



TEAMSTERS **Safety & Health** **FACTS**

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Ebola Virus Disease (EVD)

Purpose

This document is intended to provide key information about Ebola virus disease (EVD) and various measures that should be taken to prevent exposure to it.

This document is primarily based on information from The Centers for Disease Control and Prevention (CDC) and the Occupational Safety and Health Administration (OSHA). Local, state and federal health, environmental, and transportation regulations apply to all aspects of the threat posed by the Ebola virus.

What is Ebola?

Ebola virus disease (EVD), also known as Ebola hemorrhagic fever (EHF), is a usually fatal disease that can affect humans and some animals. It is caused by infection with the Ebola virus. The first case of a patient with Ebola in the U.S. was confirmed in September 2014. Two cases of transmission of Ebola to health care workers in the U.S. were confirmed in October 2014.

What are the symptoms? When do symptoms appear?

Symptoms usually appear 8 to 10 days after exposure. However, symptoms can appear as early as 2 days or as long as 21 days after exposure. A person who is infected with Ebola is not infectious (contagious) until symptoms, such as fever, begin.

Early symptoms include sudden fever, chills, and muscle aches. Around the fifth day, a skin rash may develop. Nausea, vomiting, chest pain, sore throat, abdominal pain, and diarrhea may follow. Symptoms become increasingly severe and may include jaundice (yellow skin), severe weight loss, mental confusion, bleeding inside and outside the body, shock, and multi-organ failure.

How dangerous is Ebola?

Fifty to ninety percent of patients with Ebola have died during the African Ebola outbreaks. Most Ebola fatalities are caused by dehydration. Researchers do not yet know why some people recover while others do not. Immediate treatment is essential to survival.

Currently there is no vaccine to prevent the disease. There is no approved medication or treatment to cure Ebola infection. Severely ill patients require intensive care, including hydration, electrolytes, and monitoring of blood pressure. People that are suspected or confirmed to have the disease should be isolated from other patients and treated by health care workers using strict infection control measures.

What is the difference between an “infected person” and an “infectious person?”

A person who is infected with Ebola is not infectious (contagious) until symptoms, such as fever, begin. Ebola infection cannot be detected during the incubation period; that is, it cannot be detected before symptoms appear.

How does Ebola virus spread?

Government and medical experts agree that the Ebola virus is spread by direct contact with an infectious person’s skin, blood, or body fluids such as urine, saliva, sweat, feces, vomit, breast milk, or semen. Body fluids may contain blood even if blood is not visible. Because the virus can survive on surfaces for several days, people can also be infected by direct contact with objects (like needles or bed sheets) that contain infectious blood or body fluids.

Both the Centers for Disease Control (CDC) and the World Health Organization (WHO) state that EVD is a bloodborne and not an airborne infectious disease. Airborne transmission of EVD among humans has not been documented. However, a small number of articles in the scientific literature indicate that EVD may potentially be transmitted via inhalation of infectious airborne particles.^{i, ii, iii, iv} As a precautionary measure against possible airborne transmission (droplet and/or aerosol), CDC, OSHA, and other experts recommend respiratory protection in certain health care settings.

Who is at risk?

To be at risk, you must have close contact with an infectious person (or animal). Close human contact means caring for or living with an infectious person with Ebola or having a high likelihood of direct contact with blood or body fluids from an infectious person. Direct contact means contact between an infectious body fluid and your mouth, nose, eyes or mucous membranes, or non-intact skin (cuts, scrapes, etc.).

The following groups are currently at risk:

- Residents of central and west Africa.
- Persons traveling from Sierra Leone, Guinea, Liberia, Nigeria, and Senegal who may have contact with an infectious person or animal.
- Health care workers who may have contact with an infectious person and/or infectious waste.
- Laboratory personnel who may handle infectious samples.
- Airline flight crews and airline and airport ground crews who may have contact with an infectious person or with infectious surfaces or materials
- Any other person who has close contact with an infectious person.

Worker protection

Since many Teamster members have contact with the public, it is important that all workers practice standard precautions when in direct contact with other persons or their body fluids. Standard precautions assume everyone is infectious. Use “universal precautions”- treat any body fluid as if it is infectious.

Wear impermeable, disposable gloves. Gloves and other personal protective equipment must be put on and taken off properly to avoid contaminating skin or clothing (see www.cdc.gov/HAI/pdfs/ppe/ppeposter1322.pdf). Do not reuse soiled gloves. Wash hands vigorously with soap and water after removing gloves or after close contact with an ill person or with body fluids or surfaces that may be contaminated. If soap and water are not available, use a hand sanitizer that contains at least 60% alcohol.

Avoid touching your mouth, eyes, and nose with unwashed or gloved hands. (Note: these are basic precautions. Additional protections are usually required, especially in health care settings. These include respiratory protection, eye protection, additional protective clothing, and decontamination.)

The consistent use of standard precautions helps protect workers from catching Ebola as well as most other infectious diseases including HIV, Hepatitis A, B and C, Norovirus and influenza.

Infection control measures in health care settings

Patients should be isolated in single patient rooms with private bathrooms. Mechanical ventilation should be used to maintain isolation areas under negative pressure. Health care workers should wear impermeable gloves, gown, and shoe covers, goggles or face shield, and respiratory protection.

Aerosol-generating procedures increase health care worker risk of infection and should be avoided if possible. These procedures, if performed, should occur only in an airborne isolation room. CDC recommends facilities use a powered air-purifying respirator (PAPR) or an N95 or higher respirator in the event of an unexpected aerosol-generating procedure. (<http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>).

