

PLAYER HANDOUTS

HANTAVIRUS

Hantavirus (cardio-)pulmonary syndrome

In 1993 a new variant of Hantavirus was found to cause Hantavirus Cardiopulmonary Syndrome, or HCPS. This new strain, called the Sin Nombre Virus, was first identified by Terry Yates, a professor at the University of New Mexico. While other forms of Hanta primarily affect the renal system, Sin Nombre attacks the lungs.

HCPS is a deadly disease transmitted by infected rodents through urine, droppings, or saliva. Humans can contract the disease when they breathe in aerosolized virus. Although rare, HCPS is potentially deadly. Rodent control in and around the home remains the primary strategy for preventing Hantavirus infection. People suspecting illness are encouraged to contact their local health department.

What is the infectious agent that causes Hantavirus (cardio-)pulmonary syndrome?

Hantavirus pulmonary syndrome is caused by the Sin Nombre virus. This virus is a type of Hantavirus. Most Hantaviruses attack the kidneys, but the Sin Nombre virus attacks the lungs. It infects the walls of the capillaries (tiny blood vessels in the lungs), making them leak and flooding the lungs with fluid.

Where is Hantavirus (cardio-)pulmonary syndrome found?

Hantaviruses are found in rodents in different parts of the world. Each Hantavirus has a preferred rodent host. The Sin Nombre virus is carried by the deer mouse, the cotton rat, and perhaps other rodents common throughout North America. These rodents live in semi-rural and rural areas and infest camps, old buildings, barns, and homes.

How do people get Hantavirus (cardio-)pulmonary syndrome?

Wild rodents spread HCPS to people. The Sin Nombre virus is passed in the saliva, urine, and droppings of infected rodents. The virus can live for a few days in contaminated dirt and dust. People are infected when they breathe in tiny particles of these materials in dust from places where rodents are living and active. People can also be infected by handling contaminated materials and then touching the mouth or nose.

HPS is not spread from person to person. Cats and dogs do not spread the illness either, although they can bring infected rodents into contact with humans.

What are the signs and symptoms of Hantavirus (cardio-)pulmonary syndrome?

The first symptoms are general and flu-like: fever (101°F-104°F), headache, stomach pain, pain in the joints and lower back, coughing, and sometimes nausea and vomiting. The main symptom is difficulty breathing as the lungs fill with fluid. This can quickly lead to an inability to breathe and, in severe cases, death from suffocation.

How soon after exposure do symptoms appear?

Symptoms can appear from 3 days to 6 weeks after infection, but usually within 2 weeks.

How is Hantavirus (cardio-)pulmonary syndrome diagnosed?

Because the early symptoms are not specific and vary from person to person, HCPS is hard to identify in its early stages. It is usually detected only when it affects the lungs and causes breathing problems.

Who is at risk for Hantavirus (cardio-)pulmonary syndrome?

Unlike many illnesses that mainly strike people with weakened immune systems, HCPS has hit mostly strong, healthy persons. Those who work, play, or live in closed spaces with active rodent infestation are at risk, although the chances of infection are low. The risk to campers, hikers, and tourists is very small.

People who should take special precautions against HCPS are: 1) people who often handle or are exposed to rodents, such as wildlife biologists and exterminators, 2) people who clean or work in attics or crawl spaces where rodents might be living and active, and 3) people who clean or renovate buildings that might be actively infested with rodents.

What complications can result from Hantavirus (cardio-)pulmonary syndrome?

Infected persons can develop untreatable respiratory failure. HCPS is fatal to more than half of those who become infected.

How can Hantavirus (cardio-)pulmonary syndrome be prevented?

- The best way to prevent HCPS is to avoid contact with rodents and to avoid inhaling dust that might be contaminated with rodent saliva, urine, or droppings.
- Control mice inside. Keep the kitchen clean, and store food and trash in containers with tight lids. Carefully dispose of dead rodents trapped indoors or brought inside by pets. Rodent-proof the house by sealing cracks and clearing brush from around foundations.
- Control mice outside. Eliminate possible nesting sites. Elevate hay, woodpiles, and garbage cans, and place them away from the house. Store animal food in closed containers.
- Use safety precautions when cleaning indoor or outdoor areas that might be contaminated with rodent saliva, urine, or droppings. Do not stir up and breathe dust. Before cleaning, wet down potentially contaminated areas with a household disinfectant (such as bleach or alcohol). While cleaning, wear rubber gloves, and disinfect them after use. Dust masks that cover the nose and mouth can also help.

When participating in outside activities, stay clear of rodents and their burrows and nests. Keep campsites clean and food tightly sealed. Open up and air out outbuildings and rural or wilderness cabins before entering or cleaning. Remove garbage and trash before leaving.