

Ebola Virus Disease (EVD)

What is it?

Ebola, previously known as Ebola hemorrhagic fever, is a rare and deadly disease caused by infection with one of the Ebola virus strains. Ebola can cause disease in humans and nonhuman primates.

The natural reservoir host of Ebola virus remains unknown. However, on the basis of evidence and the nature of similar viruses, researchers believe that the virus is animal-borne and that bats are the most likely reservoir. Four of the five virus strains occur in an animal host native to Africa.

What are the Symptoms?

Symptoms of Ebola include

- Fever
- Severe headache
- Muscle pain
- Weakness
- Diarrhea
- Vomiting
- Abdominal (stomach) pain
- Unexplained hemorrhage (bleeding or bruising)

Symptoms may appear anywhere from 2 to 21 days after exposure to Ebola, but the average is 8 to 10 days.

How is it Spread?

Ebola is spread through direct contact (through broken skin or mucous membranes in, for example, the eyes, nose, or mouth) with

- blood or body fluids (including but not limited to urine, saliva, sweat, feces, vomit, breast milk, and semen) of a person who is sick with Ebola
- objects (like needles and syringes) that have been contaminated with the virus
- infected animals
- Ebola is **not spread through the air or by water**, or in general, by food. However, in Africa, Ebola may be spread as a result of handling bushmeat (wild animals hunted for food) and contact with infected bats. There is no evidence that mosquitos or other insects can transmit Ebola virus.

Healthcare providers caring for Ebola patients 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 of sick patients.

What is the Treatment?

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

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

Experimental vaccines and treatments for Ebola are under development, but they have not yet been fully tested for safety or effectiveness.

Recovery from Ebola depends on good supportive care and the patient's immune response. People who recover from Ebola infection develop antibodies that last for at least 10 years, possibly longer. It isn't known if people who recover are immune for life or if they can become infected with a different strain of Ebola. Some people who have recovered from Ebola have developed long-term complications, such as joint and vision problems.

Prevention

There is **no FDA-approved vaccine** available for Ebola.

If you travel to or are in an area affected by an Ebola outbreak, make sure to do the following:

- Practice careful hygiene. For example, wash your hands with soap and water or an alcohol-based hand sanitizer and 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 (such as clothes, bedding, needles, and medical equipment).
- 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 in West Africa where Ebola patients are being treated. The U.S. embassy or consulate is often able to provide advice on facilities.
- After you return, monitor your health for 21 days and seek medical care immediately if you develop the symptoms of Ebola (<http://www.cdc.gov/vhf/ebola/symptoms/index.html>).

Healthcare workers who may be exposed to people with Ebola should follow these steps:

- Wear protective clothing, including masks, gloves, gowns, and eye protection.
- Practice proper infection control and sterilization measures. For more information, see "[Infection Control for Viral Hemorrhagic Fevers in the African Health Care Setting](http://www.cdc.gov/vhf/abroad/vhf-manual.html)" (<http://www.cdc.gov/vhf/abroad/vhf-manual.html>).
- Isolate patients with Ebola from other patients.
- Avoid direct contact with the bodies of people who have died from Ebola.

- Notify health officials if you have had direct contact with the blood or body fluids, such as but not limited to, feces, saliva, urine, vomit, and semen of a person who is sick with Ebola. The virus can enter the body through broken skin or unprotected mucous membranes in, for example, the eyes, nose, or mouth

How is the US and Ohio preparing?

- In preparation for potential infections, CDC, State & Local Health Districts have:
 - Enhanced surveillance and laboratory testing capacity in states to detect cases.
 - Developed guidelines and tools for LHDs to conduct public health investigations.
 - Provided recommendations for healthcare infection control and other measures to prevent disease spread.
 - Provided guidance for flight crews, Emergency Medical Services units at airports, and Customs and Border Protection officers about reporting ill travelers to CDC.
 - Disseminated up-to-date information to the general public, international travelers, and public health partners.
- In Warren County:
 - The Warren County Combined Health District (WCCHD) has been relaying information, guidance and resources from ODH and CDC to local hospital infection prevention and control staff; emergency department leadership; Warren County EMA; and emergency medical services.
 - WCCHD has participated on daily conference calls with the CDC, Ohio Department of Health and other local health districts.
 - WCCHD verified we have the required personal protective equipment and response procedures should a suspected case or exposed individual come to the health district seeking medical care.
- Measures currently underway locally, regionally and nationally to prevent the spread of Ebola include:
 - Development and dissemination of case definitions;
 - Isolation plans for ill people;
 - Quarantine plans for people potentially exposed to an ill person.
 - These are measures that are core public health functions, and are things public health professionals do every day for control of communicable diseases.

What can travelers do to prevent Ebola?

There is no vaccine or specific treatment for Ebola, and many people who get the disease die. Therefore, it is important to take steps to prevent Ebola.

- Avoid nonessential travel to Liberia, Guinea, and Sierra Leone.
- If you must travel, please make sure to do the following:
 - Before your trip check your health insurance plan and benefits to learn what is covered in the event that you become ill. CDC recommends that anyone traveling to countries

where outbreaks of Ebola are occurring have full coverage, including coverage for emergency medical evacuation.

- Practice careful hygiene. For example, wash your hands with soap and water or use an alcohol-based hand sanitizer
- Avoid contact with blood and body fluids (such as urine, saliva, sweat, feces, vomit, and semen).
- Do not handle items that may have come in contact with an infected person's blood or body fluids.
- Avoid direct contact with the body of someone who has died from Ebola, including participating in funeral or burial rituals.
- Avoid contact with animals (such as bats or monkeys) or with raw or undercooked meat.
- Do not eat or handle bushmeat (wild animals hunted for food).
- Avoid hospitals in West Africa where Ebola patients are being treated. The US Embassy or consulate is often able to provide advice on facilities that are suitable for your needs. The US Embassy Monrovia can be reached at +(231) 77-677-7000.
- Seek medical care immediately if you develop fever (100.4°F / 38°C or higher) or other symptoms such as severe headache, muscle pain, vomiting, diarrhea, stomach pain, or unexplained bleeding or bruising.
 - Limit your contact with other people when you travel to the doctor. Do not travel anywhere else.

After your return to the United States

If you were exposed to Ebola during your trip, call your doctor even if you do not have symptoms. Your doctor should evaluate your exposure level and symptoms if you have them and consult with public health authorities to determine whether actions, such as medical evaluation and testing for Ebola, monitoring, or travel restrictions are needed.

Pay attention to your health after you return, **even if you were not exposed to Ebola during your trip.**

- Monitor your health for 21 days if you were in an area with an Ebola outbreak.
 - Take your temperature every morning and evening.
 - Watch for other Ebola symptoms: severe headache, muscle pain, vomiting, diarrhea, stomach pain, or unexplained bleeding or bruising.
 - If your temperature is 100.4°F (38°C) or higher or you have any other Ebola symptoms, seek medical care immediately.
 - Tell the doctor about your recent travel and your symptoms before you go to the doctor's office or hospital. Advance notice will help the doctor care for you and protect other people who may be in the doctor's office or hospital.
 - Limit your contact with other people when you travel to the doctor; avoid public transportation.
 - Do not travel anywhere except to the doctor's office or hospital.
- During the time that you are monitoring your health, you can continue your normal activities, including work. If you get symptoms of Ebola, it is important to stay apart from other people and to call your doctor right away.