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*** FOR IMMEDIATE RELEASE ***

Fremont County woman hospitalized with Hantavirus; State Health Officer says rodent population in Wyoming likely greater than normal this year

CHEYENNE - Wyoming Department of Health officials today urged people to be aware of exposure to deer mice nests and droppings following the hospitalization of an adult female from Fremont County with Hantavirus pulmonary syndrome. The woman is recovering, said State Health Officer, Dr. Brent Sherard.

This the first recorded case in the state this year. The woman was apparently exposed to Hantavirus in May while cleaning out a storage area near her rural home, Sherard said. After she became ill, she reported the previous exposure to rodent nests and droppings. The woman was hospitalized for five days in June and subsequently released.

The Wyoming Department of Health public health laboratory confirmed the case as Hantavirus pulmonary syndrome (HPS) yesterday, Sherard said.

"I urge people to use good judgement when cleaning up rodent infested buildings," he said. "Hantavirus, when contracted, can quickly develop into a very serious, and often fatal, disease."

In addition to the Fremont County case this year, Wyoming has recorded six previously:
2004 - two adult males from Laramie County. Both survived.
2003 - one death in an adult male from Big Horn County.
2002 - one death in an adult female from Natrona County.
1999 - one death in an adult male from Lincoln County.
1993 - one death in female Nevada resident (following exposure in Wyoming at an unknown location).

"While the disease is very rare, people need to be cautious in their approach because you can be exposed and get sick while cleaning or doing the types of things you've done throughout your life," Sherard said. "Do what you can to prevent aerosolization and inhalation of dust particles by watering down the area or wearing a proper mask before implementing the cleanup procedure."

Researchers believe that approximately 8 percent of all deer mice carry hantavirus. Sherard said that this year, due to the increased precipitation around the state, reports of increased mice populations are anecdotal but widespread. Deer mice begin breeding at 48 days of age and produce three to four litters per year, so populations increase throughout the summer and peak in autumn. Sherard said that rural homeowners typically see an increased number of mice in their houses and outbuildings in the fall/winter as mice move indoors to escape the cold temperatures.

Through May 3, 2005, a total of 387 cases of hantavirus pulmonary syndrome have been reported in the United States. The national case count began when the disease was first recognized in May 1993. Thirty-eight percent of all reported cases have resulted in death. Of persons ill with HPS, 62 percent have been male, 38 percent female. The mean age of confirmed case patients is 37 years (range: 10 to 75 years). About three-quarters of patients with HPS have been residents of rural areas.

Hantavirus Fact Sheet

Hantavirus pulmonary syndrome (HPS) has been recognized as a disease only recently in North America. So far, it's also fairly uncommon and the chances of becoming infected are low. However, HPS is potentially deadly and immediate intensive care is essential once symptoms appear.

Hantaviruses that cause HPS are carried by rodents, especially in Wyoming in the deer mouse. You can become infected by exposure to their droppings and the first signs of sickness (especially fever and muscle aches) appear 1 to 5 weeks later, followed by shortness of breath and coughing. Once this phase begins, the disease progresses rapidly, necessitating hospitalization and often artificial ventilation within 24 hours. Sore throat and runny nose are rarely symptoms of HPS.

Prevention is the best strategy, and it simply means taking some very practical steps to minimize your contact with rodents. HPS is not contagious from person to person in the United States.

How Is Hantavirus Transmitted?

It all starts with rodents, like the deer mouse and cotton rat, which carry hantaviruses.

In the United States, deer mice (plus cotton rats and rice rats in the southeastern states and the white-footed mouse in the Northeast) are the rodents carrying hantaviruses that cause hantavirus pulmonary syndrome. Deer mice have big round ears and white bellies.

These rodents shed the virus in their urine, droppings and saliva. The virus is mainly transmitted to people when they breathe in air contaminated with the virus. This happens when fresh rodent urine, droppings or nesting materials are stirred up. When tiny droplets containing the virus get into the air, this process is known as "aerosolization."

Here are several other ways rodents may spread hantavirus to people:

- Aerosol transmission from rodent excreta is felt to be the usual mode of transmission.
- If a rodent with the virus bites someone, the virus may be spread to that person - but this is very rare.
- Researchers believe that you may be able to get the virus if you touch something that has been contaminated with rodent urine, droppings or saliva, and then touch your nose or mouth.
- Researchers also suspect that if virus-infected rodent urine, droppings or saliva contaminates food that you eat, you could also become sick.

These possibilities demonstrate why disinfecting rodent-infested areas is so important in preventing transmission of the virus.

Transmission can happen any place that infected rodents have infested. (Remember, common house mice do not carry hantavirus.) This could be barns or sheds or other outbuildings, warehouses or summer cottages closed up for the season. The most sensible way to avoid contact with rodents is to prevent rodents from infesting the places where you live and work, and to follow safety precautions if you do stumble into a rodent-infested area.

Can You Get Hantavirus from Another Person?

