



# About Hantavirus

MAY 13, 2024

## KEY POINTS

- Hantaviruses are a family of viruses which can cause serious illnesses and death.
- These viruses cause diseases like hantavirus pulmonary syndrome (HPS) and hemorrhagic fever with renal syndrome (HFRS).
- They are spread mainly by rodents and are not spread from person-to-person.



## Overview

Hantaviruses can infect and cause serious disease in people worldwide. People get hantavirus from contact with rodents like rats and mice, especially when exposed to their urine, droppings, and saliva. It can also spread through a bite or scratch by a rodent, but this is rare.

Hantaviruses cause two syndromes. Hantaviruses found in the Western Hemisphere, including here in the U.S., can cause hantavirus pulmonary syndrome (HPS). The most common hantavirus that causes HPS in the U.S. is spread by the deer mouse.

Hemorrhagic fever with renal syndrome (HFRS) is a group of clinically similar illnesses caused by hantaviruses found mostly in Europe and Asia. However, Seoul virus, a type of hantavirus that causes HFRS, is found worldwide, including in the United States.

## Signs and symptoms

### Hantavirus Pulmonary Syndrome (HPS)

HPS is a severe and potentially deadly disease that affects the lungs. Symptoms of HPS usually start to show 1 to 8 weeks after contact with an infected rodent.

Early symptoms can include:

- fatigue
- fever
- muscle aches, especially in the large muscle groups like the thighs, hips, back, and sometimes shoulders

About half of all HPS patients also experience:

- headaches
- dizziness
- chills
- abdominal problems, like nausea, vomiting, diarrhea, and abdominal pain

**Four to 10 days after the initial phase** of illness, the late symptoms of HPS appear. These symptoms include coughing and shortness of breath. Patients might experience tightness in the chest, as the lungs fill with fluid.

HPS can be deadly. Thirty-eight percent of people who develop respiratory symptoms may die from the disease.

### Hemorrhagic Fever with Renal Syndrome (HFRS)

HFRS is a severe and sometimes deadly disease that affects the kidneys. Symptoms of HFRS usually develop within 1 to 2 weeks after exposure. In rare cases, they may take up to 8 weeks to develop. Initial symptoms begin suddenly and include:

- intense headaches
- back and abdominal pain
- fever/chills
- nausea
- blurred vision

People may have flushing of the face, inflammation or redness of the eyes, or a rash. Later symptoms can include:

- low blood pressure
- lack of blood flow (acute shock)
- internal bleeding (vascular leakage)
- acute kidney failure, which can cause severe fluid overload

The severity of the disease varies depending on the virus causing the infection. Hantaan and Dobrava virus infections usually cause severe symptoms where 5-15% of cases are fatal. In contrast, Seoul, Saaremaa, and Puumala virus infections are usually more moderate with less than 1% dying from the disease. Complete recovery can take several weeks to months.

## Reducing risk

Eliminate or minimize contact with rodents in your home, workplace, or campsite to reduce your risk of exposure to hantaviruses. [Seal holes and gaps in your home](#) or garage to keep rodents from entering these spaces. Place traps in and around your home to decrease rodent infestation. Clean up any easy-to-get food that might attract rodents.

KEEP READING:  
[Hantavirus Prevention](#)

## Diagnosis

Diagnosing hantavirus in a person who has been infected less than 72 hours is difficult. If the initial test is done before the virus can be found, repeat testing is often done 72 hours after symptom start. Early symptoms such as fever, headache muscle aches, nausea, and fatigue are easily confused with influenza.

If you suspect hantavirus disease, see a physician immediately and mention a potential rodent exposure.

HEALTH CARE PROVIDERS:  
[Clinician Brief: Hantavirus Pulmonary Syndrome \(HPS\)](#)

HEALTH CARE PROVIDERS:  
[Clinician Brief: Hemorrhagic Fever with Renal Syndrome](#)

State laboratories and CDC can confirm a diagnosis through testing.

If you have any questions or concerns regarding submitting a specimen or any public health emergency, please contact your [state or local health department](#) or contact the CDC's Emergency Operations Center at 770-488-7100.

## Treatment and recovery

There is no specific treatment for hantavirus infection. Patients should receive supportive care, including rest, hydration, and treatment of symptoms.

HPS can cause breathing difficulties, and patients may need breathing support, such as intubation. Intubation is a medical procedure where a tube is placed in the lungs from the mouth to help the patient get oxygen.

HFRS can disrupt kidney function. Patients with HFRS may need dialysis to remove toxins from the blood and maintain the right balance of fluids in the body when the kidneys aren't working well.

**HEALTH CARE PROVIDERS:**

[Clinical Overview of Hantavirus](#)

---

SOURCES

**CONTENT SOURCE:**

[National Center for Emerging and Zoonotic Infectious Diseases \(NCEZID\)](#)