



## Questions and Answers on Ebola

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## General

### How do I protect myself against Ebola?

If you must travel to an area affected by the 2014 Ebola outbreak, protect yourself by doing the following:

- 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 facilities 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, 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.

CDC has issued a Warning, Level 3 travel notice for U.S. citizens to avoid nonessential travel to Guinea, Liberia, and Sierra Leone. CDC has also issued an Alert, Level 2 travel notice for the Democratic Republic of the Congo (DRC). A small number of Ebola cases have been reported in the DRC, though current

For general information about Ebola, please use the links below:

[About Ebola](#)

[Signs and Symptoms](#)

[Transmission](#)

[Risk of Exposure](#)

[Prevention](#)

information indicates that this outbreak is not related to the ongoing Ebola outbreak in West Africa. For travel notices and other information for travelers, visit the [Travelers' Health Ebola web page](#) (<https://web.archive.org/web/20141031211636/http://wwwnc.cdc.gov/travel/diseases/ebola>).

**Has the first patient to become sick in this outbreak, known as “patient zero” been identified?**

Reports in the medical literature and elsewhere have attempted to identify the patient who might have been the initial person infected in the West Africa Ebola outbreak. It's important for CDC to learn as much as it can about the source and initial spread of any outbreak.

With regard to the West Africa Ebola outbreak, tracing the lineage of how Ebola has spread thus far can help CDC apply that knowledge toward better prevention and care techniques. The knowledge gained in this work might entail details about specific patients. CDC generally refrains, however, from identifying particular patients in any aspect of an outbreak.

**I am a U.S. resident experiencing some flu-like symptoms (e.g. fever, headache, muscle aches). How do I know if I have seasonal influenza or Ebola?**

Seasonal influenza and [Ebola virus infection](#) can cause some similar symptoms. However, of these viruses, your symptoms are most likely caused by seasonal influenza. Influenza is very common. Millions of people are infected, hundreds of thousands are hospitalized and thousands die from flu each year. In the United States, fall and winter is the time for flu. While the exact timing and duration of flu seasons vary, outbreaks often begin in October and can last as late as May. Most of the time flu activity peaks between December and February. Information about current levels of U.S. flu activity is available in CDC's weekly [FluView](#) (<https://web.archive.org/web/20141031211636/http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>) report.

In the United States, infections with Ebola virus have been exceedingly uncommon. In the United States, there have been two travel-associated cases and two locally acquired cases among healthcare workers. There is widespread transmission of Ebola virus disease in West Africa.

It is usually not possible to determine whether a patient has seasonal influenza or Ebola infection based on symptoms alone. However, there are tests to detect seasonal influenza and Ebola infection. Your doctor will determine if you should be tested for these illnesses based on your symptoms, clinical presentation and recent travel or exposure history. (For information regarding the signs and symptoms of Ebola, and whether you may need to be tested, please review the [Ebola case definitions](#).)

**What is CDC doing in the U.S. about the outbreak in West Africa?**

CDC has activated its Emergency Operations Center (EOC) to help coordinate technical assistance and control activities with partners. CDC has deployed several teams of public health experts to the West Africa region and plans to send additional public health experts to the affected countries to expand current response activities.

If an ill traveler arrives in the U.S., CDC has protocols in place to protect against further spread of disease. These protocols include having airline crew notify CDC of ill travelers on a plane before arrival, evaluation of ill travelers, and isolation and transport to a medical facility if needed. CDC, along with Customs & Border Patrol, has also

provided guidance to airlines for managing ill passengers and crew and for disinfecting aircraft. CDC has issued a Health Alert Notice reminding U.S. healthcare workers about the importance of taking steps to prevent the spread of this virus, how to test and isolate patients with suspected cases, and how to protect themselves from infection.

## Travelers

### What is being done to prevent ill travelers in West Africa from getting on a plane?

#### In West Africa

CDC's Division of Global Migration and Quarantine (DGMQ) is working with airlines, airports, and ministries of health to provide technical assistance for the development of exit screening and travel restrictions in the affected areas. This includes:

- Assessing the ability of Ebola-affected countries and airports to conduct exit screening,
- Assisting with development of exit screening protocols,
- Training staff on exit screening protocols and appropriate PPE use, and
- Training in-country staff to provide future trainings.

#### During Travel

CDC works with international public health organizations, other federal agencies, and the travel industry to identify sick travelers arriving in the United States and take public health actions to prevent the spread of communicable diseases. Airlines are required to report any deaths onboard or ill travelers meeting certain criteria to CDC before arriving into the United States, and CDC and its partners determine whether any public health action is needed. If a traveler is infectious or exhibiting symptoms during or after a flight, CDC will conduct an investigation of exposed travelers and work with the airline, federal partners, and state and local health departments to notify them and take any necessary public health action. When CDC receives a report of an ill traveler on a cruise or cargo ship, CDC officials work with the shipping line to make an assessment of public health risk and to coordinate any necessary response.

