

# **Facts about Ebola (Hemorrhagic Fever)**

(for citizens - not intended for healthcare workers)

## **Ebola Symptoms**

- Fever (greater than 38.6°C or 101.5°F)
- Red eyes
- Skin Rash
- Severe headache
- Muscle pain
- Diarrhea
- Vomiting
- Abdominal (stomach) pain
- Symptoms may appear anywhere from 2 to 21 days after exposure to ebola virus, although 8-10 days is most common.

Some who become sick with Ebola are able to recover. We do not yet fully understand why. However, patients who die usually have not developed a significant immune response to the virus at the time of death.

## **Transmission**

Because the natural reservoir of ebolaviruses has not yet been proven, the manner in which the virus first appears in a human at the start of an outbreak is unknown. However, researchers have hypothesized that the first patient becomes infected through contact with an infected animal.

When an infection does occur in humans, the virus can be spread in several ways to others. The virus is spread through direct contact (through broken skin or mucous membranes) with:

- a sick person's blood or body fluids (urine, saliva, feces, vomit, and semen)
- objects (such as needles) that have been contaminated with infected body fluids
- infected animals

Healthcare workers and the family and friends in close contact with Ebola patients are at the highest risk of getting sick because they may come in contact with infected blood or body fluids.

During outbreaks of Ebola HF, the disease can spread quickly within healthcare settings (such as a clinic or hospital). Exposure to ebolaviruses can occur in healthcare settings where hospital staff are not wearing appropriate protective equipment, such as masks, gowns, and gloves.

Proper cleaning and disposal of instruments, such as needles and syringes, is also important. If instruments are not disposable, they must be sterilized before being used again. Without adequate sterilization of the instruments, virus transmission can continue and amplify an outbreak.

## **Risk of Exposure**

Ebola viruses are found in several African countries. The first Ebola virus was discovered in 1976 near the Ebola River in what is now the Democratic Republic of the Congo. Since then, outbreaks of Ebola among humans have appeared sporadically in Africa.

Risk assessment in disease-endemic areas is difficult because the natural reservoir host of ebolaviruses, and the manner in which transmission of the virus to humans occurs remains unknown.

All cases of human illness or death have occurred in Africa (with the exception of several laboratory contamination cases: one in England and two in Russia)

- No cases have been reported in the United States
- In 2014, two U.S. healthcare workers who were infected with Ebola virus in Liberia were transported to a hospital in the United States.

Those at highest risk include

- Healthcare workers
- Family and friends of patients with Ebola

## **Prevention**

Because we still do not know exactly how people are infected with Ebola, few primary prevention measures have been established and no vaccine exists.

When cases of the disease do appear, risk of transmission is increased within healthcare settings. Therefore, healthcare workers must be able to recognize a case of Ebola and be ready to use practical viral hemorrhagic fever isolation precautions or barrier nursing techniques. They should also have the capability to request diagnostic tests or prepare samples for shipping and testing elsewhere.

Barrier nursing techniques include:

- wearing of protective clothing (such as masks, gloves, gowns, and goggles)
- using infection-control measures (such as complete equipment sterilization and routine use of disinfectant)
- isolating patients with Ebola from contact with unprotected persons.
- The aim of all of these techniques is to avoid contact with the blood or secretions of an infected patient. If a patient with Ebola dies, direct contact with the body of the deceased patient should be avoided.

CDC, in conjunction with the World Health Organization, has developed a set of guidelines to help prevent and control the spread of Ebola. Entitled Infection Control for Viral Hemorrhagic Fevers in the African Health Care Setting, the manual describes how to recognize cases of viral hemorrhagic fever (such as Ebola) and prevent further transmission in healthcare setting by using locally available materials and minimal financial resources.

If you must travel to an area with known Ebola cases, make sure to do the following:

- Practice careful hygiene. Avoid contact with blood and body fluids.
- Do not handle items that may have come in contact with an infected person's blood or body fluids.
- Avoid funeral or burial rituals that require handling the body of someone who has died from Ebola.
- Avoid contact with bats and nonhuman primates or blood, fluids, and raw meat prepared from these animals.
- Avoid hospitals where Ebola patients are being treated.
- After you return, monitor your health for 21 days and seek medical care immediately if you develop symptoms of Ebola.

### **Treatment**

No specific vaccine or medicine (e.g., antiviral drug) has been proven to be effective against Ebola.

Symptoms of Ebola are treated as they appear. The following basic interventions, when used early, can increase the chances of survival.

- Providing intravenous fluids and balancing electrolytes (body salts)
- Maintaining oxygen status and blood pressure
- Treating other infections if they occur

Timely treatment of Ebola HF is important but challenging because the disease is difficult to diagnose clinically in the early stages of infection. Because early symptoms, such as headache and fever, are nonspecific to ebola viruses, cases of Ebola HF may be initially misdiagnosed.

However, if a person has the early symptoms of Ebola HF and there is reason to believe that Ebola HF should be considered, the patient should be isolated and public health professionals notified. Supportive therapy can continue with proper protective clothing until samples from the patient are tested to confirm infection.

Experimental treatments have been tested and proven effective in animal models but have not yet been used in humans.