

## **HANTAVIRUS PULMONARY SYNDROME**

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

HPS is a rare, but sometimes fatal, disease of the lungs. HPS was first recognized in 1993 in the southwestern United States. Although many hantaviruses exist in nature, HPS in the western U.S. is caused by a specific hantavirus called Sin Nombre virus (SNV). Cases of HPS occur throughout the U.S. but are most common in the Southwest.

### **How are hantaviruses maintained in nature?**

Hantaviruses are maintained in nature in wild rodents. In California, only deer mice carry and shed SNV. Other rodents such as squirrels, chipmunks, and house mice are rarely, if ever, infected and do not pose a risk of HPS to humans.

### **How do you get HPS?**

Infected rodents shed hantavirus in their urine, droppings, and saliva. Most HPS patients become infected by breathing air contaminated with dried rodent urine or droppings, such as when cleaning out a rodent-infested space. This most commonly occurs in small, confined spaces where there is little air circulation. Rarely, 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.

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

Symptoms typically develop between 1-5 weeks after exposure to SNV. 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 that range from cough and shortness of breath to severe respiratory failure. Approximately 36 percent of HPS patients die from the disease.

### **How is HPS diagnosed?**

Persons with HPS can be readily diagnosed by specific blood tests.

### **What treatment is recommended for HPS patients?**

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

### **How can I avoid getting HPS?**

Avoid contact with all wild rodents, their droppings, and nesting materials. Store all food items securely in rodent-proof containers. Examine the outside of all buildings and seal any holes or other areas that would let rodents get inside. Before entering an

enclosed area that may be infested with rodents, allow it to air out for at least 30 minutes. Surfaces that rodents may have contaminated with urine or droppings should be wetted with a dilute bleach solution before mopping up. Do not dry sweep or vacuum to clean potentially contaminated areas. Promptly dispose of all cleaning materials when done, and wash hands and clothes.

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

You can find more information about HPS on the [Centers for Disease Control and Prevention hantavirus webpage](http://www.cdc.gov/hantavirus/) (<http://www.cdc.gov/hantavirus/>) and on the [California Department of Public Health hantavirus webpage](http://www.cdph.ca.gov/HealthInfo/discond/Pages/HantavirusPulmonarySyndrome.aspx) (<http://www.cdph.ca.gov/HealthInfo/discond/Pages/HantavirusPulmonarySyndrome.aspx>).

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