



## Be aware from Ebola!

Ebola hemorrhagic fever (Ebola HF) or Ebola virus disease (EVD) is one of numerous Viral Hemorrhagic Fevers. It is a severe, often fatal disease in humans and nonhuman primates (such as monkeys, gorillas, and chimpanzees). Ebola is a rare but deadly virus that causes bleeding inside and outside the body. As the virus spreads through the body, it damages the immune system and organs. Ultimately, it causes levels of blood-clotting cells to drop. This leads to severe, uncontrollable bleeding. People can become infected with the Ebola virus if they come into contact with the blood, body fluids or organs of an infected person. It's difficult to know if a patient is infected with Ebola virus in the early stages as symptoms such as fever, headache and muscle pain are similar to those of many other diseases.

Most people are infected by giving care to other infected people, either by directly touching the victim's body or by cleaning up body fluids (stools, urine or vomit) that carry infectious blood. Health-care workers have frequently been infected while treating patients with suspected or confirmed EVD.

EVD is a severe acute viral illness often characterized by the sudden onset of fever, intense weakness, muscle pain, headache and sore throat. This is followed by vomiting, diarrhoea, rash, impaired kidney and liver function, and in some cases, both internal and external bleeding. Laboratory findings include low white blood cell and platelet counts and elevated liver enzymes. Ebola virus infections can be diagnosed definitively in a laboratory through several types of tests: such as, antibody-capture enzyme-linked immunosorbent assay (ELISA), antigen detection tests, serum neutralization test, reverse transcriptase polymerase chain reaction (RT-PCR) assay, electron microscopy, virus isolation by cell culture. No licensed vaccine for EVD is available. Several vaccines are being tested, but none are available for clinical use. New drug therapies are being evaluated. Severely ill patients require intensive supportive care. Patients are frequently dehydrated and require oral rehydration with solutions containing electrolytes or intravenous fluids.

Samples of blood or body fluid can be sent to a laboratory to be tested for the presence of Ebola virus, and a diagnosis can be made rapidly. Standard treatment for Ebola HF is still limited to supportive therapy. This consists of: balancing the patient's fluids and electrolytes, maintaining their oxygen status and blood pressure, treating them for any complicating infections. Timely treatment of Ebola HF is important but challenging since the disease is difficult to diagnose clinically in the early stages of infection. Because early symptoms such as headache and fever are nonspecific to ebolaviruses, cases of Ebola HF may be initially misdiagnosed.

The prevention of Ebola HF presents many challenges. Because it is still unknown how exactly people are infected with Ebola HF, there are few established primary prevention measures.

The Ebola virus is classified as a Risk Group 4 pathogen, and therefore requires being handled in an equivalent level of biosafety (BSL-4). Scientists and researchers are faced with the challenges of developing additional diagnostic tools to assist in early diagnosis of Ebola HF and conducting ecological investigations of Ebola virus and its possible reservoir. In addition, one of

the research goals is to monitor suspected areas to determine the incidence of the disease. More extensive knowledge of the natural reservoir of Ebola virus and how the virus is spread must be acquired to prevent future outbreaks effectively.



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