



Ebola

Frequently Asked Questions

What is Ebola Virus Disease?

Ebola Virus Disease (EVD) is also called Ebola Hemorrhagic Fever (EHF). Ebola is caused by infection with a virus of the genus *Ebolavirus*. It is a severe, often fatal, disease in humans and non-human primates (such as monkeys, gorillas, and chimpanzees). Ebola was first discovered in 1976 in the African country of Zaire (now called Democratic Republic of Congo), near the Ebola River for which the disease is named. Since then, outbreaks have appeared sporadically in African countries.

Where is Ebola Virus Disease occurring?

Since early 2014, an outbreak of Ebola has been ongoing in the West African countries of Guinea, Liberia, and Sierra Leone.

Where has Ebola occurred outside of the 3 countries in West Africa?

A few cases related to the outbreak have occurred outside of West Africa in the countries of Nigeria, Spain, Senegal, and the United States. These cases were in persons who had traveled to the countries where the outbreak is occurring widespread in communities or they were in direct contact to a case of Ebola. Nigeria experienced transmission from a person who had travelled to one of these countries, but Nigeria has contained transmission and has now been declared Ebola free. In the United States, two healthcare workers were infected after treating a case of Ebola who traveled to Dallas, TX. In Spain, one healthcare worker was infected after treating a case of Ebola who was transported to Spain for care.

If a suspected case of Ebola is reported in Oklahoma that meets the clinical and travel criteria, what actions will the Oklahoma State Department of Health take to prevent the spread of Ebola?

If a case of Ebola is identified in Oklahoma, the OSDH will take the following steps:

- Work with the healthcare facility to collect clinical specimens for laboratory testing to confirm Ebola as the etiologic agent.
- Coordinate with healthcare providers to collect information about the patient, including travel and exposure history, illness symptoms, and dates and types of interactions the patient has had with other people since becoming symptomatic.
- Identify and monitor close contacts of the ill individual. This includes, but is not limited to: household or other close contacts, healthcare providers, emergency medical services providers, and laboratory workers. Contacts will be monitored for 21 days from their last date of exposure to the case and will be provided with instructions on limitations of activity or other measures to protect the public's health and prevent the spread of disease.
- Distribute advisories and recommendations to healthcare facilities regarding the occurrence of a case of EVD.
- Notify the public and provide educational resources regarding EVD.

What are the symptoms of Ebola?

The first symptoms of EVD are the sudden onset of fever, fatigue, muscle pain, and headache. These symptoms are followed by vomiting, diarrhea, rash, symptoms of impaired kidney and liver function, and in some cases, both internal and external bleeding (e.g. oozing from the gums, blood in the stools). Laboratory tests usually show low white blood cell and platelet counts and elevated liver enzymes.

How soon after exposure do symptoms usually occur?

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

When is a person with Ebola able to transmit the virus to other persons?

The Ebola virus can only be transmitted to other people when a person a person with Ebola is actually experiencing symptoms of illness due to Ebola disease.

How is Ebola spread?

Ebola is spread from person to person through **direct contact** (through broken skin or mucous membranes) with blood or body fluids (like feces, vomit, urine, saliva, sweat, tears, breast milk, semen, or anything moist) of a person who is sick with or has died from Ebola. Blood, vomit, and feces are the most infectious body fluids. Ebola may also be spread through **indirect contact** with surfaces or objects (like needles) that have been contaminated with the blood or body fluids of a person who is sick with or has died from Ebola. Ebola is **not** spread through the air, water, or in general food. Ebola cannot be spread through casual contact in public places with people who do not appear to be sick.

Can a person with Ebola virus disease breastfeed?

When safe alternatives to breastfeeding and infant care exist, mothers with probable or confirmed Ebola should not have close contact with their infants (including breastfeeding). In resource-limited settings, non-breastfed infants are at increased risk of death from starvation and other infectious diseases. These risks must be carefully weighed against the risk of infection with Ebola virus. There is not enough evidence to provide guidance on when it is safe to resume breastfeeding after a mother's recovery from Ebola virus disease, unless her breast milk can be shown to be Ebola virus-free by lab testing.

When is a person with Ebola most contagious?

The amount of virus in an Ebola patient's blood and body fluids increases as the person becomes more ill. A person with EVD is most contagious when having vomiting and diarrhea.

How much Ebola virus does it take to cause infection (infectious dose)?

Ebola virus can cause infection with exposure to as few as 1 to 10 viruses.

What is the average number of people who will be infected from one case of Ebola?

In general, for every case of Ebola an average of 2 secondary cases of Ebola will occur. This is similar to what is seen with hepatitis C (a bloodborne virus). For other familiar viruses, the number of secondary cases that will generally occur for each is as follows: HIV = 4, SARS = 4, mumps = 10, and measles = 18. Measles is transmitted through the airborne route, so you can see that it spreads much more easily from person-to-person than Ebola, which requires direct contact with blood and body fluids.

