What is Ebola virus disease?

Ebola virus disease (formerly known as Ebola hemorrhagic fever) is a severe often fatal illness caused by the Ebola virus. The virus originated in the Central African rainforest and is thought to spread to humans by handling or butchering of infected animals such as monkeys, gorillas, chimpanzees, forest antelope, porcupines or bats. Ebola virus was first identified in 1976, after an outbreak in Zaire (now the Democratic Republic of the Congo) near the Ebola river.

Why is Ebola in the news?

The largest Ebola outbreak ever known has affected part of West Africa for several months, and it is estimated that up to 70% of those infected with the Ebola virus have died. The outbreak started in Guinea, and has spread to the neighboring countries of Liberia and Sierra Leone. Cases in Nigeria and Senegal have been successfully contained, and there are cases in the United States and in Spain among healthcare workers who cared for returned travellers who contracted Ebola in West Africa. These cases and their contacts are currently being managed and monitored respectively.

What are the symptoms of Ebola virus?

An infected person will typically develop symptoms such as sudden fever, headache, joint and muscle pain and weakness. These symptoms typically start suddenly 8 to 10 days after becoming infected. However, it is possible for someone to become sick anywhere from 2 to 21 days after becoming infected.

Additional symptoms include rash, diarrhea, vomiting and abdominal (stomach) pain, and unexplained hemorrhage (bleeding or bruising). The infected person may bleed internally, as well as from the ears, eyes and mouth.

Symptoms of Ebola virus disease are similar to those of other viral haemorrhagic fevers, such as Marburg, and early symptoms, in particular, are similar to infectious diseases like malaria or typhoid. Diagnosis can be difficult, especially if only a single case is involved.

With immediate medical care, some people who become infected with the Ebola virus are able to recover.
How is the Ebola virus transmitted?

Ebola virus is not spread through routine social contact such as shaking hands with or sitting near to people who do not have symptoms. It is not spread through food or water, or by mosquitoes.

People can become infected with the Ebola virus if they come into contact with the blood, bodily secretions or organs of an infected person or animal.

A person is infectious as long as their blood and secretions contain the virus. The Ebola virus can survive for several days outside the body, including on the skin of an infected person even after they have died. Some traditional African burial rituals may have played a part in its spread.

Other ways people can catch the virus include:

- Touching the soiled clothing of an infected person and then touching your own eyes, nose or mouth;
- Handling unsterilized needles or medical equipment that have been used on an infected person;
- Not wearing appropriate protective equipment such as masks, gowns and gloves in the healthcare setting, including in laboratories;
- Handling infected animals or coming into contact with their body fluids.
- Having sex with an infected person without using a condom (the virus can be present in semen for several weeks after an infected person has recovered);

Who is at risk from Ebola?

Anyone who has close contact with an infected person or handles samples from patients is at risk of becoming infected. Healthcare workers, laboratory workers and family members caring for sick patients are at greatest risk.

What is the risk of Ebola in the Caribbean?

EVD is a threat to regional health security, and there is no time for complacency. To date there have not been confirmed cases of EVD in the Caribbean, and there are a limited number of cases of local transmission of EVD outside Guinea, Liberia, and Sierra Leone. This means the Caribbean region has the opportunity to continue to adapt, prepare and to test its public health emergency plans to face the current realities. There is also a recommendation from WHO, based on the revised International Health Regulations (2005), to maintain global alert for this disease. Based on available information, the risk to the Caribbean is considered to be low at this time.

However, because there is a possibility that someone with the virus could arrive in the Caribbean, health professionals have been told to be alert for any patient presenting with unusual symptoms, and a travel history to an affected area.
If such a person were identified, the person would be quickly admitted to hospital and treated in an isolation facility.

**What is the risk of catching Ebola during air travel?**

Individuals who are not symptomatic are not contagious.

You cannot catch Ebola by travelling on a plane with someone who is infected, unless you come into very close physical contact with them, or with their bodily fluids.

Ebola virus is not a respiratory disease like influenza (‘flu’) and is not transmitted through the air.

**Can Ebola be transmitted through the air?**

Ebola is not an airborne infectious disease like tuberculosis or measles. The only known way to become infected with Ebola is from contact with blood or body fluids of sick people

It is possible that transmission has happened in hospitals and treatment centres from larger droplets of fluid that have fallen onto surfaces: infection may occur when a healthcare worker touches a contaminated object or surface (including clothing) and then touches her or his mouth or eyes.

**Can dogs get or transmit Ebola?**

There has never been documented transmission of Ebola from a dog to a human. Prior to the current outbreak, a study done in Gabon showed that dogs that ate carcasses of infected animals had Ebola antibodies in their blood, but none of them showed symptoms of illness, that is, they were exposed to the virus, but they did not get sick.

