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PUBLIC HEALTH AGENCY OF SWEDEN

# Ebola and Marburg: Monitoring of returning aid workers

Guidance – version 3



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## About the publication

The Public Health Agency of Sweden has developed guidance to support the monitoring of aid workers returning from countries with active cases of Ebola and Marburg. The aim is to provide a national recommendation for uniform treatment of this group. The guidance is intended for employers of returning workers, such as the Swedish Civil Contingencies Agency (MSB), the Red Cross and Doctors Without Borders (Médecins Sans Frontières), as well as healthcare workers and county medical officers. The guidance includes the communicable disease control perspective and should be integrated in any returnee programme that employers may have.

Public Health Agency of Sweden

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# Background

Ebola and Marburg are zoonotic diseases prevalent in East, Central and West Africa. Ebola and Marburg are RNA viruses of the filovirus family that cause haemorrhagic fever.

The diseases regularly affect individuals infected by animals, with occasional larger outbreaks when the virus is also spread from person to person. The largest Ebola outbreak to date occurred in West Africa in 2014, when thousands of people fell ill. Rwanda experienced its first Marburg outbreak in September 2024.

The Communicable Diseases Act (2004:168) provides special provisions for Ebola and Marburg, both of which are classified as diseases dangerous to public health. More information on the Communicable Diseases Act and the classification of diseases can be found on the Public Health Agency of Sweden's webpage on [notifiable diseases](#).

Viral haemorrhagic fevers like Ebola and Marburg are transmitted through direct contact with blood or other body fluids of infected individuals. They are not transmitted through social contact with asymptomatic individuals. Both diseases usually start with a sudden fever, headache, muscle aches, sore throat and fatigue. Further information is available on the Public Health Agency of Sweden website: [Disease information – Ebola](#) and [Disease information about Marburg virus disease](#).

Persons who have worked in Ebola- or Marburg-affected countries may have been exposed and are at risk of infection. They should therefore be subject to monitoring upon return. In most cases, symptoms of Ebola or Marburg are more likely to be a consequence of other diseases such as malaria or influenza, and should therefore be widely investigated at an infectious disease clinic.

## Purpose

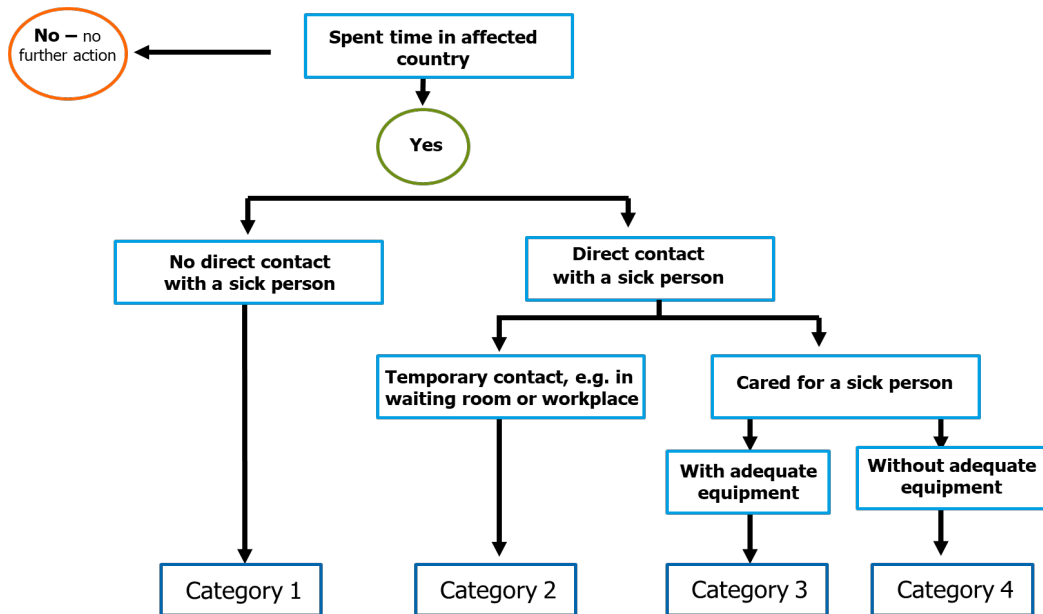
This guidance aims to provide a national recommendation for the monitoring of aid workers returning from countries with active cases of Ebola and Marburg.

