



February 2, 2010

Memorandum

To: All Volunteers in Parks (VIPs), Cooperators, Scientists, and Researchers visiting  
Channel Islands National Park

From: Superintendent, Channel Islands National Park

Subject: Notice of Hantavirus Presence in Channel Islands National Park

It is important that you become aware of the presence of Hantavirus in Channel Islands National Park and that you learn how to avoid contracting Hantavirus Pulmonary Syndrome (HPS) through exposure to this virus. Hantavirus can be a life threatening illness.

Studies by the California Department of Health Services have shown that Hantavirus is widespread in California and that all residents and visitors should take appropriate precautions to avoid contracting HPS.

HPS is a respiratory disease caused by the Sin Nombre virus, which is a type of Hantavirus. It can be transmitted to humans by deer mice and other rodents. Though deer mice on Anacapa and Santa Barbara Islands did not show Hantavirus in their populations, Hantavirus presence has been documented in deer mice on Santa Cruz, Santa Rosa, and San Miguel Islands. There have been no documented cases of visitors, employees or island residents having contracted HPS as a result of visiting, working, or living on the islands. However, this does not mean that one could not contract the disease while visiting, or by working or living in the park.

Our goal is to help ensure that no one contracts HPS while working on or visiting the park islands. From what is currently known about Hantavirus, the risk to those out in the open environment (campers, hikers and those working occasionally on outdoor projects) appears to be very low. However, those whose normal activities include working in or cleaning of structures such as older and/or intermittently occupied buildings, vehicles or stored materials that deer mice may frequent or nest in, are at significantly higher risk of contracting HPS. These persons need to be particularly aware of the presence of Hantavirus, how HPS is contracted, and how to safeguard themselves and others while working in or cleaning any environment where Hantavirus may be present.

It is your responsibility to know the HPS risk reduction guidelines applicable to your work on the islands. The attached information from the Directors of Health Promotion and Education (DHPE) on Hantavirus and Hantavirus Pulmonary Syndrome (HPS) provides information on how HPS may

be contracted, how to recognize the symptoms, how to reduce your risk of contracting this serious disease, and how to clean rodent-contaminated areas. If, in your work on the islands, you are required to engage in any of the higher-risk projects mentioned above, you must know and follow prescribed procedures for trapping and removal of rodents from facilities, and for disinfection of areas presumed contaminated by Hantavirus. Detailed information on these procedures is available from your NPS supervisor or research contact.

If you have any questions after reading this memorandum and the attached information, please bring them to the attention of island staff responsible for facility upkeep, your NPS research sponsor, your NPS Volunteers in Parks (VIP) program supervisor and/or the Park Superintendent. Park staff can also address questions and concerns to their supervisors and/or the Park's Human Resources Officer.

Please sign the attached certification of receipt of this information, and return it to the Park Volunteer Coordinator or designee, via your NPS supervisor or your NPS research contact. Your signature confirms that you have read and understood these materials, and that you have been properly notified of the presence of Hantavirus in the Park, and that your activities in the Park may expose you to some risk of contracting HPS.

Russell E. Galipeau, Jr.

#### Attachments

- Certification of Receipt
- 'Hantavirus Information' (Directors of Health Promotion and Education (DHPE))

## **HANTAVIRUS INFORMATION**

### **WHAT IS HANTAVIRUS PULMONARY SYNDROME?**

Hantavirus pulmonary syndrome [HAN-tuh-vi-rus PUL-mun-air-ee SIN-drome] (HPS) is a rare but serious, and often deadly, lung infection. HPS is caused by a type of virus called a Hantavirus. The Hantavirus that causes HPS is carried by rodents found throughout North America. People get HPS when they breathe in dust that is contaminated with saliva, urine, or droppings from infected rodents. No anti-virus drug is effective against HPS, and there is no vaccine.

To prevent HPS, avoid contact with rodents, and avoid inhaling dust that might be contaminated with rodent urine, saliva, or droppings.

### **WHAT IS THE INFECTIOUS AGENT THAT CAUSES HANTAVIRUS 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 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 PULMONARY SYNDROME?**

Wild rodents spread HPS 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 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 PULMONARY SYNDROME DIAGNOSED?**

Because the early symptoms are not specific and vary from person to person, HPS 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 PULMONARY SYNDROME?**

Unlike many illnesses that mainly strike people with weakened immune systems, HPS 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 HPS 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 PULMONARY SYNDROME?**

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

### **WHAT IS THE TREATMENT FOR HANTAVIRUS PULMONARY SYNDROME?**

No virus-killing drug is effective against HPS. Although there has been some experimental use of the anti-virus drug, ribavirin, mechanical ventilation (use of a respirator) is the main treatment. Most patients need to be hospitalized in intensive care. The sooner an infected person gets medical treatment, the better the chance of recovery.

### **HOW COMMON IS HANTAVIRUS PULMONARY SYNDROME?**

HPS is a rare disease. It was first recognized in 1993 after the investigation of an outbreak of sudden fatal respiratory illness in the southwestern United States. Since then, no more than 100 cases of HPS have been identified in 20 states, mostly in the western part of the country.

### **IS HANTAVIRUS PULMONARY SYNDROME A NEW OR EMERGING INFECTIOUS DISEASE?**

Yes. The Sin Nombre virus is a newly recognized virus, and HPS is a newly recognized disease. Scientists are working to learn more about it and to develop diagnostic tests and treatments.

### **HOW CAN HANTAVIRUS PULMONARY SYNDROME BE PREVENTED?**

The best way to prevent HPS is to avoid contact with rodents and to avoid inhaling dust that might be contaminated with rodent saliva, urine, or droppings.

1) 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.

2 ) 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.

### **Where can I find more information about Hantavirus pulmonary syndrome?**

<http://www.cdc.gov/ncidod/diseases/hanta/hantvrus.htm>

<http://www.cdc.gov/ncidod/diseases/hanta/hps/index.htm>

This fact sheet is for information only and is not meant to be used for self-diagnosis or as a substitute for consultation with a health-care provider. If you have any questions about the disease described above, consult a health-care provider.



**‘Expertise and support for health promotion and public health education’**

The Directors of Health Promotion and Education (DHPE) was founded in 1946 (as the Conference of State Directors of Public Health Education) as a joint effort between directors of health education in state health departments and deans of health education in schools of public health.

# HANTAVIRUS SAFETY INFORMATION

Please complete this page, then detach and return it to your project supervisor.  
You are encouraged to keep the information for future reference.

## CERTIFICATION OF RECEIPT

I certify that I have received notice of the presence of the Hantavirus within Channel Islands National Park and have been informed of Hantavirus Pulmonary Syndrome (HPS) risk reduction measures and safe cleanup procedures for Hantavirus-contaminated areas as provided through this memorandum and the attached information "Hantavirus Information" from the Directors of Health Promotion and Education (DHPE).

I certify that I have read and understood these materials, that I have been properly notified of the presence of Hantavirus in the Park and that I understand that my activities in the Park may expose me to some risk of contracting HPS.

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**Print Name**

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**Signature**

(Parent or guardian must sign for minors)

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**Date**

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**Print Name of Parent or Guardian**

Check appropriate box

☐ Employee

☐ Volunteer

☐ Cooperator

☐ Research Permit Holder

☐ Contractor

☐ Other \_\_\_\_\_