Ebola



What is Ebola?

Ebola virus disease (EVD) is caused by a virus in the family “Filoviridae”. Viruses in this family are very large and have several long filaments or tails. Five Ebola virus species have been identified. Four of them are known to cause diseases in humans.

Unlike small viruses, such as influenza virus, Ebola virus cannot easily pass from person to person in the air and cannot survive for very long on surfaces outside of the body.

Ebola virus causes a severe disease called haemorrhagic fever. A haemorrhagic fever is one that involves damage to the blood vessels, loss of white blood cells and platelets, low blood pressure, and shock.

There are other diseases and other haemorrhagic fevers that present the same symptoms as the Ebola virus disease. Medical tests are required to confirm an Ebola diagnosis.

Ebola viruses have been associated with historical outbreaks in several Central African countries and caused a large outbreak in West Africa from 2014 to 2016. The World Health Organization (WHO) states that the average case fatality rate is around 50%. Rates have varied from 25% to 90% in past outbreaks.

HOW DOES THE EBOLA VIRUS DISEASE SPREAD?

Ebola virus is spread by direct contact with body fluids or tissues of an infected person with EVD symptoms or a recently deceased person (e.g., blood, saliva, feces, vomit) or from infected animals. The virus can enter your body through breaks in your skin (e.g., a cut), or through your eyes, nose or mouth. The Ebola virus disease also spreads by contact with contaminated objects such as soiled surfaces (bedding), or medical equipment (e.g., needles) contaminated with an Ebola virus.

Ebola is not spread through the air (i.e., it does not spread like the seasonal flu virus), nor is it spread by mosquitoes or water. Walking by an infected person is not enough contact to spread the disease. There is no indication that Ebola is spread by casual contact with surfaces touched by an infected person.

The amount of virus in the body of an infected person becomes significant at the time that symptoms of the illness first appear. The person must be showing symptoms of illness in order to spread the disease. During the incubation period (the time before symptoms become evident), no cases of Ebola being transmitted have been reported.

WHAT IS THE RISK OF BECOMING INFECTED BY THE EBOLA VIRUS?

In Canada and in any area where there is not an outbreak, the risk of infection for the general population (people not in direct contact with symptomatic persons) is extremely low. Specific occupations (e.g., laboratory and health care workers) are at higher risk of exposure, but these workplaces will have infection prevention controls to reduce the risk of exposure. People in an EVD-affected area who protect themselves or have only casual contact are at low risk (e.g., health professionals or humanitarian aid workers caring for Ebola patients). Those persons who are at high risk of exposure are those with unprotected, close contact with a potential source of the virus.

WHAT ARE THE SYMPTOMS OF EBOLA?

Symptoms can begin 2 to 21 days after exposure and usually start with the sudden onset of fever followed by other symptoms. The average period for symptoms to appear is 8 to 10 days. Initial symptoms include:

- Sore throat.
- Fever.
- Chills.
- Fatigue.
- Headache.
- Muscle pain and weakness.

Additional symptoms include:

- Rash.
- Nausea, vomiting and diarrhea.
- Haemorrhaging (bleeding from inside and outside the body).

WHO MIGHT BE EXPOSED TO THE EBOLA VIRUS?

As mentioned above, the risk of exposure outside an area where there is an outbreak is very low. Persons in health care or emergency response who may come in contact with the infected bodily fluids are at some risk. Other situations where exposure may possibly occur outside an affected area include airline crews, servicing and cargo employees, laboratory workers, mortuary and death care workers, and customs/border protection.

WHAT PREVENTION STEPS CAN BE TAKEN?

The Public Health Agency of Canada has provided guidance on the prevention of Ebola virus disease. Following personal protective measures whenever there is a possibility of exposure to Ebola virus is very important in preventing EVD.

The U.S. Regulators lists interim general guidance for workers who are in a known or reasonably suspected environment where they may contact the Ebola virus (e.g., there is known contamination by potentially infectious materials). The

Regulators recommendations include:

- Follow good infection control practices.
- Meet applicable requirements for personal protective equipment (PPE) and respirators. Care must be taken to put on and remove PPE properly.
- Wear gloves, use good handing washing techniques after removing gloves, and dispose of gloves in properly labelled containers.
- If you might be splashed, sprayed or spattered with body fluids, wear face and eye protection such as full-face shield or surgical masks with goggles. Aprons or other fluid-resistant clothing must also be worn.
- If you are asked to clean a surface that may be contaminated, your employer is responsible for ensuring you are protected and that appropriate procedures are followed.
- Training about the sources of Ebola exposure and appropriate precautions is provided.

Review the latest travel health advice to practice special precautions before travelling to an area with a known Ebola outbreak. For people who must travel to, or are in an Ebola outbreak area:

- Practice good hygiene.
- Use good hand washing techniques.
- Prevent contact with body fluids (e.g., a person showing symptoms, clothes, bedding, needles, medical equipment).
- Avoid contact with animals, including their blood, fluids, or raw meat.

WHAT SHOULD I DO IF I HAVE BEEN TO AN AFFECTED AREA AND I THINK I MAY BE ILL?

The Government of Canada states that you must call your appropriate public health authority immediately if:

- you are showing some of the above symptoms, and
- you or anyone in your household has recently travelled to an area where there is a confirmed Ebola virus outbreak.

Describe your symptoms and mention your recent travel over the phone before your appointment, so that health care staff can arrange to see you safely without potentially exposing themselves or others to the virus.

WHAT IS THE TREATMENT FOR EBOLA VIRUS DISEASE?

Cases should be cared for in highly specialized centres to make sure there is the appropriate supportive care and strict infection controls in place. There is currently no Health Canada approved treatment for EVD.

Symptoms of EVD are treated as they appear. These basic interventions include:

- Providing fluids intravenously (IV).
- Offering oxygen to maintain blood oxygen levels.
- Using different medication for blood pressure, vomiting, diarrhea, and managing fever.

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