Hantavirus

What is Hantavirus? Hantavirus is a rare but serious illness.
Hantavirus is a group of viruses that are found in the urine, saliva and dropping of infected deer mice and some other wild rodents. Hantavirus pulmonary syndrome (HPS) was first diagnosed in 1983 in the southwestern United States. Exposure can result in a serious lung disease called Hantavirus Pulmonary Syndrome (HPS). There are different strains of Hantavirus that can cause human illness. The most common one is called *Sin Nombre* virus.

Description of Deer Mice
The deer mouse is about six inches long from nose to the tip of its tail. It is grayish to light brown on top, with a white belly, large ears and a furry tail that is white on the underside. The deer mice live primarily in rural and semi rural areas but can also reside in urban centers.

Routes of Infection/Exposure
Hantavirus infection is contracted by breathing air with contaminated dust or ingestion of contaminated materials through accidentally rubbing eyes, mouth or broken skin with hantavirus infected deer mouse saliva, urine or feces. Person to person transmission does not appear to occur. There have not been any reports of infection from human contact in North America. Animals are not known to get sick from this virus and other than the rodent species directly involved and no other animals are known to spread it. For example, a cat that eats an infected deer mouse will not get sick nor will it spread the disease.

Symptoms of Exposure
Symptoms of HPS develop between approximately one to six weeks after exposure, usually occurring around 14 days. In the early stages of infection an infected person may experience flu-like symptoms such as fever, chills, muscle aches, headaches, nausea, vomiting and shortness of breath. In severe cases, lung involvement including coughing and shortness of breath and low blood pressure follow the early symptoms by a few days to a week. Infection without symptoms is rare.

This disease progresses rapidly and infected people experience an abnormal fall in blood pressure and their lungs will fill with fluid. Severe respiratory failure, resulting in death can occur within a few days of the early stages of symptoms.

As of May 2000, there have been 33 cases reported in Canada of which 13 died (37%). Of the 33 cases reported in Canada, 20 were in Alberta, 6 in British Columbia, 5 in Saskatchewan and 2 in Manitoba.

Occupational Hazards
Occupations at risk include those people who work in environments where rodents live, nest or feed. Examples include; mamologiests, laboratory personnel, maintenance workers (telephone, plumbers and electricians), farmers, grain handlers, exterminators and wildlife (conservation) officers.

Sources of Exposure
- Sweeping and cleaning barns
- Trapping and studying mice
- Using compressed air and dry sweeping to clean up wood waste in a sawmill
- Handling grain contaminated with mouse droppings and urine
- Entering a barn infested with mice
- Planting or harvesting field crops
- Occupying vacant dwellings or living with a sizable indoor rodent population
- Disturbing rodent-infested areas while hiking or camping

How to prevent exposure to Hantavirus?
Since human infection can occur through inhalation of contaminated material, clean-up must be conducted in a way that limits airborne dust. Personal protective equipment should include rubber gloves, rubber boots and respiratory protective equipment with a HEPA filter. When cleaning rodent contaminated areas with heavy accumulations of droppings it is necessary to use powered air-purifying (PARP) or air-supplied respirators.

All dead mice, nests and droppings need to be soaked with a 10% solution of household bleach. After ten minutes of decontamination, all material needs to be placed in a plastic bag and disposed of by burning or burying. Gloves and other equipment used in the cleaning process should be disposed of in the same manner as other contaminated material. Thoroughly wash hands with soap and water after removing gloves.

Post Exposure
If flu-like or respiratory symptoms are experienced after suspected exposure to rodents, medical attention should be sought as soon as possible. The diagnosis of Hantavirus is made on the basis of symptoms and blood tests.

Where can I get more information?
Contact your local public health unit or call Health Links-Info at 788-9257 in Winnipeg, toll-fee elsewhere in Manitoba 1-888-315-9257. For work-related issues contact Workplace Safety & Health at (204) 945-6848.