



Marburg Hemorrhagic Fever

Fact Sheet for the Business Sector

Are there travel restrictions in or out of Angola?

No U.S. travel restrictions to the affected area are recommended at this time. For information about Marburg hemorrhagic disease and travelers, see the Centers for Disease Control and Prevention (CDC) Travelers' Health website: <http://www.cdc.gov/travel/index.htm>.

What actions can companies take to protect the health and safety of their employees in Angola?

The likelihood of individuals working in a corporate setting in Angola contracting any viral hemorrhagic fever (VHF), including Marburg, is considered extremely low unless they have traveled to the affected area and had direct contact with the body fluids of infected persons or animals or with objects that have been contaminated with body fluids.

Should U.S. businesses in Angola plan to relocate their employees to areas outside of that country?

There is no evidence to suggest that employees of American companies in Angola are at increased risk for Marburg virus infection. As of April 9, 2005, the outbreak was still focused in Uige province. In addition, two confirmed cases and several suspected cases of Marburg virus infection had been confirmed in Luanda, and additional suspected cases had occurred only in the following provinces (all located in the northwestern part of the country): Cabinda, Kuanza Norte, Kuanza Sul, Malange, and Zaire. The likelihood of contracting Marburg virus infection is considered extremely low unless there has been travel to the affected areas and direct contact with the blood or body fluids (e.g., saliva, urine) of symptomatic infected persons or animals, or with objects that have been contaminated with body fluids of symptomatic infected persons or animals.

How does a person become infected with Marburg virus?

The natural reservoir (where the virus lives between human outbreaks) of Marburg virus is unknown, and it is not known how the virus is initially transmitted to humans. However, once a human is infected, Marburg virus can be transmitted from person to person by direct contact with blood or body fluids of ill individuals.

What are the symptoms of Marburg hemorrhagic fever?

After an incubation period of 5-10 days, the disease can present with sudden fever, chills, headache, and muscle aches. Around the fifth day after the onset of symptoms, a rash on the chest and back may occur, along with nausea, vomiting, chest pain, a sore throat, stomach pain, and diarrhea. Symptoms become increasingly severe and may include jaundice (yellow skin and eyes), mental confusion, shock, liver failure, and multi-organ dysfunction.

How long does Marburg virus live in the environment and what is the risk of transmission on objects, such as a package or other materials?

Marburg virus may survive in dried blood for several days. The risk of transmission from objects such as packages and other materials is low. The main risk of spread is from direct contact with ill individuals or body fluids (e.g., blood, saliva, urine) from ill individuals.

What is the treatment for Marburg hemorrhagic fever?

No specific treatment for this disease is available. Patients should receive supportive care, including careful fluid and electrolyte management and treatment of other infections that may arise as a result of being sick with Marburg virus. Where medical resources exist, intensive care, including mechanical devices to support breathing, blood pressure support, and replacement of blood and clotting factors, may be necessary.

What precautions should be taken for people already in Angola?

The best protection for persons in or traveling to the outbreak area is to avoid contact with ill individuals. Infections occur through direct contact with body fluids (e.g., blood, saliva, urine) from individuals with active signs of infection.

Barrier precautions should be used when in close contact with persons infected with Marburg hemorrhagic fever or persons and animals suspected of being infected with Marburg virus. These precautions include wearing protective gowns, gloves, and masks, in addition to wearing eye protection (e.g., eye glasses) or a face shield.

What should I do if I become ill with symptoms of Marburg hemorrhagic fever?

If you become ill with fever or develop other symptoms such as chills, muscle aches, nausea, vomiting, or rash, visit a health-care provider **immediately**. The cause of fever in persons who have traveled in areas where VHF occur is more likely to be a different infectious disease, but you would need to be evaluated to be sure. The nearest U.S. Embassy or Consular Office can help you find a provider in the area. You are encouraged to identify these resources in advance. Limit nonessential travel while sick, and limit your contact with others.

Persons returning from the affected area should monitor their health for 10 days. Any traveler who becomes ill, even if only a fever (for up to 1 year in the case of malaria), should consult a health-care provider **immediately** and tell him or her about their recent travel. ***Tell the provider about your symptoms prior to going to the office or emergency room so arrangements can be made, if necessary, to prevent transmission to others in the health-care setting.***

What is the likelihood of spread to nearby areas or countries?

Governments of countries neighboring Angola are addressing the issue of cross-border movement. There is no indication that persons with Marburg virus disease have left the African continent. Information about the outbreak is insufficient at this time to determine the full extent of possibly affected areas. Updates will be posted regularly on the CDC Websites (www.cdc.gov and www.cdc.gov/travel) and the World Health Organization Website (www.who.int).

What is being done to prevent and control this outbreak?

As part of the public health response, CDC is sending personnel to join the WHO response team to assist with the epidemiologic investigation and control of the outbreak. CDC will continue to provide laboratory and other scientific and logistical support to the Ministry of Health of Angola.

What is the risk of infection among health care and laboratory workers, and what precautions can they take to reduce their risk?

Risk of infection with Marburg virus is greatest in health-care settings. Individuals working in health-care settings should ensure correct use of infection control precautions and appropriate personal protective equipment to prevent splashes of blood or body fluids from reaching the eyes, nose or mouth, direct contact with blood and body fluids, and needlesticks or other injuries that break the skin. Individuals working in laboratories with Marburg virus-infected monkeys or cell cultures also are at risk for infection. More specific information on infection control is available on CDC's website at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm54d330a1.htm>