Is Ebola an airborne virus?

Ebola virus disease is not airborne virus. For a virus to be spread by the airborne route, it is required to float around in the air for an undetermined amount of time. This has not been seen during extensive studies of the Ebola virus over several decades. On the contrary, good evidence of previous Ebola outbreaks shows that people became infected by direct, close contact with ill patients. Data from the current and previous Ebola outbreaks is not consistent with the pattern of spread that is seen with airborne infections (ex: measles, chickenpox, and TB). Airborne transmission may happen only when certain medical procedures are being performed; during those high-risk procedures, healthcare professionals will use personal protective equipment to protect themselves from airborne infection.

Can the Ebola virus mutate and become airborne?

Scientists do not know of any virus that has dramatically changed the way it is spread. Rumors that Ebola might change so that it could easily spread among humans through the air are just speculation, and do not have any scientific evidence behind them.

Can Ebola be spread through food or water?

Food and water in the U.S. are safe and not a risk for Ebola. In Africa, people who eat wild animals (bushmeat) or handle a wild animal's blood or body fluids could be infected by Ebola if that animal had disease.

Can Ebola be spread by insects?

There is no evidence that mosquitoes or other insects can spread Ebola. Only some mammals (for example, humans, bats, monkeys, and apes) have shown the ability to become infected with and spread Ebola.

Can you get Ebola from pets?

At this time, there have been no reports of dogs or cats becoming sick with Ebola or of being able to spread Ebola to people or other animals. The chances of a dog or cat being exposed to Ebola in the United States is very low, as they would have to come into contact with blood or body fluids of a person who is sick with Ebola. More information on pets and Ebola can be found on CDC's website: <http://www.cdc.gov/vhf/ebola/transmission/qas-pets.html>.

How long can Ebola live outside the body?

Ebola is killed with hospital-grade disinfectants (including household bleach). The length of time Ebola can live on surfaces or objects depends on several factors including temperature, humidity, and presence of body fluids. Ebola virus on dried surfaces, such as doorknobs or countertops, can live for several hours; however, virus in blood or other body fluids can live up to several days at room temperature, this includes even after death. Therefore, it is important to take special precautions during burial preparations for someone who died from Ebola virus disease.

What cleaners can be used to kill Ebola virus?

Hospital-grade disinfectants (including household bleach) will kill Ebola virus. It is recommended to use a disinfectant that states it is effective against non-enveloped viruses (ex: norovirus, rotavirus, adenovirus, and poliovirus).

How do I know if I have been exposed to Ebola?

If you have traveled to an area* with an Ebola outbreak or had close contact with a person sick with Ebola, you may be at risk if you:

- Had direct contact with blood or body fluids or items that came into contact with blood or body fluids from a person with Ebola.
- Touched bats or nonhuman primates (like apes or monkeys) or blood, fluids, or raw meat prepared from these animals.
- Went into hospitals where Ebola patients were being treated and had close contact with the patients.
- Touched the body of a person who died of Ebola.

* Currently, this is Guinea, Liberia, and Sierra Leone. Check the CDC website for an up-to-date list of Ebola-affected countries and areas: <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/distribution-map.html#areas>.

What countries/areas* have been affected by the Ebola outbreak in West Africa?

Countries with *widespread* transmission are Guinea, Liberia, and Sierra Leone. Other countries have also been affected by the outbreak in West Africa.

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What should I do if I traveled to one of the affected areas and think I may have been exposed to Ebola?

If you think you may have been exposed to Ebola, call your doctor even if you do not have symptoms. The doctor can evaluate your exposure and any symptoms and consult with public health officials to determine if any more actions are needed.

You should check for signs and symptoms of Ebola for 21 days following your last exposure to the Ebola outbreak area affected or last close contact with a person sick with Ebola.

- Take your temperature every morning and evening
- Watch for other symptoms like severe headache, muscle pain, vomiting, diarrhea, stomach pain, or unexplained bleeding or bruising.

During the time you are watching for signs and symptoms, you can continue your normal activities, including going to work or school if you are not ill, unless instructed otherwise by public health officials.

What if I get sick after I come back from an area with an Ebola outbreak?

Get medical care *right away* if you have a fever (greater than 100.4°F), severe headache, muscle pain, vomiting, diarrhea, stomach pain, or unexplained bruising or bleeding.

BEFORE you go to the doctor's office or emergency room, call ahead and tell your doctor about your recent travel to West Africa or contact with a person who was sick with Ebola and your symptoms. Calling before visiting the doctor will help the medical staff care for you and protect other people who may be in the doctor's office or emergency room. When traveling to get medical care, limit your contact with other people. This includes avoiding public transportation.

Can someone with Ebola spread the virus if they don't have symptoms of illness?

No. A person with Ebola can't spread the disease until symptoms appear.