The types of hantavirus that cause HPS in the United States cannot be transmitted from one person to another. For example, you cannot get the virus from touching or kissing a person who has HPS, or from a health care worker who has treated someone with the disease. Finally, you cannot get the virus from a blood transfusion in which the blood came from a person who became ill with HPS and survived.

Can You Get Hantavirus from Animals Other Than Rodents, or from Insects? What About Pets?

No - the hantaviruses that cause HPS in the United States are not known to be transmitted by any types of animals other than certain species of rodents. You cannot get hantavirus from farm animals, such as cows, chickens or sheep, or from insects, such as mosquitoes. Dogs and cats are not known to carry

hantavirus. However, they may bring infected rodents into contact with people if they catch such animals and carry them home. Guinea pigs, hamsters, gerbils and other such pets are not known to carry hantavirus.

Who Is at Risk of Getting HPS, and Why?

You can be old or young, male or female, of any race, living anywhere in almost any part of the Americas. Healthy, active people are more likely to become infected because their activities often put them in contact with the virus.

What Kind of Activities Are Risky?

Anything that puts you in contact with rodent droppings, urine or nesting materials can place you at risk for infection. These include such activities as opening up cabins and sheds or cleaning outbuildings that have been closed during the winter - such as barns, garages or storage facilities for farm and construction equipment. Both activities mean you may directly touch rodents or their droppings and/or "stir up the dust," and when you touch or inhale them, you're at risk for infection.

Hikers and campers can also be exposed when they use infested trail shelters or camp in other rodent habitats.

Exposure is possible when working in closed-up sheds or crawl spaces. Construction and utility workers can be exposed when they work in crawl spaces under houses or in vacant buildings that may have a rodent population.

Cleaning in and around your own home can put you at risk if rodents have made it their home, too. And many homes can expect to shelter a few rodents, especially when the weather turns cold.

Keep areas around your home clean to prevent mice. Overall, the chance of being exposed to hantavirus is greatest when people work, play or live in closed spaces where rodents are actively living. However, recent research results show that many people who have become ill with HPS got the disease after having been in frequent contact with rodents and/or their droppings for some time. In addition, many people who have become ill reported that they had not seen rodents or their droppings - at all. Therefore, if you live in an area where the carrier rodents such as the deer mouse are known to live, take sensible precautions before you do activities like those described above - even if you don't see any rodents or their droppings.

What Are The Symptoms of HPS?

The Early Symptoms

Early symptoms include fatigue, fever and muscle aches, especially the large muscle groups - thighs, hips, back, sometimes shoulders. These symptoms are universal. There may also be headaches, dizziness, chills and/or abdominal problems, such as nausea, vomiting, diarrhea and abdominal pain. About half of all HPS patients experience these symptoms.

How long could it be between the time you get the virus, and the time you start showing these symptoms?

Because there have been so few cases of HPS, it isn't quite clear what this "incubation time" is. However, on the basis of limited information, it appears that symptoms may develop between 1 and 5 weeks after exposure to potentially infected rodents and their droppings.

Another important point to remember from the data that the CDC Special Pathogens Branch keeps on all reported cases of HPS, it appears that many people who have become ill were in a situation where they didn't see rodents or rodent droppings. Other people have had frequent contact with rodents and their droppings before becoming ill. This apparent inconsistency makes it very difficult to pin down the precise time when the virus was transmitted.

Late Symptoms

Four to 10 days after the initial phase of illness, the late symptoms of HPS appear. These include coughing and shortness of breath, with the sensation of, as one survivor put it, a "...tight band around my chest and a pillow over my face" as the lungs fill with fluid.

What Symptoms Aren't Common?

Earache, sore throat and rash are very uncommon.

Tips For Preventing HPS:

Indoors:

- Keep a clean home, especially kitchen (wash dishes, clean counters and floor, keep food covered in rodent-proof containers).
- Keep a tight-fitting lid on garbage, discard uneaten pet food at the end of the day.
- Set and keep spring-loaded rodent traps. Set traps near baseboards because rodents tend to run along walls and in tight spaces rather than out in the open.
- Cracks in foundation allow mice to enter your home so seal all entry holes 1/4 inch wide or wider with lath screen or lath metal, cement, wire screening or other patching materials, inside and out.

Outdoors:

- Clear brush, grass and junk from around house foundations to eliminate a source of nesting materials.
- Use metal flashing around the base of wooden, earthen or adobe homes to provide a strong metal barrier. Install so that the flashing reaches 12 inches above the ground and six inches down into the ground.
- Elevate hay, woodpiles and garbage cans to eliminate possible nesting sites. If possible, locate them 100 feet or more from your house.
- Encourage the presence of natural predators, such as non-poisonous snakes, owls and hawks.
- Remember, getting rid of all rodents isn't feasible, but with ongoing effort you can keep the population very low.

