

What is Arenaviridae?

The *Arenaviridae* are a family of viruses whose members are generally associated with rodent-transmitted diseases in humans. Viruses in this group can cause mild to severe illnesses including the following:

- Argentinian hemorrhagic fever
- Bolivian hemorrhagic fever
- Brazilian hemorrhagic fever
- Venezuelan hemorrhagic fever
- Lassa fever
- Chapare hemorrhagic fever
- Lujo hemorrhagic fever
- Lymphocytic choriomeningitis (LCM)

Who is at risk for Arenaviridae?

The main groups at risk for diseases caused by *Arenaviridae* viruses are laboratory workers who work with the viruses, people in contact with rodents in areas where the diseases are present, and healthcare providers working with infected patients. In areas where these viruses are present, field workers are particularly at risk because of increased contact with rodents.

What are the symptoms of Arenaviridae?

General symptoms include fever, cough, body aches, headache, and reduction of white blood cells, typically followed by complete recovery. In rare cases, symptoms start as stiff or sore neck, rash, and myocarditis. The diseases caused by *Arenaviridae* viruses can be fatal.

How soon do symptoms appear?

Depending on the illness, the incubation period can range from 5 – 21 days.

How is Arenaviridae spread?

Human infection occurs when an individual comes into contact with the excretions or materials contaminated with the excretions of an infected rodent, such as ingestion of contaminated food, or by direct contact of abraded or broken skin with rodent excrement. Infection can also occur by inhalation of tiny particles soiled with rodent urine or saliva (aerosol transmission).

Person-to-person transmission of these diseases is uncommon, but has been documented in some illnesses. It has been reported that LCM can be passed from infected mother to fetus. *Arenaviridae* illness can cause complications in pregnant women.

When and for how long is a person able to spread the disease?

As long as virus is present. In some cases, virus is present in the urine of an infected case for 3 – 9 weeks and in semen for up to three months.

How is a person diagnosed?

Several tests including can be used to detect antibodies of the Arenaviridae viruses. These tests are typically done on blood or cerebral spinal fluid samples.

What is the treatment?

There is no specific treatment for most of these illnesses. Some of the illnesses, such as Lassa fever, respond to anti-viral therapies if they are treated during the first week of illness. Supportive therapy, including managing secondary bacterial infections, may also help reduce mortality.

Does past infection make a person immune?

Yes. Infection with *Arenaviridae* viruses show immunity, but the type of virus causing the infection will determine the length of that immunity.

Should children or others be excluded from child care, school, work or other activities if they have Arenaviridae?

Yes. People with diseases caused by *Arenaviridae* should stay home from school, work and child care until they have been fever free for 24 hours without the aid of fever reducers. In some cases, infected people will need to be hospitalized until the illness subsides.

What can be done to prevent the spread of Arenaviridae?

General rules of thumb:

- Avoid contact with blood and body fluids of infected individuals
- Prevent rodents from nesting in or near your home.
- Avoid rodent contact when traveling to affected countries
- Keep pet food covered and stored in rodent-proof containers. Do not leave excess pet food or water out overnight.
- Store garbage in containers with tight-fitting lids. Dispose of garbage on a frequent basis and pick up or eliminate clutter.

Additional Information:

Additional information is available by calling the North Dakota Department of Health at 800.472.2180.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease shall be reported to the North Dakota Department of Health.

Resources:

1. Centers for Disease Control and Prevention, 2013: www.cdc.gov/vhf/virus-families/arenaviruses.html
2. Virginia Bioinformatics Institute, 2011: ci.vbi.vt.edu:13001/pathinfo/pathogens/
3. Control of Communicable Disease Manual, 20th Edition-2015, Heymann, David, MD ed.
4. American Academy of Pediatrics. [Children in Out-Of-Home Care]. In: Kimberlin DW, Brady MT, Jackson MA, Long SS, eds. *Red Book: 2015 Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015: 132-151.