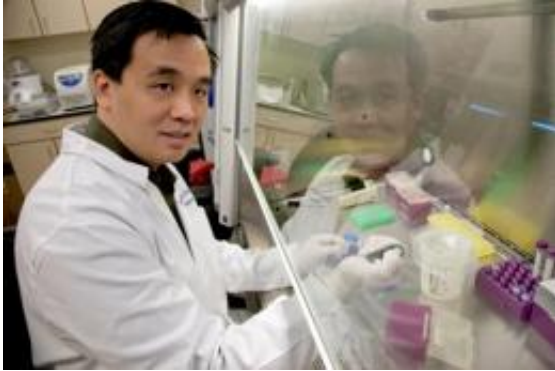


# Hantavirus: Be careful, not fearful

August 30 2012, by Jeffrey Norris

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Charles Chiu, MD, PhD. Photo: Susan Merrell

(Medical Xpress)—Hantavirus, a potentially fatal virus transmitted by rodents such as deer mice, is making news following an unusual outbreak at a popular tourist area of Yosemite National Park. The recent cases are a reminder for campers to be cautious, but not necessarily fearful, according to UCSF infectious diseases expert, Charles Chiu, MD, PhD.

Previous [hantavirus](#) cases in [Yosemite](#) had originated at [higher elevations](#), which are favored by the deer mouse that carries the virus, said Chiu, who directs the UCSF-Abbott Viral Diagnostics and Discovery Center. Other rodents, including [house mice](#), are rarely if ever carriers of the virus.

"For whatever reason, it appears that the range of the deer mouse is moving to include lower elevations," he said. "Over the past two decades,

most exposures to the virus have been in very rural areas. Now we are starting to see potentially more people at risk perhaps due to changing [geographical distribution](#) of the deer mouse."

Hantavirus has been fatal in more than one-third of the nearly 600 cases reported since it was first recognized in 1993 in the Four Corners region of New Mexico. Three—possibly four—cases of infection, including two deaths, have been linked to June stays at tent cabins in Yosemite's Curry Village.

Chiu prescribes precautions for those who want to be happy, virus-free, Labor Day campers at Yosemite and other favored camping destinations. But there is no reason to ruin your vacation out of fear, he said.

The virus is often deadly but infection is very rare, and potential exposures occur much more often than infection, Chiu said. The virus is not spread by infected humans or by other animals. Furthermore, the virus does not survive long in dust after the mice that carry it have been eradicated, Chiu said.

Contamination depends on continual exposure to infected [deer mice](#). "The mice most likely must have been around within hours or days of infection," Chiu said.

Humans may become infected by inhaling dust contaminated by the droppings or urine of an infected mouse, which does not exhibit any symptoms when carrying hantavirus. The deer mouse nests in wood, and may nest in the logs of wooden cabins or stacks of firewood. The virus does not fare well in sunlight, but survives well in dark, musty environments, which may include seldom-used cabins that have not recently been aired out or cleaned.

Infection may occur up to six weeks before symptoms become apparent,

Chiu said. Initial flu-like symptoms from hantavirus infection can include fever, fatigue, muscle aches, and stomach upset. Respiratory symptoms occur later and may progress to pneumonia that requires that patients be on a breathing tube in the intensive care unit, to secondary bacterial infections, and to multi-organ failure.

According to Chiu, there is no known effective anti-viral treatment for hantavirus infection, but early detection and medical care that includes close monitoring, fluids, oxygen and antibiotics to treat secondary infections increase the likelihood of survival.

Chiu suggested that continuing outbreaks of hantavirus infection might spur greater interest in the development of new treatments or a vaccine.

### **Lower Your Risk for Hantavirus Infection**

- Stay away from wild rodents and do not pitch tents near logs or mouse droppings.
- Open doors and windows of cabins upon arriving and allow at least 30 minutes for airing out.
- Do not raise dust by sweeping or vacuuming.
- Wipe down floors and surfaces with a solution of one part bleach and 10 parts water using a sponge, sponge mop or rags. Wear rubber, vinyl or latex gloves, as well as a dust mask while cleaning.
- Seal up all food tightly to keep mice away. Clean dishes and utensils promptly after use. Close garbage containers securely.

Provided by University of California, San Francisco

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