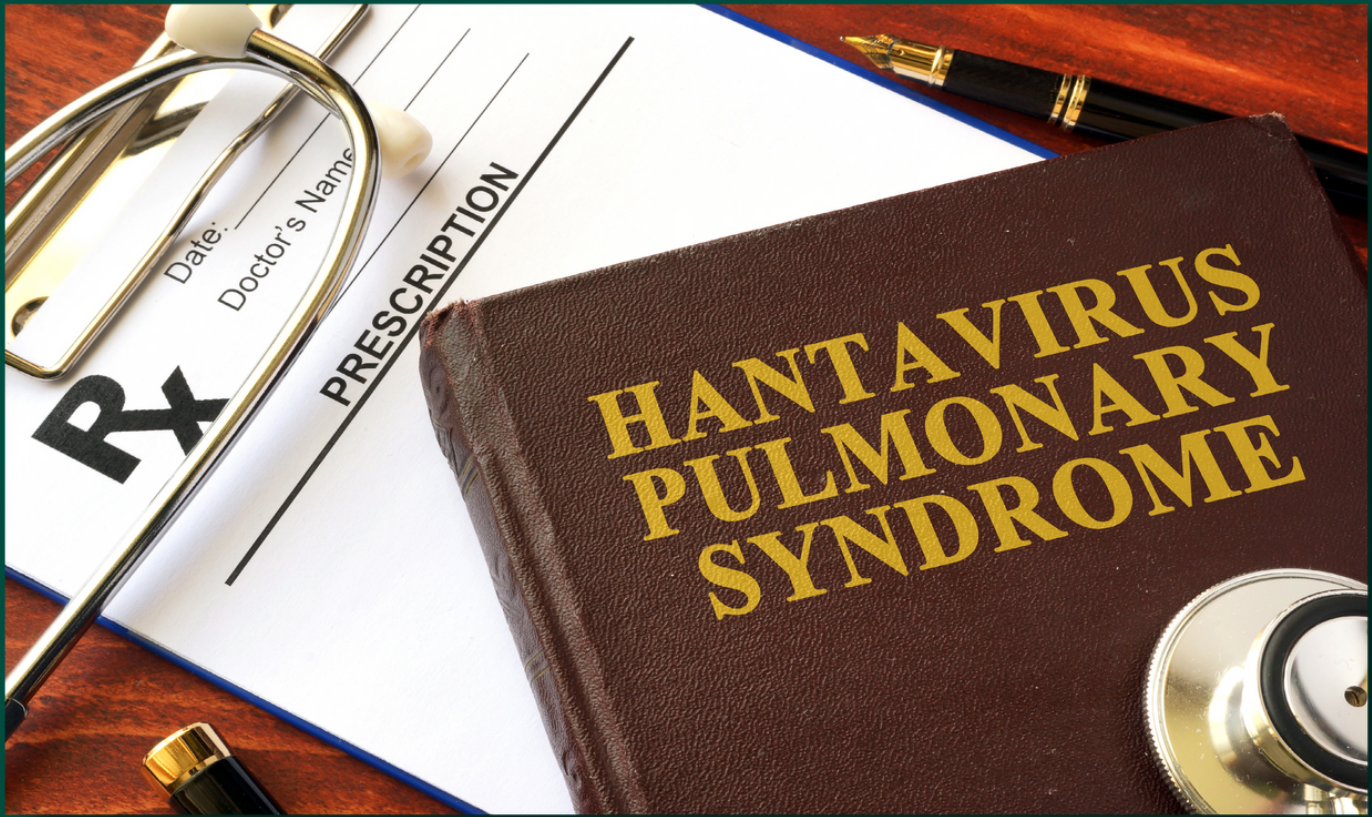


# MONOGRAM

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## Hantavirus Pulmonary Syndrome

### What is Hantavirus Pulmonary Syndrome (HPS)?

Hantavirus Pulmonary Syndrome (HPS) is a potentially severe disease of the lungs that was first recognized in 1993 in the "Four Corners" area (where Utah, Colorado, Arizona, and New Mexico meet) of the southwestern United States (U.S.). Although there are many types of hantaviruses in the U.S., Sin Nombre Virus (SNV) is the specific hantavirus that causes HPS in the western U.S. The Eastern Sierra has been the source of most cases identified in California. HPS is a rare, but often fatal disease.

