Frequently asked questions on Ebola virus disease

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1. What is Ebola virus disease?

Ebola virus disease (formerly known as Ebola haemorrhagic fever) is a severe, often fatal illness, with a death rate of up to 90%. The illness affects humans and nonhuman primates (monkeys, gorillas, and chimpanzees).

Ebola first appeared in 1976 in two simultaneous outbreaks, one in a village near the Ebola River in the Democratic Republic of Congo, and the other in a remote area of Sudan.

The origin of the virus is unknown but fruit bats (Pteropodidae) are considered the likely host of the Ebola virus, based on available evidence.

2. How do people become infected with the virus?

Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals. In Africa, infection has occurred through the handling of infected chimpanzees, gorillas, fruit bats, monkeys, forest antelope and porcupines found ill or dead or in the rainforest. It is important to reduce contact with high-risk animals (i.e. fruit bats, monkeys or apes) including not picking up dead animals found lying in the forest or handling their raw meat.

Once a person comes into contact with an animal that has Ebola, it can spread within the community from human to human. Infection occurs from direct contact (through broken skin or mucous membranes) with the blood, or other bodily fluids or secretions (stool, urine, saliva, semen) of infected people. Infection can also occur if broken skin or mucous membranes of a healthy person come into contact with environments that have become contaminated with an Ebola patient's infectious fluids such as soiled clothing, bed linen, or used needles.

Health workers have frequently been exposed to the virus when caring for Ebola patients. This happens because they are not wearing personal protection equipment, such as gloves, when caring for the patients. Health care providers at all levels of the health system – hospitals, clinics and health posts – should be briefed on the nature of the disease and how it is transmitted, and strictly follow recommended infection control precautions.

Burial ceremonies in which mourners have direct contact with the body of the deceased person can also play a role in the transmission of Ebola. Persons who have died of Ebola must be handled using strong protective clothing and gloves, and be buried immediately.

People are infectious as long as their blood and secretions contain the virus. For this reason, infected patients receive close monitoring from medical professionals and receive laboratory tests to ensure the virus is no longer circulating in their systems before they return home. When the medical professionals determine it is okay for the patient to return home, they are no longer infectious and cannot infect anyone else in their communities. Men who have recovered from the illness can still spread the virus to their partner through their semen for up to 7 weeks after recovery. For this reason, it is important for men to avoid sexual intercourse for at least 7 weeks after recovery or to wear condoms if having sexual intercourse during 7 weeks after recovery.

3. Who is most at risk?

During an outbreak, those at higher risk of infection are:

- health workers;
- family members or others in close contact with infected people;
- mourners who have direct contact with the bodies of the deceased as part of burial ceremonies; and
- hunters in the rain forest who come into contact with dead animals found lying in the forest.

More research is needed to understand if some groups, such as immuno-compromised people or those with other underlying health conditions, are more susceptible than others to contracting the virus.

Exposure to the virus can be controlled through the use of protective measures in clinics and hospitals, at community gatherings, or at home.

4. What are typical signs and symptoms of infection?

Sudden onset of fever, intense weakness, muscle pain, headache and sore throat are typical signs and symptoms. This is followed by vomiting, diarrhoea, rash, impaired kidney and liver function, and in some cases, both internal and external bleeding.

Laboratory findings include low white blood cell and platelet counts, and elevated liver enzymes.

The incubation period, or the time interval from infection to onset of symptoms, is from 2 to 21 days. The patient becomes contagious once they begin to show symptoms. They are not contagious during the incubation period.

Ebola virus disease infections can only be confirmed through laboratory testing.

5. When should someone seek medical care?

If a person has been in an area known to have Ebola virus disease or in contact with a person known or suspected to have Ebola and they begin to have symptoms, they should seek medical care immediately.

Any cases of persons who are suspected to have the disease should be reported to the nearest health unit without delay. Prompt medical care is essential to improving the rate of survival from the disease. It is also important to control spread of the disease and infection control procedures need to be started immediately.

6. What is the treatment?

Severely ill patients require intensive supportive care. They are frequently dehydrated and need intravenous fluids or oral rehydration with solutions that contain electrolytes. There is currently no specific treatment to cure the disease.

Some patients will recover with the appropriate medical care.

To help control further spread of the virus, people that are suspected or confirmed to have the disease should be isolated from other patients and treated by health workers using strict infection control precautions.

7. What can I do? Can it be prevented?

Currently there is no licensed vaccine for Ebola virus disease. Several vaccines are being tested, but none are available for clinical use right now.

