



Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives. Protecting People.™

## Factsheets

### Ebola

**What's the difference between infections spread through the air or by droplets?**

**Airborne spread** happens when a germ floats through the air after a person talks, coughs, or sneezes. Germs may land in the eyes, mouth, or nose of another person.

If a germ is airborne, direct contact with the infected person is NOT needed for someone else to get sick. Airborne spread diseases include chickenpox, tuberculosis.

**Droplet spread** happens when germs traveling inside droplets that are coughed or sneezed from a sick person enter the eyes, nose, or mouth of another person. Droplets travel short distances, less than 3 feet (1 meter) from one person to another.

A person might also get infected by touching a surface or object that has germs on it and then touching their mouth or nose.

Droplet spread diseases include Ebola, Ebola.

**How do I protect myself from getting sick?**

- **Wash your hands** often with soap and water. If soap and water are not available, use an alcohol-based hand sanitizer.
- **Cover your cough.** Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
- **Avoid close contact with people who are sick.**
- **Avoid touching your eyes, nose, and mouth.**

Cover your mouth when you cough or sneeze.

**Clean and disinfect commonly touched surfaces** like doorknobs, faucet handles, and toys, since the Ebola virus may live on surfaces for up to several hours.

**Is Ebola airborne?**

No. Ebola is not spread through the airborne route nor through water or food.

**Is Ebola spread through droplets?**

Yes, to get Ebola, you have to directly get body fluids (like pee, poop, spit, vomit, semen, sweat, breast milk) from someone who has Ebola in your mouth, nose, eyes or through a break in your skin or through sexual contact.

Air, food, and water do not carry the Ebola germs.

**What's the difference between infections spread through the air or by droplets?** [PDF - 1 page]

### What You Need to Know about Ebola

October 16, 2014

**The 2014 Ebola epidemic is the largest in history**

This outbreak is affecting multiple countries in West Africa. One imported case and associated locally acquired cases in healthcare workers have been reported in the United States. CDC and its partners are taking precautions to prevent the further spread of Ebola within the United States.

**A person infected with Ebola can't spread the disease until symptoms appear**

The time from exposure to when signs or symptoms of the disease appear (the incubation period) is 2 to 21 days, but the average time is 10 to 16 days. Signs of Ebola include fever and symptoms like severe headache, muscle pain, vomiting, diarrhea, stomach pain, or unexplained bleeding or bruising.

**Ebola is spread through direct contact with blood and body fluids**

Ebola is spread through direct contact (through broken skin or through your eyes, nose, or mouth) with:

- Blood and body fluids (like urine, feces, saliva, vomit, sweat, and semen) of a person who is sick with Ebola.
- Objects (like needles) that have been contaminated with the blood or body fluids of a person sick with Ebola.

Ebola is not spread through the air, water, or food.

**Protect yourself against Ebola**

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

**To protect yourself from Ebola**

- **DO wash** your hands often with soap and water or use an alcohol-based hand sanitizer.
- **DO NOT** touch the blood or body fluids (like urine, feces, saliva, vomit, sweat, and semen) of people who are sick.
- **DO NOT** handle items that may have come in contact with a sick person's blood or body fluids, like clothes, bedding, needles, or medical equipment.
- **DO NOT** touch the body of someone who has died of Ebola.

**What You Need To Know About Ebola** [PDF - 2 pages]

### Ebola

**Ebola, previously known as Ebola hemorragic fever, is a severe, often fatal disease in humans and nonhuman primates such as monkeys, gorillas, and chimpanzees.**

Ebola is a rare and deadly disease caused by infection with a virus of the family *Filipoviridae*, genus *Ebolavirus*. There are five identified *Ebolavirus* species. Four of which have caused disease in humans: *Zaire ebolavirus*, *Sudan ebolavirus*, *Tai Forest ebolavirus*, formerly *Côte d'Ivoire ebolavirus*, and *Bundibugyo ebolavirus*. The fifth, *Reston ebolavirus*, has caused disease in nonhuman primates but not in humans.

Ebola is found in several African countries. The first Ebola species was discovered in 1976 near the Ebola River in what is now the Democratic Republic of the Congo. Since then, outbreaks have occurred sporadically in Africa. The natural reservoir host of Ebola remains unknown. However, on the basis of available evidence and the nature of other viruses, researchers believe that the virus is animal-borne with bats being the most likely reservoir. Four of the five outbreaks occur in or around forest regions of Africa.

**Transmission**

Because the natural reservoir host of Ebola has not yet been identified, the manner by which the virus first appears in a human at the start of an outbreak is unknown. However, researchers believe that the first patient becomes infected through contact with an infected animal.

When an infection does occur in humans, there are several ways the virus can be spread to others. These include:

- direct contact with the blood or body fluids (including but not limited to feces, saliva, urine, vomit and semen) of a person who is sick with Ebola
- contact with objects (like needles and syringes) that have been contaminated with the blood or body fluids of an infected person or with infected animals

The virus in the blood and body fluids can enter another person's body through broken skin or unprotected mucous membranes in, for example, the eyes, nose, or mouth. The viruses that cause Ebola are often spread among families and friends, because they come in close contact with blood or body fluids when caring for ill patients.

