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What are viral hemorrhagic fevers?

Viral hemorrhagic fevers (VHF) are a group of illnesses caused by viruses. These viruses live, for the most part, in certain rodents, bats, and insects in parts of the world where VHFs naturally occur. VHFs affect multiple body systems and tend to cause bleeding (hemorrhaging).

There are five distinct families of viruses that cause hemorrhagic fevers:

- Arenaviruses (such as Lassa fever virus)
- Filoviruses (such as **Ebola virus** and **Marburg virus**)
- Bunyaviruses (such as Crimean Congo hemorrhagic fever virus and Rift Valley fever virus)
- Flaviviruses (such as yellow fever virus and dengue virus)
- Paramyxoviruses (such as the Nipah virus and Hendra virus)

Who gets viral hemorrhagic fever?

Anyone can get VHF, but it generally occurs in people who live in or visit areas where the virus is found and who have had contact with:

- Infected rodents, bats, or insects and their excretions
- Body fluids from people who are sick with or who died from a VHF

How are viral hemorrhagic fevers spread?

The way VHFs spread depends on the type of VHF. In general, VHF can spread by:

- Getting bitten by an infected insect like a mosquito, tick or sand fly
- Handling infected animals (dead or alive)
- Having direct contact with infected animal urine or feces
- Breathing in airborne particles of an infected animal's urine or feces
- Close contact with infected people or their body fluids during their illness or after their death
- Direct contact with objects contaminated with infected body fluids
- In some types of VHF, semen from a man who has recovered

What are the symptoms of viral hemorrhagic fever?

Specific symptoms vary by type of VHF. Initial symptoms often include:

- Fever
- Tiredness
- Weakness or feeling unwell
- Dizziness
- Muscle aches

- Vomiting
- Diarrhea

Patients with severe illness often experience:

- Bleeding under the skin, inside the body, or from the mouth, eyes or ears
- Bloody diarrhea
- Shock
- Problems with the nervous system
- Coma
- Seizures
- Organ failure

How soon after exposure do symptoms appear?

Symptoms may appear anywhere from days to weeks after exposure, depending on the type of VHF.

How are viral hemorrhagic fevers diagnosed?

The Centers for Disease Control and Prevention (CDC) and other public health laboratories conduct special tests to diagnose VHF. Samples of blood and other sites can be used to test for the viruses. The Virginia Department of Health (VDH) will coordinate testing if someone in Virginia has symptoms of VHF.

What is the treatment for viral hemorrhagic fever?

Patients receive supportive care to relieve VHF symptoms. There are specific treatments for only a few types of VHF.

How can viral hemorrhagic fever be prevented?

- The best way to prevent VHF is to avoid contact with infected rodents, bats, mosquitoes, and ticks in areas where VHFs are common.
- Person-to-person transmission can be reduced by avoiding close physical contact with infected people and their body fluids during their illness and after their death.
- Vaccines are available for yellow fever, Ebola, and some other VHFs.
- Infection control techniques include isolating infected individuals and wearing protective clothing.

Could viral hemorrhagic fevers be used for bioterrorism?

Yes. Many VHFs are considered possible bioterrorism agents because they are highly infectious, can be made airborne, and would cause serious illness in the target population.

How can I get more information about viral hemorrhagic fever?

- If you have concerns about VHF, contact a healthcare provider.
- Call your local health department. A directory of local health departments in Virginia is located at the VDH Local Health Districts page.
- Visit the CDC Viral Hemorrhagic Fever website
- For Healthcare Providers:
 - Viral Hemorrhagic Fevers: Overview for Health Care Providers Two-page summary of: Organism, Reporting, Infectious Dose, Occurrence, Natural Reservoir, Route of Infection, Communicability, Case-fatality Rate, Risk Factors, Incubation Period, Clinical Manifestations, Differential Diagnosis, Laboratory Tests/Sample Collection, Treatment, and Vaccine
 - Viral Hemorrhagic Fevers: Guidance for Healthcare Providers: Key Medical and Public Health Interventions After Identification of a Suspected Case

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