Fact Sheet: Ebola disease

Updated Oct 2025

What is Ebola disease?

Ebola disease is a rare but severe and often fatal illness caused by viruses known as orthoebolaviruses (formerly ebolavirus), primarily found in sub-Saharan Africa. There are four orthoebolaviruses that cause illness in people: Ebola virus (species *Orthoebolavirus zairense*) causes Ebola virus disease, Sudan virus (species *Orthoebolavirus sudanense*) causes Sudan virus disease, Taï Forest virus (species *Orthoebolavirus taiense*) causes Taï Forest virus disease, Bundibugyo virus (species *Orthoebolavirus bundibugyoense*) causes Bundibugyo virus disease. The most common species associated with major outbreaks include *Orthoebolavirus zairense* (e.g., the 2014–2016 West Africa outbreak) and *Orthoebolavirus sudanense* (e.g., the 2022 Uganda outbreak). Ebola disease outbreaks typically begin in endemic regions when a person is infected through contact with an animal host, human-to-human transmission occurring from contact with body fluids of an infect sick or deceased person. Ebola disease typically begins suddenly with symptoms such as fever, fatigue, muscle pain, headache, and sore throat, followed by vomiting and diarrhea. In severe cases, the illness can progress to multiorgan failure, internal and external bleeding, and death. **A person is only contagious once symptoms appear.** Health care workers and caregivers are at high risk without proper personal protective equipment (PPE) and infection control practices.

Clinical Presentation & Disease Summary

Transmission:

- A person becomes infected when their broken skin or mucous membranes in the eyes, nose, or mouth come into contact with:
  - Blood or body fluids from a person who is sick or has died from Ebola disease (urine, salvia, sweat, feces, vomit, breast milk, and amniotic fluid). This can include needle-sticks.
  - Objects contaminated with body fluids from a person who is sick or has died of Ebola disease (clothes, bedding, needles, and medical equipment)
  - Infected animals like bats, primates, or forest antelopes. It may be spread through hunting, handling, or eating infected animals
  - Semen from a person who has recovered from Ebola disease. This can happen through oral, vaginal, or anal sex. There is no evidence of spread through contact with vaginal fluids from someone who has recovered from Ebola disease.
- A person sick with Ebola disease can only transmit the virus to others once they start having symptoms.

Incubation Period:

- From 2-21 days
- On average, symptoms start 8-10 days after exposure

Symptoms:

- Early stage of Ebola disease generally has an abrupt onset of fever and “dry” symptoms, including:
  - Fever
  - Chills
  - Headache
  - Myalgia (aches and pains in muscles and joints)
  - Weakness and fatigue
  - Sore throat
- Mid-late stage of Ebola disease is typically 4 to 5 days after symptom onset, where patients can progress to “wet” symptoms that include:
  - Loss of appetite

- Unexplained bleeding
  - Bleeding is not universally present (reported in 40% of patients), but can manifest later in course as petechiae, ecchymosis or oozing from venipuncture sites, mucosal hemorrhage, or blood in stool or vomitus.
- Gastrointestinal Symptoms
  - Nausea
  - Abdominal pain
  - Diarrhea
  - Vomiting
- Other symptoms during the mid-late stage of disease include:
  - Chest pain, shortness of breath, headache, or confusion, eye irritation and redness, hiccups
- Those with fatal Ebola disease usually develop more severe clinical signs early during infection and die typically between days 6-16 of complications including multiorgan failure and septic shock.

Complications:

- Hypovolemia, electrolyte abnormalities, hematologic abnormalities, refractory shock, hypoxia, hemorrhage, septic shock, multiorgan failure, and disseminated intravascular coagulation (DIC)
- Ebola disease survivors can have many chronic complications, including viral persistence of orthoebolavirus in their bodies.

Early in illness, Ebola disease may resemble non-specific febrile illness (e.g., influenza, COVID-19) or other tropical diseases (e.g., typhoid, malaria). A high index of suspicion is required.

When to Suspect a Patient has Ebola disease?

Suspect Ebola disease in any individual who has a sudden onset of one or more symptoms of Ebola disease (listed above) **AND** one or more of the following exposure risk factors within 3 weeks of symptom onset:

- Travel to / residence in a country known to have circulating Ebola Disease. Outbreak map located here
- Known/suspected exposure to ill or dead person with suspected/confirmed Ebola disease, including by:
  - Contact with bodily fluids (e.g., blood, sweat, saliva, urine, vomit, feces, semen) without appropriate PPE
  - Contact with objects contaminated by bodily fluids (e.g., clothing, bedding, equipment) without appropriate PPE
  - Contact with bodily fluids or contaminated objects with appropriate PPE if there is concern for a breach in PPE
- Known/suspected exposure to semen of male recovered from Ebola disease
- Work in a laboratory that handles viral hemorrhagic fever specimens
- Handling wild animals or carcasses that may be infected with orthoebolaviruses (e.g., primates, bats)

Key Steps for Frontline Clinical Staff

Identify
- Assess the patient for signs and symptoms, travel history, and epidemiological criteria.
- For assistance, contact facility Infection Prevention and Control or on-call hospital epidemiologist.