Raising awareness of the risk factors and measures people can take to protect themselves are the only ways to reduce illness and deaths.

Ways to prevent infection and transmission

While initial cases of Ebola virus disease are contracted by handling infected animals or carcasses, secondary cases occur by direct contact with the bodily fluids of an ill person, either through unsafe case management or unsafe burial practices. During this outbreak, most of the disease has spread through human-to-human transmission. Several steps can be taken to help in preventing infection and limiting or stopping transmission.

- Understand the nature of the disease, how it is transmitted, and how to prevent it from spreading further. (For additional information, please see the previous questions about Ebola virus disease in this FAQ.)
- Listen to and follow directives issued by your country's respective Ministry of Health.
- If you suspect someone close to you or in your community of having Ebola virus disease, encourage and support them in seeking appropriate medical treatment in a care facility.
- If you choose to care for an ill person in your home, notify public health officials of your intentions so they can train you and provide appropriate gloves and personal protective equipment (PPE), as well as instructions as a reminder on how to properly care for the patient, protect yourself and your family, and properly dispose of the PPE after use.
- When visiting patients in the hospital or caring for someone at home, hand washing with soap and water is recommended after touching a patient, being in contact with their bodily fluids, or touching his/her surroundings.
- People who have died from Ebola should only be handled using appropriate protective equipment and should be buried immediately.

Additionally, individuals should reduce contact with high-risk infected animals (i.e. fruit bats, monkeys, or apes) in the affected rainforest areas. If you suspect an animal is infected, do not handle it. Animal products (blood and meat) should be thoroughly cooked before eating.

8. What about health workers? How do they protect themselves from the high risk of caring for sick patients?

Health workers treating patients with suspected or confirmed illness are at higher risk of infection than other groups.

- In addition to standard health-care precautions, health workers should strictly apply recommended infection control measures to avoid exposure to infected blood, fluids, or contaminated environments or objects – such as a patient's soiled linen or used needles.
- They should use personal protection equipment such as individual gowns, gloves, masks and goggles or face shields.
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- They should not reuse protective equipment or clothing unless they have been properly disinfected.
- They should change gloves between caring for each patient suspected of having Ebola.
- Invasive procedures that can expose medical doctors, nurses and others to infection should be carried out under strict, safe conditions.
- Infected patients should be kept separate from other patients and healthy people, as much as possible.

9. What about rumours that some foods can prevent or treat the infection?

WHO strongly recommends that people seek credible health advice about Ebola virus disease from their public health authority.

While there is no specific drug against Ebola, the best treatment is intensive supportive treatment provided in the hospital by health workers using strict infection control procedures. The infection can be controlled through recommended protective measures.

10. How does WHO protect health during outbreaks?

WHO provides technical advice to countries and communities to prepare for and respond to Ebola outbreaks.

WHO actions include:

- disease surveillance and information-sharing across regions to watch for outbreaks;
- technical assistance to investigate and contain health threats when they occur – such as on-site help to identify sick people and track disease patterns;
- advice on prevention and treatment options;
- deployments of experts and the distribution of health supplies (such as personal protection gear for health workers) when they are requested by the country;
- communications to raise awareness of the nature of the disease and protective health measures to control transmission of the virus; and
- activation of regional and global networks of experts to provide assistance, if requested, and mitigate potential international health effects and disruptions of travel and trade.

11. During an outbreak, numbers of cases reported by health officials can go up and down? Why?

During an Ebola outbreak, the affected country's public health authority reports its disease case numbers and deaths. Figures can change daily. Case numbers reflect both suspected cases and

laboratory-confirmed cases of Ebola. Sometimes numbers of suspected and confirmed cases are reported together. Sometimes they are reported separately. Thus, numbers can shift between suspected and confirmed cases.

Analyzing case data trends, over time, and with additional information, is generally more helpful to assess the public health situation and determine the appropriate response.

12. Is it safe to travel during an outbreak? What is WHO's travel advice?

During an outbreak, WHO reviews the public health situation regularly, and recommends any travel or trade restrictions if necessary.

The risk of infection for travelers is very low since person-to-person transmission results from direct contact with the body fluids or secretions of an infected patient.

WHO's general travel advice

- Travelers should avoid all contact with infected patients.
- Health workers traveling to affected areas should strictly follow WHO-recommended infection control guidance.
- Anyone who has stayed in areas where cases were recently reported should be aware of the symptoms of infection and seek medical attention at the first sign of illness.
- Clinicians caring for travelers returning from affected areas with compatible symptoms are advised to consider the possibility of Ebola virus disease.