



HANTAVIRUS

What You Need to Know to Prevent Hantavirus Pulmonary Syndrome (HPS)

Environmental Public Health Services
Health Protection Directorate
First Nations and Inuit Health Branch

Suite 730, 9700 Jasper Avenue
Edmonton, Alberta T5J 4C3



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Facts About Hantaviruses

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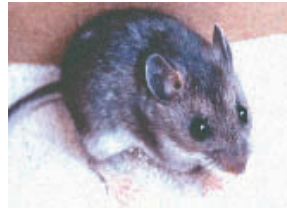
What are Hantaviruses?

Hantaviruses are a group of viruses that may be carried by some rodents. Some hantaviruses can cause a rare but deadly disease called hantavirus pulmonary syndrome (HPS).

What animals can give people Hantaviruses?

Certain kinds of mice carry hantaviruses that may cause HPS in humans.

- In Alberta, the deer mouse has been identified as a carrier of HPS:
 - Not every deer mouse carries hantavirus.
 - Other rodents, such as house mice, are not known to carry or spread hantavirus.
- Since you can not tell if a mouse carries hantavirus, it is best to avoid all wild mice and to safely clean up any rodent urine, droppings, or nests in your home.
- Dogs and cats are not affected by hantavirus and cannot give HPS to people.



Deer Mouse

How do people get HPS?

People get HPS when they breathe in hantaviruses. This can happen when rodent urine and droppings that contain the virus are stirred up into the air. The highest risk occurs with exposure in an enclosed space. People can also become infected when they touch mouse urine, droppings, or nesting materials that contain the virus and then touch their eyes, nose, or mouth. Extremely rare cases have contracted HPS from a mouse bite.

Here are some activities that can put people at risk for HPS:

- Creating excess dust while cleaning up mouse urine, droppings, and nests.
- Cleaning a shed or cabin that has been closed for some time.
- Working in areas where mice may live (such as barns).

In Canada and the USA, there has never been a case in which a person with HPS has given the disease to another person.

What are the symptoms of HPS?

If people get HPS, they will feel sick three days to six weeks after disturbing mice material contaminated with hantavirus.

At first people with HPS will have:

- Fever
- Severe muscle aches
- Fatigue
- Sneeze
- Cough
- Wheezing

Sometimes people will also have headaches, dizziness, chills, nausea, vomiting, diarrhea, or stomach pain. Usually, people do not have a runny nose, sore throat, or a rash. After a couple of days of the above 'flu-like' symptoms, the affected individual suffers a sudden and severe onset of having trouble breathing.

This requires immediate medical attention and the person should present to an emergency room as soon as possible for urgent care.



Fever, fatigue and muscle aches are the first symptoms of HPS

How can HPS be prevented?

- Keep mice out of your home.
- Clean up mouse urine, droppings, and nesting materials with a disinfectant or a mixture of bleach and water.

How to Clean Up After Mice

How to clean up mouse urine and droppings:

Prevent Dust Generation, Ventilate, Glove, and Wet with Bleach

- Prevent the generation of dust.
- Wear rubber or plastic gloves.
- Spray urine and droppings with a disinfectant or a mixture of bleach and water. Make sure you get the urine and droppings very wet.
- Let it soak for five minutes.
- Use a paper towel to wipe up the urine or droppings.
- Throw the paper towel in the garbage.
- Mop or sponge the area with a disinfectant or bleach solution.
- Wash gloved hands with soap and water or spray a disinfectant or bleach solution on gloves before taking them off.
- Discard gloves. Do not reuse.
- Wash hands with soap and warm water after taking off your gloves.





Use either of these when cleaning up after mice:

- General-purpose household disinfectant. Make sure the word “disinfectant” is written on the label.

OR

- Bleach and water solution. Mix 350 mL of household bleach with 4 L of water. Smaller amounts can be made with one part bleach and nine parts water.

Clean-up tip:

Do not sweep or vacuum up mouse urine, droppings, or nests. This will cause virus particles to go into the air, where they can be breathed in.

How to clean up a dead mouse in a snap trap and how to clean up a rodent nest:

- Wear rubber or plastic gloves.
- Wash gloved hands with soap and water or spray a disinfectant or bleach solution on gloves before taking them off.
- Wash hands with soap and warm water after removing your gloves.
- Spray the dead mouse, trap, or nest, as well as the surrounding area, with a disinfectant or a mixture of bleach and water.
- Let it soak.
- Place nesting materials or trap with the dead rodent in a bag. If you plan to reuse the trap, get the mouse out of the trap by holding it over the bag and lifting the metal bar. Let the mouse drop in the bag. Disinfect the trap.
- Seal the bag.
- Place the full bag in a second plastic bag and seal.
- Throw the bag into a covered trash can that is regularly emptied or contact your EHO for information on other ways to throw away dead mice.
- Wash gloved hands.
- Discard gloves.
- Wash hands.



Wear a mask if working in heavily contaminated areas. See Special Considerations section.



