

Middle East Respiratory Syndrome (MERS-CoV)

An acute respiratory infection caused by a new coronavirus, first identified in countries in the Middle East in 2012, is known as Middle East Respiratory Syndrome. The new coronavirus is called the Middle East Respiratory Syndrome Coronavirus. Since the name is long, we use the abbreviation MERS-CoV.

MERS-CoV infections have been confirmed most frequently in countries on the Arabian Peninsula – in addition to Saudi Arabia, patients have come from the United Arab Emirates (UAE), Qatar, Oman, Jordan, Lebanon, and Kuwait. MERS-CoV infections have also been confirmed in residents of other countries – most of whom had travelled to or stayed in countries on the Arabian Peninsula, where they became infected with MERS-CoV and fell ill after returning home. Thus, MERS-CoV infection was detected in travellers from the United Kingdom, France, Tunisia, Italy, Greece, the United States, and Malaysia.

We have not yet confirmed a case of MERS-CoV infection in Slovenia. It is entirely possible that a traveller could return to Slovenia with this infection after traveling to or staying in countries in the Middle East.

Cause

Coronaviruses are viruses that cause mild respiratory infections. They have been known for many years and are found all over the world, occurring somewhat more frequently in the winter months in moderate climate zone.

Infection with MERS-CoV was first identified in 2012 in the Kingdom of Saudi Arabia. MERS-CoV is also not the same as the SARS coronavirus, which emerged unexpectedly in 2003 in China and caused acute respiratory infection in at least 8,000 people.

The source from which MERS-CoV spread to humans has not yet been identified. New viral and bacterial pathogens typically spread from an animal reservoir. Viruses or bacteria multiply within a specific animal species for many years. If they mutate in such a way that they are capable of infecting human cells in addition to animal cells, they become new pathogens of infectious diseases for humans. Antibodies against MERS-CoV have been found in camels. The current hypothesis is that camels are the source of the new MERS-CoV.

Incubation period

The incubation period (the time between infection and the onset of symptoms) is likely short, lasting only a few days. Currently, the incubation period is considered to be 2–14 days.

Transmission

The mode of transmission has not been definitively established – it is likely transmitted between people via respiratory droplets over short distances (up to 1 metre), which means that close contact with an infected person is required for transmission. Other modes of transmission are possible –

perhaps even through infected and poorly heat-treated meat or animal milk – but there is no conclusive evidence yet.

MERS-CoV was also transmitted from a patient to healthcare workers who did not use appropriate protective equipment while providing care.

Susceptibility to infection

Susceptibility to infection and the progression of the disease have not yet been thoroughly studied. It appears that, following infection, a more severe form of the disease develops in the elderly, in those with chronic illnesses, and especially in patients with compromised immune systems.

Symptoms and signs of the disease

The course of the acute MERS-CoV infection varies – some patients experience only a mild respiratory infection, similar to the common cold, while in others (usually the elderly, those with chronic illnesses, or patients with compromised immune systems) the course is extremely severe and results in the patient's death. A more severe course is characterized by a fever, cough, and shortness of breath. The clinical presentation of MERS-CoV infection is non-specific and cannot be distinguished from other acute respiratory infections, such as influenza, or bacterial pneumonia. The diagnosis of MERS-CoV infection is made using microbiological tests. Confirmation requires microbiological testing of samples such as throat swabs, nasal swabs, nasopharyngeal swabs, or other respiratory secretions.

Treatment

There is no antiviral medication available to treat MERS-CoV infections. Once infected, the course of the disease depends on the patient's immune system – the older we are and the more compromised our immune system is, the greater the likelihood that the disease will take a severe course. Patients are treated symptomatically (i.e., to alleviate symptoms) and by supporting the organ systems that fail during infection.

Prevention

A vaccine to protect against MERS-CoV infection has not yet been developed.

We recommend that travellers to areas where the disease is present follow general guidelines for reducing the risk of infection with viruses and bacteria while traveling:

- Wash your hands thoroughly with soap and water several times a day, or use a disinfectant if they aren't visibly dirty and you don't have access to water to wash them;
- Avoid eating undercooked food (such as meat that hasn't been cooked thoroughly); raw vegetables, etc.;
- Drink only bottled water and eat fruit that can be peeled;
- Avoid close contact (within 1 meter) with people who have a cold, are coughing, sneezing, or have a fever;

- After returning home, monitor your health for about 14 days – if you develop a fever, feel unwell, or start coughing during this time, call your doctor and tell them that you travelled to a country where you could have been exposed to MERS-CoV. The doctor will assess your health and advise you on how to proceed.

The likelihood of becoming infected with MERS-CoV is low, but it's still wise to be cautious.

Until MERS-CoV infection has been ruled out, avoid close contact with family member so as not to infect them. Family members should not be in close proximity to you (maintain a distance of at least 1 meter). Make sure to wash your hands more frequently (with soap and water) and practice cough etiquette – cough into your sleeve. However, if you coughed while covering your nose and/or mouth with your hand, immediately wash your hands, which are contaminated with respiratory secretions. Dispose of used tissues in the trash can; do not leave them lying around. Do not share cutlery, glasses, cups, or plates. Use your own towels.