Clean Up Infested Areas, Using Safety Precautions:

- Do not sweep infestation material! Put on latex rubber gloves before cleaning up.
- Don't stir up dust by sweeping up or vacuuming up droppings, urine or nesting materials. Instead, thoroughly wet contaminated areas with detergent or liquid to deactivate the virus. Most general purpose disinfectants and household detergents are effective. However, a hypochlorite solution prepared by mixing 1 and ½ cups of household bleach in 1 gallon of water may be used in place of commercial disinfectant. When using the chlorine solution, avoid spilling the mixture on clothing or other items that may be damaged.

Spray mouse droppings while wearing gloves. Once everything is wet, take up contaminated materials with a damp towel, then mop or sponge the area with disinfectant.

Spray dead rodents with disinfectant, then double-bag along with all cleaning materials and bury or burn - or throw out in appropriate waste disposal system. If burning or burying isn't feasible, contact your local or state health department about other disposal methods.

Finally, disinfect gloves before taking them off with disinfectant or soap and water. After taking off the clean gloves, thoroughly wash hands with soap and warm water.

Bag up nesting material when going into cabins or outbuildings (or work areas) that have been closed for awhile, open them up and air out before cleaning.

What If My House or Workplace is Heavily Infested with Rodents?

You should get help from a professional exterminator if you see lots of droppings or rodents - you may

have a bad infestation problem. Or you can contact your local health authorities for advice.

Precautions for Workers in Affected Areas Who are Regularly Exposed to Rodents:

Persons who frequently handle or are exposed to rodents (e.g., mammalogists, pest-control workers) in the affected area are probably at higher risk for hantavirus infection than the general public because of their frequency of exposure. Therefore, enhanced precautions are warranted to protect them against hantavirus infection.

Precautions To Be Used:

- Workers in potentially high-risk settings should be informed about the symptoms of the disease and be given detailed guidance on prevention measures.
- Workers who develop a febrile or respiratory illness within 45 days of the last potential exposure should immediately seek medical attention and inform the attending physician of the potential occupational risk of hantavirus infection. The physician should contact local health authorities promptly if hantavirus-associated illness is suspected. A blood sample should be obtained and forwarded through the state health department to CDC for hantavirus antibody testing.
- Workers should wear a half-face air-purifying (or negative-pressure) respirator or PAPR equipped with HEPA filters when removing rodents from traps or handling rodents in the affected area. (Please note: the HEPA classification recently has been discontinued. Under the new classification system, the N-100 filter type is recommended. Read the Federal Occupational Safety and Health Administration (OSHA) directive online, at "OSHA Directives: CPL 2-0.120 - Inspection procedures for the Respiratory Protection Standard".)
- Respirators (including positive-pressure types) are not considered protective if facial hair interferes with the face seal, since proper fit cannot be assured. Respirator use practices should be in accord with a comprehensive user program and should be supervised by a knowledgeable person.
- Workers should wear rubber or plastic gloves when handling rodents or handling traps containing rodents. Gloves should be washed and disinfected before removing them, as described above.
- Traps contaminated by rodent urine or feces or in which a rodent was captured should be disinfected with a commercial disinfectant or bleach solution. Dispose of dead rodents as described in the section on Eliminating Rodents inside the Home.

Precautions for Other Occupational Groups Who Have Potential Rodent Contact:

Insufficient information is available at this time to allow general recommendations regarding risks or precautions for persons in the affected areas who work in occupations with unpredictable or incidental contact with rodents or their habitations. Examples of such occupations include telephone installers, maintenance workers, plumbers, electricians, and certain construction workers. Workers in these jobs may have to enter various buildings, crawl spaces, or other sites that may be rodent infested. Recommendations for such circumstances must be made on a case-by-case basis after the specific working environment has been assessed and state or local health departments have been consulted.

Precautions for Campers and Hikers in the Affected Areas

There is no evidence to suggest that travel into areas where HPS has been reported should be restricted. Most usual tourist activities pose little or no risk that travelers will be exposed to rodents or their urine and/or droppings. However, persons who do outdoor activities such as camping or hiking in areas where the disease has been reported should take precautions to reduce the likelihood of their exposure to potentially infectious materials.

Useful Precautions:

- Avoid coming into contact with rodents and rodent burrows or disturbing dens (such as pack rat nests).
- Air out, then disinfect cabins or shelters before using them. These places often shelter rodents.
- Do not pitch tents or place sleeping bags in areas in proximity to rodent droppings or burrows or near areas that may shelter rodents or provide food for them (e.g., garbage dumps or woodpiles).
- If possible, do not sleep on the bare ground. In shelters, use a cot with the sleeping surface at least 12

inches above the ground. Use tents with floors or a ground cloth if sleeping in the open air.

- Keep food in rodent-proof containers!

- Use only bottled water or water that has been disinfected by filtration, boiling, chlorination, or iodination for drinking, cooking, washing dishes, and brushing teeth.

- And last but not least, do not play with or handle any rodents that show up at the camping or hiking site, even if they appear friendly.

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For more information, contact:

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