

## Information sheet about pathogens in humans – hygiene keeps you safe!

### What are hantaviruses?

Hantaviruses occur around the world and cause a number of severe diseases. The pathogens are transmitted to humans through rodents such as mice and rats, and in Germany mostly through the bank vole and striped field mouse. Various rodents spread different types of the virus, usually without falling ill themselves. The number of cases in humans fluctuates from year to year, depending on the rodent population and the number of animals carrying the virus. Hantavirus infections can occur all year round, but most diseases are observed from April to September.

### How are hantaviruses transmitted?

#### *Through rodents*

The viruses are excreted by infected rodents in their saliva, feces or urine. Even when dried, the pathogens are still infectious for several days to several weeks. Direct contact with the affected rodents is not necessary for infection. Infection can occur if swirled up dust containing excretions from animals is inhaled. Hantaviruses can also enter the body through small skin injuries, for example to the hands, if they come into contact with contaminated soil. Transmission through food contaminated with excretions from infected rodents is also possible. An infection can also be caused by an animal bite.

Important: The pathogens occurring in our area are not passed on from person to person.

### What symptoms do the sufferers show?

The severity of disease can depend on the type of virus. Sometimes it will run its course unnoticed and without any symptoms.

The predominant form of the disease in Germany usually begins with a sudden onset of fever persisting for 3 to 4 days, accompanied by flu-like symptoms, such as headaches, stomach and back pain as well as nausea and diarrhea. Dizziness, light-headedness and vision problems are also possible. Bleeding can occur, especially from the conjunctiva of the eyes, rarely also from the skin and mucous membranes. As the disease progresses, there may be a sudden drop in blood pressure and eventually temporary impairments to the kidney function. The form of the disease observed in Germany usually heals without any lasting damage. Fatalities are very rare.

### What's the incubation period – and how long are you contagious?

The first symptoms usually appear 2 to 4 weeks after being infected and in exceptional cases after 5 or only after up to 60 days.

Sufferers are not contagious as transmission from person to person does not occur with the virus types common in Germany.

### Who is particularly at risk?

Hantavirus diseases do not occur at the same rate in all areas of Germany. Infections transmitted by the bank vole are concentrated in north-western, western and southern Germany, in particular the Swabian Alb, the Münster region, the Teutoburger Forest, Lower Franconia, the Odenwald, Upper Swabia, the Franconian Alb, the Bavarian Forest, East Hesse and West Thuringia. In addition to these predominantly rural regions, there are also individual urban areas in which infections in humans occur more frequently. Infections transmitted by the striped field mouse occur in northern, north-eastern and eastern Germany.

People in the risk areas are particularly at risk of becoming infected with hantaviruses during the following activities:

- ▶ Forestry or construction work,
- ▶ Staying in or cleaning sheds, stables or houses where there are or were rodents, particularly when dust is swirled up,
- ▶ Outdoor activities that can lead to contact with rodents or their excretions, such as gardening, hunting, jogging or camping.

## What should I do if I fall ill?

- ▶ If you suspect that you may have a hantavirus, see your doctor. All the necessary steps will be taken there.
- ▶ Only the symptoms (for example, pain and fever) are usually treated. However, severe cases of the disease, such as kidney function disorders, may require hospital treatment.
- ▶ Sufferers do not need to be isolated because they are not contagious.

## How can I protect myself?

### **Important tips regarding your protection:**

- ▶ Control mice and rats especially in residential areas, such as basements, attics or sheds.
- ▶ Keep food safe and firmly closed to avoid attracting rodents. This also applies to animal feed.
- ▶ Dispose of waste in closable rubbish bins and cans.
- ▶ Do not put food residues and animal waste in the household compost.
- ▶ Dispose of nesting opportunities for rodents, such as bulky waste or waste heaps.
- ▶ Avoid contact with the excretions from rodents, especially mice.
- ▶ Wash your hands carefully after spending time outdoors or in basements, attics or sheds.

### **If you need to remove mouse corpses or feces:**

- ▶ Wear disposable gloves and suitable nose and mouth protection indoors (FFP2 or FFP3 fine dust mask).
- ▶ Ventilate the area thoroughly beforehand for at least 30 minutes.
- ▶ Avoid stirring up dust. Do not use a vacuum cleaner as viruses may be released through the exhaust air.
- ▶ Thoroughly spray droppings or corpses with water to reduce the amount of dust produced.
- ▶ Put the animal corpse into a plastic bag. Seal the bag carefully and dispose of it in the household waste.
- ▶ Afterwards, clean contaminated areas thoroughly with a household cleaner and dispose of the rags or sponges used. Have a shower immediately after the work and wash your hair. Work clothes should also be washed.

There is no vaccine to protect against hantaviruses.

## Where can I get more information?

Your local health authority can provide you with further advice and information. Since hantaviruses must be reported, it also has information on the latest situation and a wealth of experience in dealing with the disease.

More (specialist) information is also available online from the Robert Koch Institute ([www.rki.de/hantaviren](http://www.rki.de/hantaviren)) and the Friedrich-Loeffler Institute ([www.fli.de](http://www.fli.de)).



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Bundeszentrale für gesundheitliche Aufklärung, Cologne.  
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