CONDITION

# Ebola virus disease

Ebola virus disease is a serious viral infection that can cause severe fluid loss, bleeding, and organ failure.

**WHAT IT IS**
Severe viral infection that can cause organ failure

**BODY SYSTEM**
Whole body, especially blood vessels, liver, and kidneys

**MAIN SYMPTOMS**
Fever, severe weakness, vomiting, diarrhoea

**WHAT CAUSES IT**
Infection with an Ebola virus

**HOW IT IS DIAGNOSED**
Blood PCR testing, sometimes antigen or antibody tests

**MAIN TREATMENT**
Supportive care and species-specific antibody medicines

**CAN IT BE CURED?**
Sometimes - prompt treatment can lead to recovery

**IS IT AN EMERGENCY?**
Yes - symptoms after possible exposure need immediate assessment

**LONG-TERM OUTLOOK**
Recovery is possible, but severe illness can be fatal

## Overview

Ebola virus disease is a serious infection caused by viruses in the Orthoebolavirus group. Several species can infect people. Outbreaks have mainly occurred in parts of sub-Saharan Africa.

The virus damages blood vessels and may affect the immune system, liver, kidneys, and other organs. Vomiting and diarrhoea can cause severe loss of fluid and electrolytes. Abnormal bleeding sometimes occurs but is not present in every case.

Ebola spreads through direct contact with infected blood or other body fluids, including when caring for someone who is ill, handling contaminated objects, or preparing the body of someone who has died. People are not generally contagious before symptoms begin.

Ebola is not spread through the air like measles. Close, unprotected contact with someone who is sick carries the greatest risk.

Early care can improve survival. Treatment replaces fluids, supports blood pressure and organ function, and may include effective antibody medicines. Suspected cases need prompt isolation to prevent further transmission.

## Symptoms

Symptoms usually begin 2 to 21 days after exposure. They often start suddenly and can resemble malaria, typhoid fever, influenza, or other infections.

Early symptoms may include:

Later symptoms can include vomiting, watery diarrhoea, stomach pain, and a rash. Fluid loss may cause intense thirst, dizziness, reduced urination, and low blood pressure.

Some people develop red eyes, bruising, bleeding from the gums, blood in vomit or stool, or bleeding from needle sites. Internal bleeding can occur, but no visible bleeding does not rule out Ebola.

Severe infection may cause confusion, seizures, breathing problems, shock, or liver and kidney failure. Pregnant people may have pregnancy-related bleeding, miscarriage, or other serious complications.

Symptoms alone cannot confirm Ebola.

- Fever, severe tiredness, headache, and muscle pain
- Sore throat and reduced appetite
- General weakness or feeling very unwell

## Causes and risk factors

Ebola begins when the virus passes from an infected animal to a person. Fruit bats are considered a likely natural host, and infections have also been linked to infected primates and other wild animals.

Once a person is ill, the virus spreads through direct contact with blood or body fluids, including vomit, diarrhoea, urine, saliva, sweat, breast milk, semen, and vaginal fluids. It can enter through broken skin or the eyes, nose, or mouth.

Contaminated needles, medical equipment, bedding, and clothing may also spread infection.

Risk is higher for people who:

The virus may remain in semen and certain other body sites after recovery, even after it has cleared from the blood. Follow-up precautions are therefore important.

- Provide close care without suitable protective equipment
- Handle the body of someone who died from Ebola
- Work with infected laboratory samples or animals
- Have sexual contact involving semen that still contains the virus
- Have direct exposure while living in or visiting an outbreak area

## Diagnosis

Ebola cannot be diagnosed from symptoms alone. Clinicians assess symptoms, travel history, and contact with a potentially infected person, body, animal, sample, or body fluid.

The main test is reverse-transcription polymerase chain reaction, or RT-PCR. This blood test detects the virus's genetic material. Antigen tests may also be used, while antibody tests are more useful later in the illness or after recovery.

Samples require special handling and appropriately equipped laboratories because infected blood can transmit the virus.

Testing very early may miss an infection. If suspicion remains high, healthcare and public health teams may repeat the test while continuing isolation and monitoring.

Other tests assess blood counts, clotting, electrolytes, liver and kidney function, and alternative diagnoses such as malaria.

## Treatment and management

Ebola requires hospital care in a facility prepared to prevent infection from spreading. If it is strongly suspected, treatment and isolation begin before every test result is available.

Supportive care may include:

Antibiotics like amoxicillin or doxycycline do not kill Ebola viruses, although they may be given for a suspected bacterial infection.

Two laboratory-made antibody treatments, commonly known as Inmazeb and Ebanga, reduce deaths from Zaire ebolavirus . They attach to the virus and help the immune system clear it.

These treatments are specific to Zaire ebolavirus and are not established for every Ebola virus species. The choice of treatment depends on the species involved, medicine availability, and the person's condition.

Patients are kept apart from uninfected people. Staff use protective clothing and strict procedures for equipment, waste, and body fluids. Treatment centres may provide phones, viewing areas, or other safe ways to maintain family contact.