Spray gloves before taking them off

How to clean out cabins, sheds, barns, or other outbuildings:

- Open all doors and windows. Leave them open for 30 minutes before cleaning.
- Wear rubber or plastic gloves.
- Clean up all rodent urine, droppings, nests or dead mice by using a disinfectant or a mixture of bleach and water.
- Mop floors or spray dirt floors with a disinfectant of bleach and water.
- Clean counter tops, cabinets, and drawers with a disinfectant or a mixture of bleach and water.
- Steam clean, shampoo, or spray upholstered furniture with a detergent, disinfectant, or a mixture of bleach and water.
- Wash any potentially contaminated bedding and clothing with laundry detergent in hot water.



Nesting Materials:

Some materials mice use to build their nests include paper, tissues, insulation, and the stuffing from furniture.

How to keep Mice Out of Your Home

Why keep mice out of your home?

Some mice can carry harmful diseases such as HPS and lymphocytic choriomeningitis. The best way to protect you and your family from these diseases is to keep mice out of your home.

What you can do inside your home:

- Keep food in thick plastic or food grade metal containers with tight lids.
- Clean up spilled food right away. Wash dishes and cooking utensils soon after use.
- Put pet food away after use. Do not leave pet food or water bowls out overnight.
- Keep garbage in thick plastic or metal containers with tight lids.



- Check inside your house for gaps or holes that a pencil can fit through. Seal them with steel wool, lath metal and caulk.
- Inside your home, use snap traps baited with peanut butter.

What you can do outside your home:

- Use a thick plastic or metal garbage can with a tight lid. Make sure there are no holes in the garbage can.
- Check the outside of your house for gaps and holes. Seal them with cement, lath metal, wire mesh or sheet metal.
- Keep grains and animal feed in thick plastic or metal containers with tight lids.
- Put away pet food after use.



Yard maintenance:

- Clean up trash, brush, and weeds around your house.
- Get rid of old cars and trucks, unused tires, appliances and other debris. Mice may use these as homes.
- Keep grass and shrubbery within 10 metres of the house well trimmed.
- Move woodpiles 10 metres or more away from the house. Raise the wood at least 30 centimetres off the ground.
- Keep composting bins 30 metres or more from the house.
- Fix gaps in trailer skirting.



Where to look for gaps or holes inside your home:

- Inside, under, and behind kitchen cabinets.
- Inside closets near the floor.
- Around the fireplace.
- Around doors.
- Around the pipes under sinks and washing machines.
- Around floor air vents and dryer vents.
- Inside the attic.
- In the basement or crawl space.



Look for gaps where the water pipes come into your house

Where to look for gaps and holes outside your home:

- In the roof among the rafters, gables and eaves.
- Around windows.
- Around doors.
- Between the foundation of your house and the ground.
- Attic vents and crawl space vents.
- Under doors.
- Around holes for electrical, plumbing, and gas lines.



Look for gaps around pipes outside your home



Remove abandoned vehicles from around occupied buildings

How to seal gaps and holes inside and outside your house:

- Fill small holes with steel wool. Put caulk around steel wool to keep it in place.
- Use cement, wire mesh, or metal sheeting to fix large holes.
- Wire mesh can be folded and pushed into holes.
- It can also be cut to fit around pipes.
- This material can be found in the masonry or building materials section at a hardware store.



Fold wire mesh and place in holes in the foundation of houses



Seal holes with steel wool and caulk



Use wire mesh around pipes

How to use snap traps:

- Choose the right kind of snap trap. Some traps are made for catching mice and some traps are made for catching rats.
- Read the instructions on the box before setting the snap trap.
- Place some peanut butter about the size of a pea on the bait pan on the snap trap. Chunky peanut butter works best.
- Place the snap trap on the floor right next to the wall. Put the end of the trap with the bait on it next to the wall so it forms a "T" with the wall.



Put peanut butter on trap

- Place snap traps in areas where you have seen mice nesting materials, urine and droppings, or nibbled food. Also, place snap traps in closed areas, such as behind the stove, and refrigerator, and in the back of cabinets and drawers.
- Put traps near other areas where you think mice are coming into your home.



Place trap so it makes a “T” with the wall

Trapping tips:

- Keep traps away from children and pets.
- Use only snap traps. Glue traps and live traps should not be used. These traps can scare the caught live mice and cause them to urinate. This may increase your chances of getting sick.



Special Considerations for Areas Heavily Contaminated with Mouse Droppings:

- Minimize creation of dust.
- If working in an area heavily contaminated with mouse droppings or an area with known cases, extra precautions should be taken.
- In addition to the above procedures, a HEPA filtered mask should be worn.
 - The mask should be worn according to the National Institute for Occupational Safety and Health (NIOSH) respirator standards.
- Wear disposable coveralls that resist dust penetration.
- Wear rubber boots or disposable shoe covers.
- Wear eye or face protection.



For more information about Hantavirus Pulmonary Syndrome or rodent control, contact your Environmental Health Officer at:

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Health Protection Directorate
First Nations and Inuit Health Branch**

**Suite 730, 9700 Jasper Avenue
Edmonton, Alberta T5J 4C3**

Edmonton Office: 780-495-2712

Calgary Office: 403-299-3939