# Monitoring upon return

Individuals who may have been exposed to Ebola or Marburg, but have not developed any symptoms, shall be individually assessed for the risk of transmitting the infection to others based on four risk categories. This assessment is then used to determine how the person is to be monitored in order to establish the diagnosis without delay in the event of illness and thus minimise the risk of secondary cases. Figure 1 presents the risk categorisation flowchart.

In all contacts with healthcare services, regardless of whether fever or other symptoms of suspected Ebola or Marburg are present, infectious disease specialists and county medical officers should be consulted.

Figure 1. Flowchart of risk categorisation of asymptomatic individuals with possible or confirmed exposure to Ebola or Marburg



# Recommendations for monitoring of individuals exposed to Ebola

## Category 1 – Low exposure – Low risk

Aid workers, including healthcare workers, returning from an assignment abroad in an Ebola- or Marburg-affected country. The person has been in a country with active cases of Ebola or Marburg, but has not had direct contact with a sick person or their body fluids. For example, they may have assisted in training other healthcare workers, or performed administrative or other non-medical aid work.

### Monitoring for those returning home

- Self-monitoring of temperature twice a day for 21 days after leaving the affected area.
- Individuals who have been exposed can contact the county medical officer if they have any general questions.
- Contact the infectious disease clinic by phone if temperature is  $\geq 38^{\circ}\text{C}$ .
- From a communicable disease control perspective, the person can work and live as usual.

## Category 2 – Temporary exposure – Some risk

The person has – without adequate protective equipment – had temporary contact (<1 metre) with an asymptomatic person who has been diagnosed with Ebola or Marburg in connection with, for example, spending time in the same waiting room, working as a receptionist, or spending time in the same household, classroom or workplace.

### Monitoring for those returning home

- Self-monitoring of temperature twice a day for 21 days after last exposure.
- Individuals who have been exposed can contact the county medical officer if they have any general questions.
- Contact the infectious disease clinic by phone if temperature is  $\geq 38^{\circ}\text{C}$ .
- From a communicable disease control perspective, the person can work and live as usual.

## Category 3 – Extensive exposure – Low risk

The person has cared for a person with Ebola or Marburg and/or had contact (< 1 metre) with the infected person's body fluids. The person used adequate protective equipment. No known incidents have occurred that could have posed a risk of infection.



Examples: Healthcare workers providing high isolation care in Sweden or who have returned from an assignment abroad in an Ebola- or Marburg-affected country.

#### Monitoring for those returning home

- Self-monitoring of temperature twice a day for 21 days after last exposure.
- Inform the county medical officer/treating physician of the measured body temperature daily.
- Contact the infectious disease clinic by phone if temperature is  $\geq 38^{\circ}\text{C}$ .
- From a communicable disease control perspective, the person can work and live as usual.

### Category 4 – Extensive exposure – High risk

The person has cared for a person with Ebola or Marburg and/or had contact (< 1 metre) with a person with Ebola or Marburg who e.g. coughed, vomited, was bleeding or had diarrhoea, without wearing adequate protective equipment and/or an incident occurred. Examples of incidents include needle sticks, splashes of body fluids on mucous membranes or in the eyes, or direct contact with the body fluid/tissue of a person with Ebola or Marburg.

#### Monitoring for those returning home

- The person at high risk should be offered a medical contact person at an infectious disease clinic, and the county medical officer must be informed.
- Individual assessment by the treating physician, if necessary in consultation with the county medical officer.
- Self-monitoring of temperature twice a day for 21 days after exposure.
- The county medical officer or treating physician is contacted daily and informed of all values on an ongoing basis. If a fever ( $\geq 38^{\circ}\text{C}$ ) or other symptoms develop – call an infectious disease clinic immediately.
- Special recommendations apply to cases involving exposure. In consultation with the county medical officer, the physician in charge of the case gives recommendations related to work, close contacts and travel.
  - Work-related recommendation: May involve a change in work duties, teleworking or suspension.
  - Recommendation related to close contacts: May involve avoiding various forms of social contact with other people during the period of observation.
  - Travel-related recommendation: May involve not using public transport or making long journeys, and instead staying in the local area.