- Fluids and electrolytes by mouth or through a vein
- Oxygen and support for blood pressure
- Treatment for pain, fever, vomiting, and diarrhoea
- Blood products, kidney support, or breathing support when needed

## Complications

Vomiting and diarrhoea can cause dehydration, electrolyte disturbances, low blood pressure, and shock, in which organs do not receive enough blood and oxygen.

Ebola may disrupt normal clotting, leading to bleeding or small clots that damage organs. Other complications include liver injury, kidney failure, brain inflammation, breathing failure, and secondary infections.

During pregnancy, Ebola can cause miscarriage, stillbirth, premature birth, and severe illness. Pregnancy tissues and fluids may remain infectious and need specialist handling.

After recovery, problems may include tiredness, headaches, muscle or joint pain, sleep difficulties, reduced hearing, abdominal discomfort, and problems with memory or concentration. Anxiety, low mood, grief, and stigma may also occur.

Eye inflammation can cause pain, light sensitivity, or vision changes and needs prompt assessment. Rarely, virus remaining in a protected body site can cause a relapse.

## Prevention

Outbreaks can be controlled through vaccination, rapid diagnosis, isolation, safe medical care, contact monitoring, and safer funeral practices.

A vaccine is available against Zaire ebolavirus . During an outbreak, it may be offered to contacts of a confirmed case, contacts of those contacts, and some frontline workers. It does not protect against every Ebola virus species.

In affected areas:

Healthcare and burial teams need specialised training and protective equipment. Household gloves or improvised clothing are not substitutes for professional infection-control procedures.

If someone may have Ebola, call local health or emergency services instead of transporting or caring for them without guidance.

Survivors may be offered semen testing and sexual-health advice. Condoms or avoiding sex may be recommended until testing or public health guidance indicates that transmission risk is low.

- Avoid direct contact with blood and body fluids
- Do not touch the body of someone who may have died from Ebola
- Avoid handling potentially infected wildlife
- Follow local public health and vaccination advice

## Living with it and what to expect

The acute illness develops over days. Outcome is influenced by the Ebola virus species, time before treatment, fluid loss, organ injury, pregnancy, age, and access to effective care.

People who improve usually need time to rebuild strength and nutrition. Tiredness, pain, and concentration problems may continue after the virus has cleared from the blood. Return to work, school, exercise, or caring duties may need to be gradual.

Follow-up may include checks of eyesight, hearing, joint pain, mental health, and sexual health. Blood or semen testing may be offered through survivor programmes. New eye pain or vision changes should not wait for a routine appointment.

Many survivors return to family, work, and community life, although some need rehabilitation or ongoing physical or emotional care.

Recovery may provide protection against the species that caused the illness, but protection against other Ebola virus species is uncertain. Previous infection should not be treated as complete protection from future exposure.

## When to get medical help

Ebola is a medical and public health emergency when symptoms occur after possible

exposure.

Seek immediate help if, within the previous 21 days, you have been in an Ebola outbreak area or had possible contact with an infected person, body, animal, laboratory sample, or body fluid and develop:

Call emergency or public health services before going to a clinic or hospital. Explain the possible exposure and symptoms so staff can prepare a safe assessment. Avoid public transport and close contact with others while awaiting instructions.

Emergency care is also needed for severe dehydration, fainting, confusion, seizures, breathing difficulty, very little urine, heavy bleeding, or inability to keep fluids down.

After recovery, arrange follow-up for persistent tiredness, joint pain, sleep problems, or difficulty returning to daily activities. Seek prompt assessment for eye pain, light sensitivity, reduced vision, new neurological symptoms, or a return of fever.

- Fever or marked weakness
- Headache or stomach pain
- Vomiting or diarrhoea
- Unexplained bleeding

## Common questions

Is Ebola airborne?

Ebola is not considered airborne in ordinary community settings. It mainly spreads when infected blood or another body fluid directly contacts broken skin or the eyes, nose, or mouth. Close care without suitable protection creates much greater risk than being in the same general area.

Can Ebola be cured?

Some people recover, especially with prompt supportive care. Effective antibody medicines are available for Zaire ebolavirus . No single treatment is proven to cure every Ebola virus species, and severe illness can still be fatal.

How long after exposure do Ebola symptoms start?

Symptoms begin 2 to 21 days after exposure. A person who remains well after the full monitoring period is unlikely to have developed infection from that exposure.

Does everyone with Ebola bleed?

No. Fever, severe weakness, vomiting, and diarrhoea are more consistent features. Visible

bleeding occurs in some cases but is not required for diagnosis.

Can an Ebola survivor still spread the virus?

The virus usually clears from the blood during recovery but can remain longer in semen and some other protected body sites. Follow-up, testing, and sexual-health precautions reduce this risk.

Can you get Ebola twice?

Recovery may produce lasting immunity to the species that caused the infection, but the strength and duration of protection are uncertain. It may not protect against a different Ebola virus species.

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