Expert commentary published by the Center for Infectious Disease Research and Policy recommends using a powered air-purifying respirator (PAPR) for any activity that may aerosolize body fluids. The PAPR is recommended primarily because it is more protective but also because it allows for longer work periods, requires fewer doffing episodes, and generates less infectious waste (<http://www.cidrap.umn.edu/news-perspective/2014/09/commentary-health-workers-need-optimal-respiratory-protection-ebola>).

Environmental cleaning and disinfection are essential. Disinfectants for Ebola virus include 10% sodium hypochlorite (bleach) solution or hospital-grade quaternary ammonium or phenolic products. Note that these products have their own health and safety concerns and should be used only with appropriate precautions.

What Laws or Standards Protect Workers in the Private and Public Sectors?

Employers are required to protect workers against exposure to Ebola.

The OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030) requires an employer to have a written Exposure Control Plan to determine which work tasks might be “reasonably anticipated” to expose employees to infectious or potentially infectious materials. The plan must also describe the measures the employer will take to prevent or reduce exposure. These measures must include annual training of workers and providing appropriate personal protective equipment (PPE) such as impermeable gloves. Employers must provide access to hand washing facilities, or if not feasible, to antiseptic hand cleaners.

The OSHA Personal Protective Equipment/General Requirements Standard (29 CFR 1910.132) requires the employer to conduct a job hazard assessment to determine whether hazards are present that require the use of PPE. If PPE is required, the employer must provide it at no cost. The employer must train employees who are required to use PPE. Training must cover when and where to use PPE, how to use PPE, the limitations of relying on PPE, and how to maintain and dispose of PPE.

The OSHA Respiratory Protection Standard (29 CFR 1910.134) applies in situations where workers may be exposed to bio-aerosols containing Ebola virus.

The standard requires the employer to implement a written respiratory protection program where respirators are required to protect worker health. The employer must medically evaluate and annually train and fit-test workers who will use respirators.

The General Duty Clause of the Occupational Safety and Health (OSH) Act of 1970, Section (5) (a) (1), requires employers to keep their workplace free of recognized hazards that can cause death or serious harm to workers.

Private Sector Workers

OSHA covers private sector employers and employees in all 50 states, the District of Columbia, and other U.S. jurisdictions either directly through Federal OSHA or through an OSHA-approved state program. State-run health and safety programs must be at least as effective as the Federal OSHA program. To find the contact information for the OSHA Federal or State Program office nearest you, see the Regional and Area Offices map

State and Local Government Workers

Employees who work for state and local governments are not covered by Federal OSHA, but have OSH Act protections if they work in a state that has an OSHA-approved state program. Four additional states and one U.S. territory have OSHA approved plans that cover public sector employees only. This includes: Connecticut, Illinois, New Jersey, New York, and the Virgin Islands. Private sector workers in these four states and the Virgin Islands are covered by Federal OSHA.

Federal Government Workers

Federal agencies must have a safety and health program that meet the same standards as private employers. Although OSHA does not fine federal agencies, it does monitor federal agencies and responds to workers' complaints. The United States Postal Service (USPS) is covered by OSHA.

Not covered by the OSH Act:

- Self-employed;
- Immediate family members of farm employers that do not employ outside employees; and
- Workplace Hazards regulated by another Federal agency (for example, the Mine Safety and Health Administration, the Federal Aviation Administration, the Coast Guard).

Workers must not be discriminated against for raising legitimate safety concerns. Contact your union representative if you feel safety issues are not being addressed.

Where can I look for more information on Ebola Virus Disease and best available protections?

Information on best protections against EVD may change.

For questions and the most recent information to protect members from occupational hazards posed by the Ebola virus, please see other IBT Safety and Health Department Fact Sheets at www.teamster.org; you may also contact us at (202) 624- 6960 and ibtsafety@teamster.org.

References:

For more information, see the websites and documents below:

Ebola-related Fact Sheets on the IBT website and available through the IBT Safety and Health Department.

CDC: <http://www.cdc.gov/vhf/ebola/> .

OSHA: <https://www.osha.gov/SLTC/ebola/index.html>

National Institute for Occupational Safety and Health (NIOSH): <http://www.cdc.gov/niosh/topics/ebola/>

Guidance on Personal Protective Equipment To Be Used by Healthcare Workers During Management of Patients with Ebola Virus Disease in U.S. Hospitals, Including Procedures for Putting On (Donning) and Removing (Doffing), Centers for Disease Control and Prevention.

ⁱ Borio L, Inglesby T, Peters C, Schmaljohn A, et. al. 2002. Hemorrhagic fever Viruses as biological weapons: medical and public health management. JAMA 287(18): 2391-2405.

ⁱⁱ Jaax N, Jahrling P, Geisbert T, Steele K, et. al. 1995. Transmission of Ebola virus (Zaire strain) to uninfected control monkeys in a biocontainment laboratory. Lancet 346: 1669-1671.

ⁱⁱⁱ Johnson E, Jaax N, White J, Jahrling P. 1995. Lethal experimental infections of rhesus monkeys by aerosolized Ebola Virus. Int. J Exp Path 76:227-236.

^{iv} Piercy T, Smither S, Steward L, Eastbaugh L, Lever M. 2010. The survival of filoviruses in liquids, on solid substrates and in a dynamic aerosol. J Appl Microbiol. 109:1531-1539.