**Is it safe to travel during the Ebola outbreak?**

During the current outbreak, CARPHA has been reviewing the public health situation regularly and supports WHO recommends that there should be no travel or trade restrictions at this time.

While travellers should always be vigilant with regard to their health and that of those around them, the risk of infection for travellers is very low since person-to-person transmission results from direct contact with the body fluids or secretions of an infected patient.

**Are ill passengers in West Africa getting on planes?**

As with any illness or disease, it is always possible that a person who has been exposed to Ebola virus may choose to travel. If the individual has not developed symptoms, they cannot transmit EVD to those around them.
Airports in Guinea, Liberia and Sierra Leone are screening all outbound passengers for Ebola symptoms, including fever. Ill passengers detected during these screens are not allowed to travel. Passengers are also required to complete a health questionnaire.

**Should international travellers be required to show proof that they have tested negative for Ebola?**

The World Health Organization has advised that this type of certification is NOT recommended under the provisions of the International Health Regulations.

Certificates indicating Ebola-free status are only given to people who have recovered from an Ebola infection. The document certifies that they are completely Ebola-free.

There is absolutely no need for members of the general public to have such a certificate. What is needed is a sound understanding of how the disease is transmitted and how one can protect oneself.

**How is Ebola diagnosed?**

Diagnosing Ebola in a person who has been infected for only a few days is difficult, because the early symptoms, such as fever, are nonspecific to Ebola infection and are seen often in patients with more commonly occurring diseases, such as malaria and typhoid fever.

Ebola is diagnosed based on travel history, symptoms and laboratory testing.

The decision for specimen collection and testing should be based on the clinical status of the patient and an on-going risk assessment. The presence of Ebola virus in samples of blood or body fluids can be detected by molecular methods in a Biosafety Containment Level 3 (BSL3) laboratory. CARPHA is in the process of establishing the capacity to conduct testing at its own laboratory. In the interim, all samples should be sent to WHO Collaborating Centre laboratories in the U.S. or Canada following consultation with PAHO/WHO and CARPHA. These laboratories are also equipped to culture the virus. **No virus culture should be attempted outside of a Biosafety Containment Level 4 (BSL4) laboratory.** There are currently no BSL4 facilities in the Caribbean.

**What treatment is available for Ebola?**

There is currently no specific treatment or cure for Ebola virus disease, although potential new vaccines and drug therapies are being developed and tested.

Patients need to be treated in strict isolation in intensive care to prevent the infection from spreading, while supportive care is given for their symptoms:

- Dehydration is common, so fluids may be given intravenously (directly into a vein);
- Blood oxygen levels and blood pressure need to be maintained at the correct level;
- Replacement of lost blood and clotting factors.
What do I do if I become ill?

- If you or anyone in your household has travelled to an area where there is a confirmed Ebola virus outbreak, call a healthcare provider IMMEDIATELY if you or anyone in your household are showing some or all of the symptoms of Ebola virus disease.
- Describe your symptoms over the phone, inform the healthcare provider of your travel history and activities carried out while in the affected area. This is so that they can prepare for your arrival, and see you safely in a hospital setting to minimize the risk to themselves and others.
- The sooner you receive treatment, the better your chances of recovery.

Can I take care of an ill relative at home, if it is likely that they have Ebola?

- No. Home care is NOT recommended for Ebola patients. The risk of spread in a household setting is extremely high. Caring for a sick person with Ebola requires special protective measures, and medical intervention that cannot easily be provided at home.
- All suspected cases of Ebola should be referred to a hospital for appropriate management.

What is CARPHA doing to protect the region?

The Caribbean Public Health Agency (CARPHA), the body responsible for public health in the Caribbean, has informed Member States about the situation in West Africa and asked that they inform health professionals to be vigilant for unusual illnesses in people who have visited the affected area.

CARPHA provides technical advice to Member States and others to prepare for and respond to the current Ebola outbreak. CARPHA actions include:

- Risk assessment – continued monitoring of the situation in order to update the assessed risk of Ebola for the Caribbean when necessary;
- Information sharing – CARPHA has posted and continues to update information on its website for health professionals, the public and the media;
- Communications - to raise awareness of the nature of the disease and the protective measures required to control transmission of the virus;
- Accessing global expertise – to access networks, mitigate potential impact and strengthen preparedness; and
- Collaboration and coordination - CARPHA is working closely with its regional and international partners, including PAHO/WHO, US CDC and Public Health Agency Canada (PHAC) to monitor the situation, gain access to diagnostic laboratory services and to provide a coordinated response.