



## Brief description on Ebola virus

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### DESCRIPTION

Ebola is a rare but however lethal virus that reasons fever, body pains, and diarrhea, and at times bleeding outside and inside the frame. As the virus spreads through the body, it damages the immune system and organs. Ultimately, it reasons tiers of blood-clotting cells to drop. This ends in severe, uncontrollable bleeding. This sickness referred to as Ebola hemorrhagic fever however is now called Ebola virus. It kills nearly 90% of those who are inflamed. Ebola virus and Marburg virus stay in animal hosts. Humans can get the viruses from inflamed animals. After the preliminary transmission, the viruses can spread from person to person through contact with body fluids or unclean objects such as inflamed needles. Ebola virus became first diagnosed in 1976. By the end of that year, associated lines of the virus had been recognised known as Ebola Zaire and Ebola Sudan. Later three different lines are also recognised to exist.

Ebola is not as easy to spread as common illnesses such as the common cold, flu, and measles. There is no evidence that the virus that causes Ebola is in the air or on the water. People with Ebola cannot spread the disease until symptoms appear. Ebola can spread among people only through direct contact with infected body fluids such as urine, saliva, sweat, feces, vomiting, breast milk, and semen. The virus can enter the body through broken skin and mucous membranes such as the eyes, nose, and mouth.

Ebola can also spread by contact with surfaces, objects, or substances that come into contact with the body fluids of a sick person like bed clothes and bedding, clothing, bandages, needles and syringes, medical equipment. In Africa, Ebola hemorrhagic fever can also be spread by handling infected wild animals hunted for food (bushmeat), contact with infected animals blood and body fluids, and contact with infected bats. Ebola does not spread through air, water, food and insects (mosquitoes). Health care workers and those who care for sick loved ones are at increased risk of developing Ebola because

they are more likely to have direct contact with body fluids. Proper use of Personal Protective Equipment (PPE) significantly reduces this risk.

### Symptoms

Signs and symptoms usually begin suddenly within 5-10 days of infection with the Ebola or Marburg virus. The initial signs and symptoms are: Fever, severe headache, joint and muscle pain, chills, weakness. Over a time the symptoms become more and more severe like nausea, vomiting, diarrhea (which may contain blood), red eyes, raised skin rashes, chest pain, cough, sore throat, abdominal pain, severe weight loss, bruising and bleeding generally from the eyes and when near to death, there may be bleeding from the ears, nose, rectum, or internal bleeding.

### Classification

Ebola virus belongs to a family of viruses called Filoviridae. Filovirus particles form long, sometimes branched, and short filaments of various shapes, up to 14,000 nanometers in length and 80 nanometers in diameter. Viral particles contain molecules of single-stranded negative-sense RNA coated with a lipid (fat) membrane. New virus particles sprout from the surface of the host cell. The Ebola virus, which was only discovered in 1976, is an ancient virus that is believed to be isolated from other viruses thousands of years ago.

There are five subtypes of Ebola virus, Zaire, Sudan, Bundibugyo, Thai Forest (formerly Cote d'Ivoire), and Reston, each named after the place where it was first identified. The first three subtypes are associated with the outbreak of major EVDs in Africa. Reston subtypes are found in the western Pacific Ocean and are highly pathogenic in non-human primates, but are not known to cause disease in humans. In addition to the Ebola virus, there is another member of the filovirus family known as the Marburg virus (named after the first German city to be detected), which also causes hemorrhagic fever.

## Diagnosis

It can be difficult to tell if you have Ebola based on your symptoms alone. Your doctor can do tests to rule out other illnesses such as cholera and malaria. Ebola can also be diagnosed by blood and tissue tests. If you have Ebola, you will be immediately isolated from the general public to prevent its spread. Researchers are working on Ebola, but there is no cure for Ebola. There are two medications approved to treat Ebola. Inmazeb is a mixture of three monoclonal antibodies (atortibimab, maftibimab, odesibimabebugun). Ansuvimabzykl (ebanga) is a monoclonal antibody given by injection. It prevents the virus from invading cell receptors and prevents it from invading cells. Doctors treat the symptoms of with: Fluids aelectrolytes, oxygen, blood

pressure medications, blood transfusions treatment of other infectious diseases.

## Prevention

There are vaccines to prevent Ebola, but rVSV-ZEBOV (Ervebo) treats only the Zaire strain of the virus. The best way to avoid getting sick is to avoid traveling to areas where the virus is present. If you are in an Ebola area, avoid contact with bats, monkeys, chimpanzees and gorillas. These animals infect humans with Ebola. You may be able to get the vaccine from the World Health Organization (WHO). Healthcare professionals can prevent infection by wearing masks, gloves, and goggles when in contact with people who may have Ebola.