During outbreaks of Ebola, the disease can spread quickly within healthcare settings, such as clinics or hospitals. Exposure to Ebola can occur in healthcare settings where healthcare staff are not wearing appropriate protective clothing including masks, gloves, and eye protection.

Quarantined medical equipment (generally disposable, when possible) should be used by healthcare personnel providing care for someone sick with Ebola. Proper cleaning and disposal of instruments, such as needles and syringes, is also important. Instruments are not disposable, they must be disinfected before being used again. Without adequate instrument sterilization, virus transmission can continue and amplify an outbreak.

**Signs and Symptoms**

A person infected with Ebola is not contagious until symptoms appear.

**Signs and Symptoms of Ebola typically include:**

- Fever greater than 38.3°C (or 101.3°F)
- Severe headache
- Muscle pain
- Vomiting
- Diarrhea
- Stomach pain
- Unexplained bleeding or bruising

Symptoms may appear anywhere from 2 to 21 days after exposure to Ebola but the average is 10 to 16 days. Recovery from Ebola depends on the patient's immune response. People who recover from Ebola infection develop antibodies that last for at least 10 years.

**Warning: Do not transport Ebola virus specimens without proper packaging and labeling.**

**Ebola Factsheet** [PDF - 3 pages]

### INTERIM GUIDANCE FOR Specimen Collection, Transport, Testing, and Submission for Patients with Suspected Infection with Ebola Virus Disease

**NOTIFICATION & CONSULTATION**

Hospitals should follow their state and/or local health department procedures for notification and consultation for Ebola testing requests to CDC.

CDC cannot accept any specimens without prior consultation.

**WHEN SPECIMENS SHOULD BE COLLECTED FOR EBOLA TESTING**

Ebola virus is detected in blood only after onset of symptoms, most notably fever. It may take up to three days after onset of symptoms for the virus to reach detectable levels. Virus is generally undetectable in urine five to 10 days after onset of symptoms.

**USUALLY, SPECIMENS SHOULD BE COLLECTED AFTER APPROPRIATELY PATIENT REPORTS TO A HEALTHCARE FACILITY AND IS SUSPECTED OF HAVING AN EBOLA VIRUS INFECTION.** However, if the onset of symptoms is less than two days after potential exposure, a subsequent specimen will be required to rule out Ebola.

**PREFERRED SPECIMENS FOR EBOLA TESTING**

A minimum volume of 4 milliliters of whole blood preserved with EDTA, or whole in plastic collection tubes can be submitted for Ebola virus disease testing.

Specimens should be shipped at 4°C. Do not submit specimens to CDC in glass containers. Do not submit specimens preserved in heparin tubes.

**DIAGNOSTIC TESTING FOR EBOLA PERFORMED AT CDC**

Several diagnostic tests are available for detection of Ebola virus disease. Assays performed at CDC are confirmed using a real-time RT-PCR assay (CDC test identifier code CDC-10589 Ebola identification) and a CLIA-certified enzyme-linked immunosorbent assay (ELISA) testing for IgG and IgM antibodies will be completed for certain specimens and to monitor the immune response in confirmed Ebola virus disease patients (CDC-10510 Ebola testing).

**LESSON FROM AFRICA:** In certain areas of West Africa and may show symptoms similar to early Ebola virus disease. Diagnostic tests including but not limited to RT-PCR, antigen detection, and gel electrophoresis may be utilized to rule out Ebola virus in patients who test negative for Ebola virus disease.

**TRANSPORTING SPECIMENS WITHIN THE HOSPITAL/INSTITUTION**

In compliance with 49 CFR 1910.106B, specimens should be placed in a double leak-proof container suitable for transport within a facility. To reduce the risk of leakage or leaks, do not use any pressurized leak system for transporting specimens from a patient with suspected Ebola virus disease.

**PACKAGING & SHIPPING CLINICAL SPECIMENS TO CDC**

Specimens collected for Ebola virus disease testing should be packaged and shipped under refrigeration (2-8°C) in leak-proof containers and double packaging.

Specimens for alignment should be packaged following the basic triple packaging system, which consists of a primary receptacle in suitable specimen leak-proof with absorbent material, secondary receptacle leak-proof, leak-proof, and in outer shipping package.

**THE SUBMISSION PROCESS**

Completed your order and/or form from the request and use CDC (770) 488-1700 to determine the proper packaging for shipment based on clinical history and risk assessment by CDC and to obtain detailed shipping guidance and required CDC submission documents. State guidelines may differ and state or local health departments should be consulted before shipping.

**Printable factsheet: Interim Guidance for Specimen Collection, Transport, Testing, and Submission for Patients with Suspected Infection with Ebola Virus Disease** [PDF - 1 page]

### Chlorine Poisoning

Health workers should be aware of persons that drinking chlorine or disinfectant solutions could cure or prevent Ebola virus disease (Ebola). Chlorine is NOT a cure for Ebola. No one should ever drink chlorine or disinfectant solutions containing chlorine.