Isolate
- Provide a mask to the patient and initiate prompt isolation. Follow **Infection Prevention Guidance**

Inform

- Notify dept/facility leadership, Infection Prevention & Control, on-call hospital epidemiologist.
- Notify jurisdictional health department immediately (via the 24-hour Epi-On-Call contact list) and follow jurisdictional protocols for patient assessment.

Infection Prevention and Control

Hand Hygiene

- Perform hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and upon removal of PPE, including gloves.
- Use soap and water for at least 20 seconds or use alcohol-based hand rubs. If hands are visibly soiled, use soap and water.

Patient Placement

- Place patient in a single patient **Airborne Infection Isolation Room (AIIR)**. If an AIIR is not available, isolate the patient in a private examination room. Keep the door closed, minimize entry and exit, and avoid entry without appropriate PPE.
  - Keep a **log** of all persons who care for or enter the room or care area of the patient.
- Limit movement of the patient outside of the room. When outside the room, **patient should wear a facemask**.

Transmission-Based Precautions & Personal Protective Equipment

- Adhere to **Standard + Airborne + Contact Precautions**. At minimum for those who do not have bleeding, vomiting, or diarrhea use a respirator, 2 pairs of extended cuff gloves (at minimum, outer gloves should have extended cuffs), fluid-resistant gown that extends to at least mid-calf OR fluid-resistant coveralls without integrated hood, face shield, hood, knee high boot covers. Additionally, an impermeable apron is recommended over gown or coveralls anytime the patient is vomiting or has diarrhea.
  - CDC VHF PPE: Clinically Stable Patients Suspected to have VHF
  - CDC VHF PPE: Confirmed Patients and Clinically Unstable Patients Suspected to have VHF
- Follow Donning and Doffing Checklist
  - Example: NYC Health + Hospitals **SP Level 2 VHF PPE Donning and Doffing Checklist**.
- Ensure a trained observer is present and donned in appropriate PPE (respirator, 2 pairs of extended cuff gloves (at minimum, outer gloves should have extended cuffs), fluid-resistant gown that extends to at least mid-calf OR fluid-resistant coveralls without integrated hood, face shield, hood, knee high boot covers).

Environmental Infection Control

- Orthoebolaviruses are classified as a **Category A infectious substance**: capable of causing permanent disability or life-threatening/fatal disease in humans if exposure occurs. Notify facility EVS. Keep all waste, supplies, or medical equipment in patient room until Ebola virus is ruled out.
- If Ebola infection is **RULED OUT**, clean and disinfect the patient's care area using an EPA registered disinfectant for appropriate contact times. Management of laundry, food service utensils, and medical waste should also be performed in accordance with routine procedures.
- If Ebola infection is **RULED IN**, all cleaning, disinfection, and transport of waste must be **managed as Category A waste**. Once the patient vacates a room, all unprotected individuals, including HCP, should not be allowed in that room until sufficient time has elapsed for enough air changes to remove potentially infectious particles and the room has been cleaned and disinfected by designated vendor (if applicable) or staff.

Diagnostic Testing

- **Consultation and approval from jurisdictional health department is required for disease-specific diagnostic testing.** Call jurisdictional health department 24-hour Epi-On-Call contact.
- Further information regarding specimen collection can be found here: https://www.cdc.gov/viral-hemorrhagic-fevers/php/laboratories/specimen-collection.html

Treatment and Immunization

- There are currently two treatments approved by the U.S. Food and Drug Administration (FDA) to treat Ebola disease (species ***Orthoebolavirus zairense*** only) in adults and children: Inmazeb™ and Ebanga™.
- There is one vaccine approved by the FDA for the prevention of Ebola disease species ***Orthoebolavirus zairense*** in individuals 12 months of age and older: ERVEBO®. It's a single dose administration and is available through CDC for pre-exposure vaccination of individuals who fall into specific occupational categories.
- There are candidate vaccines in trials for ***Orthoebolavirus sudanense***.
- Clinical management of patients with Ebola disease should focus on supportive care for complications including volume repletion, maintenance of blood pressure and oxygenation, pain control, nutritional support, and treatment of secondary bacterial infections and pre-existing comorbidities. Large volumes of IV fluids are often required.

Contact: SystemBiopreparedness@nychhc.org

References:
- CDC Ebola Signs and Symptoms
- CDC Ebola – For Healthcare Providers
- CDC Ebola Diagnosis