Prevention of Hantavirus Exposure

OVERVIEW

Hantavirus causes a serious, respiratory illness called hantavirus pulmonary syndrome. The symptoms of hantavirus infection are similar to influenza, i.e., fever, body aches, chills, and trouble breathing.

Exposure

Hantavirus is spread primarily by deer mice in the Northwest. Hantavirus is spread through their droppings, urine, saliva, and nesting material. The virus attaches to dust particles, which can become airborne if disturbed.

Humans may be infected in any of the following ways:

- Inhalation of virus-contaminated dust
- Close contact with contaminated material
- Deer mice bites

Risk of Infection

Hantavirus infection is extremely rare, even among people who are consistently exposed to mice and other rodents. Hantavirus poses no significant health risk to WSU employees, provided simple precautions are followed.

Employees with the following duties have the greatest potential for exposure to hantavirus:

- Employees who clean out storage areas, barns and outbuildings in which rodents are likely to infest.
- Employees who trap or work with wild rodents.

Responsibility

The department utilizing and controlling a space is ultimately responsible for all required cleanup and rodent control measures.

- The department assigned the space is responsible for cleanup and control measures prior to maintenance personnel entering the area.
- Maintenance personnel entering a severe infestation area are not required to perform cleanup or virus control unless they utilize the area.
- Pullman campus departments may use the blanket contract with the University's rodent, bird, and bat infestation cleanup contractor. Refer to Whitman County Contracts for more information.
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Responsibility (cont.)

• Non-Pullman campus departments have the option of hiring a local area rodent infestation cleanup contractor in conformance with University purchased services contracting procedures. See BPPM 70.50 and contact EH&S for more information.

Trapping and Handling Live Rodents

To obtain specific information about the safety measures for field trapping, research, and handling of wild rodents:

• Refer to the Office of Research Support and Operations (ORSO) Guidelines for Handling Animal Reservoirs of Hantavirus. To view the guidelines, go to the ORSO website at:

  orso.or.wsu.edu/memos/memo19/hanta.asp

• Contact the Office of Campus Veterinarian, telephone 335-6246, or

• Contact Institutional Biosafety Committee, through the Office of Grant and Research Development, telephone 509-335-9661.

PRECAUTIONS

Take precautions when rodent droppings, nesting material, evidence of feeding, or dead rodents are present.

NOTE: Do not sweep, vacuum, or generate airborne dust when rodent droppings and nesting materials are present.

RODENT CONTROL MEASURES

Follow the rodent control measures listed below if rodent droppings or nesting material are found.

Openings

Plug, screen, or cover all openings bigger than 1/4 inch wide.

Traps or Poison

A department may directly treat a rodent problem if the following requirements are observed. The department is to:

• Contact EH&S prior to application of control measures (traps or poison baits).

• Use appropriate control measures.

• Ensure that individuals applying rodent baits hold applicable licenses and follow label directions.

• Meet all other applicable state and federal regulations.
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Traps or Poison (cont.)

NOTE: WSU has a blanket contract with a pest control contractor. See SPPM 6.30 for more information or contact EH&S; telephone 509-335-3041, or Purchasing Services; telephone 509-335-3541.

Food and Water Sources

Eliminate food and water sources for mice in the following ways:

- Store human and animal food in containers with tight-fitting covers or closed feeding dishes.
- Fix leaky pipes.
- Store garbage in tight containers and dispose promptly.

CLEANING

Use wet cleaning methods only.

Follow the steps below to clean areas where deer mice and other rodents have left droppings, nesting material, or evidence of feeding.

Infestation Not Severe

Infestation is not severe if only a few droppings are found in a localized area.

Use Protective Gloves

Wear latex or nonlatex rubber gloves. Latex-sensitive individuals are to use nonlatex rubber gloves.

Disinfect Before Disposal

Mix a disinfectant solution of one part bleach to ten parts water. Other disinfectants and household detergents are also acceptable for deactivating the virus, according to the Centers for Disease Control (CDC).

Use a rag, sponge, or mop that has been soaked in disinfectant for wiping up rodent droppings and urine.

Thoroughly soak or spray droppings, nesting material and dead rodents with the disinfectant.

Disposal

Rodents

Place dead rodents in a plastic bag and seal.

Put the sealed bag into another plastic bag and seal.

Put the bagged dead rodents into a biohazard box. Boxes can be purchased at WSU University Stores, telephone 509-335-4592.
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**Rodents (cont.)**
Contact Facilities Services, Operations Waste Management, telephone 335-4530, for pickup and incineration. See *SPPM 4.24* for more information on biohazard waste disposal.

**Contaminated Material**
Place contaminated material (excluding dead rodents), including the gloves that were worn, in a plastic bag and seal.

Dispose of the bag in the regular trash.

**After Cleaning**
Wash hands with soap and hot water.

**Severe Infestation**
Infestation is severe if large numbers of rodent droppings are found and the risk of infection is increased in closed, unoccupied storage areas, such as barns.

NOTE: Wear a NIOSH-approved respirator with HEPA filter cartridges prior to entering an area that is or may be severely infested.

**Air Out Area**
Air out the area for at least 30 minutes by opening windows and doors.

Close adjacent uncontaminated areas when airing out the contaminated area.

Leave the area while it is airing out.

**Use Respirator and Protective Clothing**
Wear the following safety gear while cleaning:

- NIOSH-approved respirator with HEPA filter cartridges
- Latex or nonlatex rubber gloves (latex-sensitive individuals are to use nonlatex rubber gloves)
- Eye protection
- Disposable coveralls
- Shoe coverings or launderable clothing with rubber boots

Fit-testing and training is required before using respirator. Contact EH&S to schedule fit-testing and training; telephone 509-335-3041.
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Disinfect Before Disposal

Mix a disinfectant solution of one part bleach to ten parts water. Other disinfectants may be acceptable. Other disinfectants and household detergents are also acceptable for deactivating the virus, according to the CDC.

Use a rag, sponge, or mop that has been soaked in disinfectant for wiping up rodent droppings and urine.

Thoroughly soak or spray droppings, nesting material and dead rodents with the disinfectant.

Spray dirt floors with the disinfectant.

Disposal

Rodents

Place dead rodents in a plastic bag and seal.

Put the sealed bag into another plastic bag and seal.

Put the bagged dead rodents into a biohazard box.

Contact Facilities Services, Operations Waste Management; telephone 509-335-4530, for pickup and incineration. See SPPM 4.24 for more information on biohazard waste disposal.

Contaminated Material

Place contaminated material (excluding dead rodents), including the gloves that were worn, in a plastic bag and seal.

Dispose of the bag in the regular trash.

After Cleaning

Disinfect rubber boots and shoe coverings.

Wash hands and/or shower with soap and hot water.

Launder clothes worn while cleaning in a separate load.

WHITMAN COUNTY CONTRACTS

A WSU Pullman department experiencing a rodent infestation problem may purchase services from the University’s pest control and/or cleanup contractor. Contact EH&S or Purchasing Services for the names and telephone numbers of the contractors.

Paying for Services

The department is responsible for paying for all pest control contractor inspection and cleanup charges related to work conducted in the departmental space.
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Paying for Services (con.t)  A departmental official with expenditure authority (see BPPM 70.02) signs the vendor's invoice and enters the account code of the supporting WSU budget/project.

The department routes the invoice to Accounts Payable for payment.

MONITORING  Regularly monitor to determine if rodents are infesting the area.

EH&S  Contact EH&S to request area inspections in case of severe rodent infestation, or for further information.

Training  Environmental Health and Safety provides hantavirus exposure prevention training for WSU employees.