### What are the signs and symptoms of HPS?

Typically, infected persons develop symptoms one to two weeks after exposure. Early symptoms of HPS include fever, headache, and muscle aches, especially the thighs, hips, back, and shoulders. Other early symptoms include dizziness, chills, nausea, vomiting, diarrhea, and abdominal pain. After two to seven days of these symptoms, patients develop breathing difficulties ranging from cough and shortness of breath to severe respiratory failure. Approximately 40 percent of HPS patients die from the disease.

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## Hantavirus Pulmonary Syndrome

### How do you get HPS?

Infected rodents shed hantavirus in their urine, droppings, and saliva. Most patients become infected by breathing air contaminated with aerosolized rodent urine or droppings, such as cleaning out a rodent-infested space. Individuals can also be infected by: 1) consuming food contaminated with rodent urine or droppings; 2) touching surfaces where rodents have been, and then putting their hand in their mouth; 3) being bitten by an infected rodent.

### How is HPS diagnosed?

Specific blood tests can readily diagnose HPS infection.



### What is being done locally to prevent human cases?

Mono County Public Health and Environmental Health staff respond to and investigate hantavirus cases in Mono County (in collaboration with the California Department of Public Health, Vector Borne Disease Section). These Departments also provide education and materials to the local and visiting public about HPS, and including methods to minimize risk.

### What treatment is recommended for HPS patients?

Currently, there is no specific treatment for HPS. However, if infected is recognized early, and infected individuals are quickly hospitalized, supportive care can increase survival chances. Patients with severe respiratory disease can require intensive heart and lung function support.

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## Proactive Tips for Avoiding HPS

### Indoors:

- Keep a clean home, especially the kitchen (wash dishes, clean counters, and floor, keep food covered in rodent-proof containers).
- Keep a tight-fitting lid on garbage. Discard uneaten pet food at the end of the day.
- Set and keep spring-loaded rodent traps. Set traps near baseboards because rodents tend to run along walls in tight spaces rather than out in the open. Check traps frequently, as any fleas now left without a meal will be seeking a new host – you and your pet dog or cat!
- Seal all entry holes 1/4 inch wide or wider with lath screen or lath metal, cement, wire screening, or other patching materials, inside and out.
- Since bubonic plague is a problem in our area, do not use rodenticides to kill mice. This is important. If you control rodents but do not control fleas, you may increase the risk of infection with bubonic plague, since fleas will leave rodents once the rodents die and seek out other food sources, including dogs and cats, and humans. Although your dog and cat may not have fleas due to the altitude you live in, rodent fleas can live at a higher elevation. Dogs usually do not get very sick with the plague, but cats and humans can die.

### Outdoors:

- Avoid rodents and rodent burrows or disturbing dens (such as packrat nests).
- Air out, then disinfect cabins or shelters before using them. These places often shelter rodents.
- Do not pitch tents or place sleeping bags in areas close to rodent droppings or burrows or near areas that may shelter rodents or provide food for them.
- If possible, do not sleep on the bare ground. Use a cot with a sleeping surface at least 12 inches above the ground in shelters. Use tents with floors or a ground cloth if sleeping in the open air.
- Keep food in rodent-proof (and bear-proof) containers!
- Promptly discard all garbage and trash in covered trash containers.
- Use only bottled water or water that has been disinfected by filtration, boiling, chlorination, or iodination for drinking, cooking, washing dishes, and brushing teeth.
- Do not play with or handle any rodents that show up at the camping or hiking site, even if they appear friendly.

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**Where can I find more information about HPS?**

**The California Department of Public Health:**

[cdph.ca.gov/Programs/CID/DCDC/pages/hantaviruspulmonarysyndrome.aspx](https://cdph.ca.gov/Programs/CID/DCDC/pages/hantaviruspulmonarysyndrome.aspx)

**The Centers for Disease Control and Prevention:**

[cdc.gov/ncidod/diseases/hanta/hps/index.htm](https://cdc.gov/ncidod/diseases/hanta/hps/index.htm)

**Mono County Environmental Health: (760) 924-1830.**

