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.

EXCEPTION: WSU Tri-Cities departments must contact the campus facilities office for rodent cleanup and control measures prior to maintenance personnel entering the area. (See Campus Facilities Contacts.)

- Maintenance personnel entering a severe infestation area are not required to perform cleanup or virus control unless they utilize the area.
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Responsibility (cont.)

• 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.

• Non-Pullman campus departments, with the exception of WSU Tri-Cities, WSU Vancouver, and WSU Everett (see below), 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 the applicable campus EH&S department for more information.

  ° WSU Tri-Cities and WSU Vancouver departments must contact the campus facilities office to arrange for pest control contractors, or to remove and clean up rodents and rodent droppings. (See Campus Facilities Contacts.) Campus facilities works with campus EH&S to implement rodent control and cleanup measures or arrange for pest control contractors.

  ° WSU Everett departments must contact the campus facilities department regarding droppings in buildings; telephone 425-405-1566. Campus facilities works to implement rodent control and cleanup measures or arrange for pest control contractors.

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 Institutional Animal Care and Use Committee (IACUC) Zoonotic Diseases website:

  iacuc.wsu.edu/zoonotic-diseases/

  Select Hantavirus to view the Center for Disease Control (CDC) hantavirus guidelines.

• Contact the Office of Campus Veterinarian, telephone 509-335-6246, or

• Contact the Institutional Biosafety Committee, through the Office of Research Assurances, telephone 509-335-7183.
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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.

<table>
<thead>
<tr>
<th>Openings</th>
<th>Plug, screen, or cover all openings 1/4 inch wide and greater.</th>
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<tbody>
<tr>
<td>Traps or Poison</td>
<td>A department may directly treat a rodent problem if the following requirements are observed</td>
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The department is to:

• Contact the applicable campus EH&S prior to application of control measures (traps or poison baits). See Campus EH&S Contacts.

• 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.

NOTE: WSU Pullman 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.

Campus EH&S Contacts

The following contacts apply to EH&S services at applicable WSU locations:

• WSU Pullman EH&S; telephone 509-335-3041
• WSU Spokane EH&S; telephone 509-368-6699
• WSU Tri-Cities EH&S; telephone 509-372-7163
• WSU Vancouver EH&S; telephone 360-546-9706

Departments at WSU locations not listed above may contact WSU Pullman EH&S for assistance.
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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 nonabsorbent protective gloves, such as nitrile or vinyl. Nonlatex gloves are preferred due to the increasing prevalence of latex sensitivities.

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 using a spray bottle or clean pesticide application sprayer.

Disposal

Rodents

Place dead rodents in an opaque 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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Campus Facilities Contacts
Contact the campus facilities department for pickup and disposal procedures:

- WSU Pullman Facilities Services; telephone 509-335-4530 (Operations--Waste Management department)
- WSU Spokane Facilities Operations; telephone 509-358-7994
- WSU Tri-Cities Facility Operations; telephone 509-372-7160
- WSU Vancouver Facilities Operations; telephone 360-546-9000
- WSU Everett Facilities; telephone 425-405-1566

Departments at WSU locations not listed above may contact WSU Pullman Facilities Services, Operations--Waste Management for assistance.

Additional Information
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.
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Use Respirator and Protective Clothing

Wear the following safety gear while cleaning:

- NIOSH-approved respirator with HEPA filter cartridges
- Nonabsorbent protective gloves, e.g., nitrile or vinyl. Nonlatex are preferred due to the increasing prevalence of latex sensitivities.
- Eye protection
- Disposable coveralls
- Shoe coverings or launderable clothing with rubber boots

Fit-testing and training is required before using respirator. (See SPPM 2.62.) Contact the campus EH&S to schedule fit-testing and training. See Campus EH&S Contacts.

Disinfect Before Disposal

Mix a disinfectant solution of one part bleach to ten parts water. Other disinfectants and household detergents may be acceptable for deactivating the virus, according to the CDC. Contact the campus EH&S for assistance.

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 using a spray bottle or clean pesticide application sprayer.

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 the campus facilities department for pickup and disposal procedures. See Campus Facilities Contacts. See SPPM 4.24 for more information on biohazard waste disposal.
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**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.

A departmental official with expenditure authority signs the supplier’s invoice and enters the applicable supporting WSU cost center worktags.

The department routes the invoice to Accounts Payable for payment.

**MONITORING**

Regularly monitor to determine if rodents are infesting the area.

**Campus EH&S**

Contact the applicable campus EH&S to request area inspections in case of severe rodent infestation, or for further information. NOTE: WSU Tri-Cities and WSU Everett departments are to contact the Facilities office to request area inspections in case of severe rodent infestation, or further information. (See Campus Facilities Contacts.)

**Training**

EH&S provides hantavirus exposure prevention training for WSU Pullman employees.

A Hantavirus and Rodents--Cleanup and Control fact sheet is also available for all employees at the EH&S Factsheets website:

[ehs.wsu.edu/ehs-training/factsheets/](http://ehs.wsu.edu/ehs-training/factsheets/)