When chlorine, sometimes called bleach, is swallowed it can make people very sick or be fatal. How sick they get depends on the amount of chlorine in the product swallowed and the amount they drink. Be aware of the signs and symptoms of drinking chlorine.

**Signs of Chlorine Poisoning**

Drinking or inhaling chlorine can cause:

- Abdominal pain
- Burning in the eyes, nose and throat
- Chest discomfort
- Coughing and/or wheezing
- Nausea and vomiting
- Skin burns

If a chlorine compound or chlorine disinfectant is swallowed, that person should not drink or eat anything else.

**What is Chlorine?**

- Chlorine is a chemical used externally in industry and found in some household products, including solutions used for cleaning or disinfecting.
- Chlorine itself is not flammable, but it can react explosively or for explosive compounds when mixed with other chemicals such as turpentine and ammonia.
- With chlorinating granules (also known as Calcium Hypochlorite, or CaOCl<sub>2</sub> or High Test Chlorine) and other chlorine solutions can be carefully mixed with water to create some types of chlorine solutions used externally for cleaning or hand-washing to protect against Ebola.

**Factsheet: Chlorine Poisoning** [PDF - 1 page]

### Drinking chlorine can make you very sick or kill you

Drinking chlorine is NOT a cure for Ebola.

Drinking chlorine can make you very sick or kill you

Do NOT drink chlorine or other liquids that have chlorine in them.

If you have been near a person with Ebola and have:


- Fever
- Headache
- Muscle pain
- Vomiting
- Diarrhea
- Stomach pain
- Unexplained bleeding or bruising

Go to an Ebola Treatment Unit Now. It could **SAVE** your **LIFE**.

**Factsheet: Drinking Chlorine Can Make You Very Sick or Kill You** [PDF - 1 page]

**Facts about Bushmeat and Ebola**

Bushmeat could be infected with germs that can cause sickness in people, including the Ebola virus.




Monkeys and bats are common sources of bushmeat.

**Facts About Bushmeat and Ebola**

[PDF - 1 page]

**Ebola Information for Leadership of Volunteers Working with West African Communities in the United States**



Volunteers are concerned about being exposed to Ebola when working with West African communities in the United States. Volunteers are at very low risk of being exposed to Ebola when working with West African (Sierra Leone, Liberia, Guinea) communities in the United States.

The risk of being exposed to Ebola in the United States is very low, even when working with West African communities.

On September 30, CDC confirmed the first case of Ebola to be diagnosed in the United States in a person who had traveled from Liberia to Dallas, Texas. Two healthcare workers who cared for the first case (index patient) have contracted Ebola, and CDC is working with Texas state, local, and hospital health authorities to investigate how this occurred.

West Africans in the United States may face stigma because the current Ebola outbreak is associated with a region of the world. Stigma involves stereotyping and discriminating against an identifiable group of people, a place, or a nation.

**Get the Facts on Ebola:**  
www.cdc.gov/ebola


What your organization and volunteers can do to counter stigma:

- Raise awareness of the potential problems.
- Learn the FACTS about Ebola and then share accurate information about how the virus spreads.
- Explain that Ebola is caused by a virus, not a person.
- Speak out against negative behavior, including negative social media statements about groups of people, or exclusion of people who pose no risk from regular activities.
- Share the need for social support for people who have returned from the region or are worried about friends or relatives in the affected region.

**Ebola Information for Leadership of Volunteers Working with West African Communities in the United States**

[PDF - 2 pages]

**Ebola Information for Volunteers Working with West African Communities in the United States**



I volunteer with an organization that serves people from Sierra Leone, Liberia and Guinea. I am worried about getting Ebola.

It is normal to feel anxious or worried about coming in contact with people who have recently returned from countries where the Ebola epidemic is ongoing.

The risk of getting Ebola in the United States is very low, even when working with West African communities in the United States.

On September 30, CDC confirmed the first case of Ebola to be diagnosed in the United States in a person who had traveled from Liberia to Dallas, Texas. Two healthcare workers who cared for the first case (index patient) have contracted Ebola, and CDC is working with Texas state, local, and hospital health authorities to investigate how this occurred.

West Africans and West African communities in the United States may be facing stigma.

West Africans and West African communities in the United States may face stigma because the current Ebola outbreak is associated with a region of the world. Stigma involves stereotyping and discriminating against an identifiable group of people, a place, or a nation.

- Stigma can occur when people associate an infectious disease, such as Ebola, with a population, even though not everyone in that population or from that region is specifically at risk for the disease (for example, West Africans living in the United States).
- Communities facing stigma can make fear and anxiety worse.

**Get the Facts on Ebola: www.cdc.gov/ebola**

**Ebola Information for Volunteers Working with West African Communities in the United States**

[PDF - 2 pages]

### File Formats Help:

How do I view different file formats (PDF, DOC, PPT, MPEG) on this site? (<http://www.cdc.gov/Other/plugins/>)

(<http://www.cdc.gov/Other/plugins/#pdf>)

Page last reviewed: October 27, 2014

Page last updated: October 27, 2014

Content source: Centers for Disease Control and Prevention (/index.htm)

National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) (/ncezid/index.html)

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