### Suspected cases

If a patient presents with symptoms that are consistent with haemorrhagic fever, the patient must be given precautions to follow (Chapter 4, Section 2 of the Communicable Diseases Act). Patients with symptoms of Ebola or Marburg must be taken to an infectious disease clinic immediately to have this investigated, with relevant precautions taken in connection with this. The individual then also has an obligation to seek medical care (Chapter 3, Section 1 of the Communicable Diseases Act).

If their behaviour exposes someone else to an immediate risk of infection, patients with a suspected or confirmed case of Ebola or Marburg may also be temporarily isolated in accordance with Chapter 5, Section 3 of the Communicable Diseases Act, following a decision by the county medical officer.

### Extraordinary communicable disease control measures

For diseases classified as dangerous to public health, the county medical officer may decide to impose a quarantine under certain circumstances (Chapter 3, Section 9 of the Communicable Diseases Act). This can be imposed even if a person is only assumed to have been exposed to infection, i.e. the person does not need to be a suspected case with symptoms or the like. The regions are responsible for making quarantine facilities available. This may be applied to, for example, an asymptomatic person who is suspected of being infected or who has been exposed to the disease but not developed symptoms. Quarantine may also be carried out in the home under certain circumstances.

## General information on monitoring

Monitoring of returning aid workers lasts for 21 days after the last exposure. Before an individual even departs, it is important to plan for their deployment in East, Central and/or West Africa and what will happen when they return to Sweden, together with their employer and, if necessary, a county medical officer. This planning should include how to reduce the risk of secondary cases both during deployment and after returning to Sweden.

Other measures to consider for reducing the risk of spreading infection if a person develops a fever after returning to Sweden include avoiding exposing close relatives, for example by having access to a bathroom that is not shared with others.

Ebola and Marburg are not contagious until symptoms appear. A rule of thumb is that you are not contagious if you do not have a fever. Monitoring of categories 1–3 is done at home. For category 4, monitoring can usually be done at home if it is possible to follow the specified monitoring recommendations.

A person who may have been exposed to Ebola or Marburg may develop some other illness during the 21-day observation period, which warrants the establishment of close contact with the infectious disease clinic and county medical officer (communicable disease control unit) in the region.

If haemorrhagic fever is suspected, the patient should be given precautions to follow. Temporary isolation and quarantine, as decided by the county medical officer, may be required.

If Ebola or Marburg infection is suspected on return to Sweden, please refer to the infection prevention sheet on Ebola (Ebola virus infection) issued by Smittskyddsläkarföreningen.

Information for physicians: [Smittskyddsläkarföreningen's infection prevention sheet on Ebola](#) (in Swedish)

## Links

### Public Health Agency of Sweden

[Disease information about Ebola virus disease](#) (in Swedish)

[Disease information about Marburg virus disease](#)

### Smittskyddsläkarföreningen

Infection prevention sheet and algorithm Assessment and management of persons exposed to Ebola

### ECDC

European Centre for Disease Prevention and Control. Infection prevention and control measures for Ebola virus disease. Public health management of healthcare workers returning from Ebola-affected areas. 21 January 2015. Stockholm: ECDC; 2015

[Publication on Ebola virus disease for returning aid workers](#)

### Public Health England

Guidance. Ebola virus disease: information for humanitarian aid workers

[Publication on Ebola virus disease for aid workers](#)

### WHO

Ebola virus disease. Key facts.

[Information on Ebola virus disease from the World Health Organization](#)

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The Public Health Agency of Sweden is an expert authority with responsibility for public health issues at a national level. The Agency develops and supports activities to promote health, prevent illness and improve preparedness for health threats. Our vision statement: a public health that strengthens the positive development of society.



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