#### In the United States

CDC has staff working 24/7 at 20 Border Health field offices located in international airports and land borders. On October 27, CDC's public health authorities will begin active post-arrival monitoring of travelers whose travel originates in Liberia, Sierra Leone, or Guinea. These travelers are now arriving to the United States at one of five airports where entry screening is being conducted by Customs and Border Protection and CDC. Active post-arrival monitoring means that travelers without febrile illness or symptoms consistent with Ebola will be followed up daily by state and local health departments for 21 days from the date of their departure from West Africa. CDC staff are ready 24/7 to investigate cases of ill travelers on planes and ships entering the United States.

CDC works with partners at all ports of entry into the United States to help prevent infectious diseases from being introduced and spread in the United States. CDC works with Customs and Border Protection, U.S. Department of Agriculture, U.S. Coast Guard, U.S. Fish and Wildlife Services, state and local health departments, and local Emergency Medical Services staff.

Relatively few of the approximately 350 million travelers who enter the United States each year come from these countries. Secondly, most people who become infected with Ebola are those who live with or care for people who have already caught the disease and are showing symptoms. CDC and healthcare providers in the United States are prepared for the remote possibility that a traveler could get Ebola and return to the U.S. while sick.

## What do I do if I'm returning to the U.S. from the area where the outbreak is occurring?

After you return, pay attention to your health.

- Monitor your health for 21 days if you were in an area with an Ebola outbreak, especially if you were in contact with blood or body fluids, items that have come in contact with blood or body fluids, animals or raw meat, or facilities where Ebola patients are being treated or participated in burial rituals.
- Seek medical care immediately if you develop fever, headache, muscle pain, diarrhea, vomiting, stomach pain, or unexplained bruising or bleeding.
- Tell your doctor about your recent travel and your symptoms before you go to the office or emergency room. Advance notice will help your doctor care for you and protect other people who may be in the office.

## What do I do if I am traveling to an area where the outbreak is occurring?

If you are traveling to an area where the Ebola outbreak is occurring, protect yourself by doing the following:

- Wash your 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 facilities in West Africa where Ebola patients are being treated. The U.S. Embassy or consulate is often able to provide advice on facilities.
- Seek medical care immediately if you develop fever, 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.

## Should people traveling to Africa be worried about the outbreak?

Ebola has been reported in multiple countries in West Africa (see [Affected Countries](#)). CDC has issued a Warning, Level 3 travel notice for United States citizens to avoid all nonessential travel to Guinea, Liberia, and Sierra Leone. CDC has also issued an Alert, Level 2 travel notice for the Democratic Republic of the Congo (DRC). A small number of Ebola cases have been reported in the DRC, though current information indicates that this outbreak is not related to the ongoing Ebola outbreak in West Africa. You can find more information on these travel notices at <http://wwwnc.cdc.gov/travel/notices> (<https://web.archive.org/web/20141031211636/http://wwwnc.cdc.gov/travel/notices>).

CDC currently does not recommend that travelers avoid visiting other African countries. Although spread to other countries is possible, CDC is working with the governments of affected countries to control the outbreak. Ebola is a very low risk for most travelers – it is spread through direct contact with the blood or other body fluids of a sick person, so travelers can protect themselves by avoiding sick people and facilities in West Africa where patients with Ebola are being treated.

## Why were the ill Americans with Ebola brought to the U.S. for treatment? How is CDC protecting the American public?

A U.S. citizen has the right to return to the United States. Although CDC can use several measures to prevent disease from being introduced in the United States, CDC must balance the public health risk to others with the rights of the individual. In this situation, the patients who came back to the United States for care were transported with appropriate infection control procedures in place to prevent the disease from being transmitted to others.

Ebola poses no substantial risk to the U.S. general population. CDC recognizes that Ebola causes a lot of public worry and concern, but CDC's mission is to protect the health of all Americans, including those who may become ill while overseas. Ebola patients can be transported and managed safely when appropriate precautions are used.

## What does CDC's Travel Alert Level 3 mean to U.S. travelers?

CDC recommends that U.S. residents avoid nonessential travel to Guinea, Liberia, and Sierra Leone. If you must travel (for example, to do for humanitarian aid work in response to the outbreak) protect yourself by following [CDC's advice](https://web.archive.org/web/20141031211636/http://wwwnc.cdc.gov/travel/page/humanitarian-workers-ebola) (<https://web.archive.org/web/20141031211636/http://wwwnc.cdc.gov/travel/page/humanitarian-workers-ebola>) for avoiding contact with the blood and body fluids of people who are ill with Ebola. For more information about the travel alerts, see [Travelers' Health Ebola](https://web.archive.org/web/20141031211636/http://wwwnc.cdc.gov/travel/diseases/ebola) (<https://web.archive.org/web/20141031211636/http://wwwnc.cdc.gov/travel/diseases/ebola>) web page.

