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Hantaviruses

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IT'S YOUR HEALTH

This article was produced in collaboration with the Public Health Agency of Canada.

Hantaviruses

The Issue

Hantaviruses are found in the droppings, urine and saliva of infected rodents and humans can contract the virus from breathing in airborne particles or from being bitten. In Canada, a hantavirus capable of causing disease in humans —named Sin Nombre virus —has been identified in deer mice.

Although the risk of exposure in Canada is low, when it happens, the disease can be very severe. So, it is important to be aware of how you can minimize your risk of exposure.

Background

Hantaviruses are part of a group of viruses called the *Bunyaviridae*. Exposure to hantaviruses can cause a rare, but often fatal, disease called Hantavirus pulmonary syndrome (HPS).

Humans are most often exposed to the virus by breathing in contaminated airborne particles. This can occur after sweeping or vacuuming infected areas. It is also possible to be exposed to the virus through rodent bites, if the skin is broken, or through ingestion.

The earliest documented case of HPS in Canada was contracted in Alberta in 1989. Since then, there have been over 70 confirmed cases. Most of the cases occurred in western Canada (Manitoba, Saskatchewan, Alberta and British

Columbia), except for one case in Quebec. Hantavirus infections contracted by Canadians outside the country have also been recognized, including two fatal cases from South America.

Risk Factors of Hantaviruses

Hantavirus is typically transmitted by breathing in particles in the air from the droppings, urine and saliva of infected rodents. However, there have been a small number of reported cases of HPS believed to have been contracted through rodent bites.

Rodents, themselves, neither get sick nor can they pass along the infection to other animals. Transmission of the virus from person-to-person has not been reported in North America.

Symptoms of HPS

The following flu-like symptoms can result from Hantavirus pulmonary syndrome (HPS):

- fever
- chills
- muscle aches
- headaches
- nausea
- stomach problems

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Symptoms can appear within 3 to 60 days after exposure. However, the average time it takes for symptoms to appear is 14 to 30 days after exposure. HPS is extremely serious since approximately 30–40% of cases result in death, usually within a few days of the initial symptoms appearing. Those who recover do so rapidly and regain full functioning of their lungs, but long term effects such as fatigue are common.

HPS can progress rapidly into serious lung complications and include the following symptoms:

- abnormal fall in blood pressure
- lungs will fill with fluid
- severe respiratory failure

Treating Hantavirus Pulmonary Syndrome

There is no vaccine, treatment or cure for HPS. However, early detection and medical care is extremely important and can save lives. Those who are infected may be given medication for fever and pain, as well as oxygen therapy.

Minimizing Your Risk

All rodent droppings should be treated as potentially harmful. The primary strategy for minimizing your risk is to ensure rodent control in the home.

There are things you can do to reduce your risk of being exposed:

- Keep mice out of your home. Block openings that might allow rodents from entering;
- Store human and animal food, water and garbage in containers with tightly fitted lids;
- Keep your yard clean, and store woodpiles above the ground and away from the home;

- When cleaning your home or community, be aware of animal droppings and nesting materials. If you find any, clean them up safely.
- Do not sweep or vacuum rodent droppings; this will release particles into the air where they can be breathed in.

How to Properly Clean Animal Droppings:

- Wear rubber or plastic gloves.
- Spray droppings with a general purpose household disinfectant or a mixture of bleach and water (1 part bleach, 9 parts water).
- Make sure you get the droppings very wet. Let the area soak for ten minutes.
- Use a paper towel to wipe up the droppings. Dispose of the paper towel immediately.
- Wash gloves in disinfectant and hot soapy water before removing them from your hands, and thoroughly wash your hands after removing gloves.
- When cleaning areas contaminated by droppings in a confined space, consider wearing a high efficiency particulate air (HEPA) filtered respirator.

The Public Health Agency of Canada's Role

The Public Health Agency of Canada (PHAC) is responsible for providing Canadians with essential information on diseases like HPS.

PHAC conducts testing of hantavirus infections in humans and analysis of trends in HPS cases in Canada. The Agency also conducts field investigations into hantavirus cases across Canada.

Need More Info?

Contact:

National Microbiology Laboratory
Public Health Agency of Canada
1015 Arlington Street
Winnipeg, MB R3E 3P6
Telephone: (204)-789-2000

Also, see the following:

Health Canada's What you should know about Hantavirus at:
www.hc-sc.gc.ca/fniah-spnia/promotion/public-publique/anima_health-sante-eng.php#a2

The Public Health Agency of Canada's Material Safety Data Sheet on Hantavirus at:
www.phac-aspc.gc.ca/msds-ftss/msds74e-eng.php

The Canadian Centre of Occupational Health and Safety's factsheet on Hantavirus at:
www.ccohs.ca/oshanswers/diseases/hantavir.html

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