FACT SHEET   Viral Hemorrhagic Fevers

What are viral hemorrhagic fevers?
Viral hemorrhagic fevers (VHFs) refer to a group of illnesses that are caused by several distinct families of viruses. VHF is used to describe a severe syndrome of illnesses that may affect multiple organ systems in the body. Usually the overall vascular system is damaged and the body's ability to regulate itself is impaired. Some types of VHF cause relatively mild illnesses, but many of these viruses cause severe, life-threatening disease, such as Ebola, Lassa, Crimean-Congo and Marburg.

What are the symptoms of an infection with viral hemorrhagic fevers?
Specific signs and symptoms vary by the type of VHF, but initial signs and symptoms often include fever, fatigue, dizziness, muscle aches, loss of strength, and exhaustion. People with severe cases of VHF often show signs of bleeding under the skin, in internal organs, or from body orifices like the mouth, eyes, and ears. Severely ill cases may develop shock, nervous system malfunction, coma, delirium, and seizures.

How soon do symptoms appear?
Depending on the specific virus involved, symptoms can appear within 1 to 21 days after exposure.

How are viral hemorrhagic fevers spread?
Most VHF viruses are zoonotic. This means that these viruses naturally reside in an animal reservoir host or arthropod vector. Rodents and arthropods are likely the main reservoirs for the viruses that cause VHFs. Forest dwelling fruit bats are believed to be the reservoir for Ebola.

VHF viruses are initially transmitted to humans when the activities of infected hosts and humans overlap, as follows:
- VHFs carried in rodents are transmitted to humans when they come into contact with rodent urine, fecal matter, saliva, or other secretions.
- VHFs associated with arthropod vectors are spread most often when the vector mosquito or tick bites a human, or when a human crushes a tick into a small wound.
- Humans may become infected when caring for or slaughtering livestock that have become infected.
- Some VHFs (Ebola, Marburg, Lassa, others) can spread directly from one person to another. This can occur directly, through close contact with infected body fluids, or indirectly through contact with objects contaminated such as needles with infected body fluids.

Who gets viral hemorrhagic fever infections?
Viruses that cause VHFs are distributed over much of the globe. However, since each virus is associated with one or more particular host species, the virus and the disease it causes are usually seen only where the host species lives. Therefore, the risk of getting VHFs caused by these viruses is restricted to those areas.

Although people usually become infected only in areas where the host lives, occasionally people become infected by a host that has been exported from its native habitat, or by a person who gets infected and travels elsewhere.

For how long is a person infectious?
This is not known with certainty for all VHFs. As long as the blood and secretions of an infected person contain the virus, a person is infectious. This has ranged to over 2 months in some cases.

What are the treatments for viral hemorrhagic fevers?
Patients generally receive supportive therapy since there is no other treatment or established cure for VHFs. Some antiviral drugs have been effective in treating individuals with VHFs.

Do infected people need to be excluded from school, work, or child care?
Yes, for those VHFs that can be transmitted from one person to another. Ill persons should remain home until testing shows a they are no longer infectious.

What can be done to help prevent the spread of viral hemorrhagic fevers?
Avoiding close physical contact with infected people and their body fluids is the most important way of controlling the spread of disease.

Prevention efforts also include avoiding contact with animal or insect host species which includes:
- Controlling rodent populations
- Discouraging rodents from entering or living in homes and workplaces
- Safe cleanup of rodent nests and droppings
- Appropriate control of arthropod vectors
- Use of insect repellent