Travel notices are designed to inform travelers and clinicians about current health issues related to specific destinations. These issues may arise from disease outbreaks, special events or gatherings, natural disasters, or other conditions that may affect travelers' health. A level 3 alert means that there is a high risk to travelers and that CDC advises that travelers avoid nonessential travel.

## In the United States

### Are there any cases of people contracting Ebola in the U.S.?

CDC confirmed on September 30, 2014, the [first travel-associated case of Ebola to be diagnosed in the United States](#). The person traveled from West Africa to Dallas, Texas, and later sought medical care at Texas Health Presbyterian Hospital of Dallas after developing symptoms consistent with Ebola. The medical facility isolated the patient and sent specimens for testing at CDC and at a Texas laboratory that confirmed a positive test for the U.S. index patient. Local public health officials have identified all close contacts of the person for further daily monitoring for 21 days after exposure. The index patient died of Ebola on October 8.

Two healthcare workers (the second and third U.S. confirmed Ebola cases) who provided care for the index patient have tested positive for Ebola. Both presented with low-grade fever and were isolated at Texas Presbyterian Hospital upon reporting symptoms. CDC confirmed positive tests for Ebola for both healthcare workers. The

second confirmed U.S. case was transferred and is now being treated in Atlanta at Emory University Hospital, and the third confirmed U.S. case is receiving treatment in Maryland at the National Institutes of Health.

CDC recognizes that even a single case of Ebola diagnosed in the United States raises concerns. Knowing the possibility exists anywhere, anytime, medical and public health professionals across the country have been preparing to respond. CDC and public health officials in Texas, Dallas and Ohio are taking precautions to identify people who have had close personal contact with the three confirmed domestic cases and health care professionals have been reminded to use meticulous infection control at all times.

## Is there a danger of Ebola spreading in the U.S.?

Ebola is not spread through casual contact; therefore, the risk of an outbreak in the U.S. is very low. We know how to stop Ebola's further spread: thorough case finding, isolation of ill people, contacting people exposed to the ill person, and further isolation of contacts if they develop symptoms. The U.S. public health and medical systems have had prior experience with sporadic cases of diseases such as Ebola. In the past decade, the United States had 5 imported cases of Viral Hemorrhagic Fever (VHF) diseases similar to Ebola (1 Marburg, 4 Lassa). None resulted in any transmission in the United States.

## Are people who were on the plane with this patient at risk?

A person must have symptoms to spread Ebola to others. The index patient person did not exhibit symptoms of Ebola during the flights from West Africa, and CDC does not recommend that people on the same commercial airline flights undergo monitoring. The person reported developing symptoms approximately four days after the return flight.

At approximately 1:00 a.m. (Mountain Time) on October 15, Frontier Airlines was notified by CDC that a customer (the third U.S. confirmed Ebola case) traveling on Frontier Airlines flight 1143 Cleveland to Dallas/Fort Worth on October 13 had since tested positive for Ebola. The flight landed in Dallas/Fort Worth at 8:16 p.m. (Central Time), October 15 and remained overnight at the airport having completed its flying for the day. At that point, the aircraft received a thorough cleaning per normal procedures consistent with CDC guidelines before returning to service the next day. The plane was also disinfected again in Cleveland. Based on additional information obtained during interviews of close contacts to the second healthcare worker from Texas Presbyterian Hospital who tested positive for Ebola, CDC is expanding its outreach to airline passengers now to include those who flew from Dallas Fort Worth to Cleveland on Frontier flight 1142 on October 10. CDC believes that there is minimal risk to passengers on the same plane as the third confirmed U.S. case, based on previous experience involving sick passengers with Ebola or another similar virus, what we know about how the virus is spread, and the health status of the patient.

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National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)

([/web/20141031211636/http://www.cdc.gov/ncezid/index.html](http://www.cdc.gov/ncezid/index.html))

Division of High-Consequence Pathogens and Pathology (DHCPP)

([/web/20141031211636/http://www.cdc.gov/ncezid/dhcpp/index.html](http://www.cdc.gov/ncezid/dhcpp/index.html))

Viral Special Pathogens Branch (VSPB) ([/web/20141031211636/http://www.cdc.gov/ncezid/dhcpp/vspb/index.html](http://www.cdc.gov/ncezid/dhcpp/vspb/index.html))