Can my local hospital care for a patient with Ebola?

Any hospital that is following the Centers for Disease Control and Prevention (CDC)'s infection control recommendations and can isolate a patient in his/her own room with a private bathroom can safely manage a patient with Ebola.

Is there a cure for Ebola?

There is no Food and Drug Administration (FDA)-approved treatment or vaccine available for Ebola. Experimental vaccines and treatments for Ebola are under development, but they have not yet been fully tested for safety.

Am I at risk if I am on a flight with a person who has Ebola?

Remember that a person with Ebola only poses a risk to others if he or she is showing signs of illness. If a person is experiencing symptoms of Ebola while on a flight, health officials will conduct an investigation to identify people who sat close to the ill person or had other close contact with the ill person.

Now that someone in the U.S. has been diagnosed with Ebola, am I at a higher risk?

No. The only way to get infected with Ebola is to come into direct contact with an infected person's blood or body fluid. Public health officials are monitoring the recent situation in Dallas, TX, and are working with healthcare providers, hospitals, and others to make sure that everyone is prepared to handle another case of Ebola if it were to occur in the U.S.

Should I be concerned about Ebola occurring in Oklahoma?

The general public is not at an increased risk of exposure to Ebola, but the Oklahoma State Department of Health realizes that Ebola causes a lot of public worry and concern. If someone with Ebola came to Oklahoma, it is very unlikely it would spread widely like the outbreak in West Africa. That is because Oklahoma and other states in the United States have a strong healthcare infrastructure. Modern hospitals use procedures to prevent the disease from spreading, and public health officials would work to identify those at risk of infection to prevent them from spreading it to other people.

What is happening at airports in the United States to prevent Ebola?

In mid-October, five airports in the United States began screening travelers on flights that originate from Guinea, Liberia, or Sierra Leone. Travel restrictions were implemented for these three outbreak affected countries requiring travelers to fly into one of these five airports to ensure all travelers go through the enhanced screening process. The Centers for Disease Control (CDC) Division of Global Migration and Quarantine and the Department of Homeland Security Customs and Border Protect (CBP) staff will be:

- Reviewing passports to see if people traveled to an Ebola-affected country
- Providing travelers with health information about Ebola and how to monitor their health
- Conducting a health screening including checking for fever and other symptoms of Ebola and assessing whether the traveler may have had exposure to Ebola

If fever or other Ebola symptoms are found, a CDC quarantine public health officer will assess the patient and see if further medical evaluation is needed at a hospital. If the traveler does not have symptoms but possible exposure to Ebola was identified, the traveler will be referred to the local health department for health monitoring.

If I have to travel to an area affected by the Ebola outbreak, how do I protect myself while I am there?

- Follow CDC travel advisories (<http://wwwnc.cdc.gov/travel/notices>). As of October 16, 2014, avoid all nonessential travel to Guinea, Liberia, and Sierra Leone.
- Wash hands frequently or use an alcohol-based hand sanitizer.
- Avoid contact with blood and body fluids of any person, particularly someone who is sick.
- Do not handle items that may have come in contact with an infected person's blood or body fluids.
- Do not touch the body of someone who has died from Ebola.
- Do not touch bats and nonhuman primates or their blood and fluids and do not touch or eat 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 medical facilities.
- Seek medical care **immediately** if you develop fever (greater than 100.4°F) and any of the other following symptoms: headache, muscle pain, diarrhea, vomiting, stomach pain, or unexplained bruising or bleeding.
- Limit your contact with other people until and when you go to the doctor. Do not travel anywhere else besides a healthcare facility.

What are Isolation and Quarantine? Are they different?

- Isolation separates sick people that have a contagious disease from people who are not sick. For example, those who are infected with Ebola are placed in isolation in the hospital.
- Quarantine separates and restricts the movement of people who have been exposed to a contagious disease, but are not sick. People are usually quarantined for the duration of the incubation period and are then released from quarantine. If they become sick while in quarantine they will be evaluated, and if they have the same disease, they will be isolated until they are no longer infectious.

What happens in Isolation and Quarantine?

- A person can be isolated or quarantined in their home, another residence, an institution, or other place.
- The site must have adequate food, clothing, health care, and have their other essential needs met.
- The person being isolated or quarantined will be monitored for illness by the local health department.

How is Isolation and Quarantined Enforced?

- Isolation and/or quarantine may be in the form of recommendations to the person, who agrees to comply, or they may be required to protect others. A required period of isolation or quarantine could be ordered by public health authorities, if the communicable disease is extremely dangerous, or when a person fails to adequately follow disease control recommendations voluntarily.
- If the person disregards recommendations from health care professionals and the local health department, the State Health Commissioner can issue an Order of Isolation or Order of Quarantine to reduce the risk to the public.
- If someone violates the Commissioner's order, additional measures, may be taken to assure compliance and protect the public health.