Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People.™

Frequently Asked Questions and Answers

Q: What is MERS?

A: Middle East Respiratory Syndrome (MERS) is a viral respiratory illness. MERS is caused by a coronavirus (/coronavirus/about/index.html) called "Middle East Respiratory Syndrome Coronavirus" (MERS-CoV).

Q: What is MERS-CoV?

A: MERS-CoV is a beta coronavirus (/coronavirus/about/index.html). It was first reported in 2012 in Saudi Arabia. MERS-CoV used to be called "novel coronavirus," or "nCoV". It is different from other coronaviruses that have been found in people before.

Q: How was the name selected?

A: The Coronavirus Study Group (CSG) of the International Committee on Taxonomy of Viruses (ICTV) decided in May 2013 to call the novel coronavirus "Middle East Respiratory Syndrome Coronavirus" (MERS-CoV) [5 pages] (http://jvi.asm.org/content/early/2013/05/08/JVI.01244-13.full.pdf) (http://www.cdc.gov/Other/disclaimer.html).

Countries with Lab-Confirmed MERS Cases

Countries in the Arabian Peninsula with Cases

- Saudi Arabia
- United Arab Emirates (UAE)
- Qatar
- Oman
- Jordan
- Kuwait
- Yemen

Countries with Travel-associated Cases

- United Kingdom (UK)
- France
- Tunisia
- Italy
- Malaysia
- Turkey
- Greece
- Egypt
- United States of America (USA)

Q: Is MERS-CoV the same as the SARS virus?

A: No. MERS-CoV is not the same coronavirus that caused severe acute respiratory syndrome (SARS) in 2003. However, like the SARS virus, MERS-CoV is most similar to coronaviruses found in bats. CDC is still learning about MERS.

Q: What are the symptoms of MERS?

A: Most people who got infected with MERS-CoV developed severe acute respiratory illness with symptoms of fever, cough, and shortness of breath. 30% of them died. Some people were reported as having a mild respiratory illness.

Q: Does MERS-CoV spread from person to person?

A: MERS-CoV has been shown to spread between people who are in close contact.[1 (#foot1)] Transmission from infected patients to healthcare personnel has also been observed. Clusters of cases in several countries are being investigated.

Q: What is the source of MERS-CoV?

A: We don't know for certain where the virus came from. However, it likely came from an animal source. In addition to humans, MERS-CoV has been found in camels in Qatar, Egypt and Saudi Arabia, and a bat in Saudi Arabia. Camels in a few other countries have also tested positive for antibodies to MERS-CoV, indicating they were previously infected with MERS-CoV or a closely related virus. However, we don't know whether camels are the source of the virus. More information is needed to identify the possible role that camels, bats, and other animals may play in the transmission of MERS-CoV.

Q: Is CDC concerned?

A: Yes, CDC is concerned about MERS-CoV. Most people who have been confirmed to have MERS-CoV infection developed severe acute respiratory illness. They had fever, cough, and shortness of breath. About 30% of these people died. Also, in other countries, the virus has spread from person to person through close contact, such as caring for or living with an infected person. CDC recognizes the potential for the virus to spread further and cause more cases globally, including in the United States.

Q: Has anyone in the United States gotten infected?

A: Yes, on May 2, 2014, the first U.S. case of MERS was confirmed in a traveler from Saudi Arabia to the U.S. The traveler is considered to be fully recovered and has been released from the hospital. Public health officials have contacted healthcare workers, family members, and travelers who had close contact with the patient. At this time, none of these contacts has had evidence of being infected with MERS-CoV.

On May 11, 2014, a second U.S. imported case of MERS was confirmed in a traveler who also came to the U.S. from Saudi Arabia. This patient is currently hospitalized and doing well. People who had close contact with this patient are being contacted. The two U.S. cases are not linked.

CDC and other public health partners continue to investigate and respond to the changing situation to prevent the spread of MERS-CoV in the U.S. These two cases of MERS imported to the U.S. represent a very low risk to the general public in this country.

Q: What is CDC doing about MERS?

A: CDC works 24/7 to protect people's health. It is the job of CDC to be concerned and move quickly whenever there is a potential public health problem.

CDC continues to closely monitor the MERS situation globally. We are working with the World Health Organization and other partners to better understand the virus, how it spreads, the source, and risks to the public's health.

We recognize the potential for MERS-CoV to spread further and cause more cases globally and in the United States. In preparation for this, we have

- Enhanced surveillance and laboratory testing capacity in states to detect cases
- Developed guidance and tools for health departments to conduct public health investigations
- Provided recommendations for healthcare infection control and other measures to prevent disease spread
- Provided guidance for flight crews, Emergency Medical Service (EMS) units at airports, and U.S. Customs and Border Protection (CPB) officers about reporting ill travelers to CDC
- Disseminated up-to-date information to the general public, international travelers, and public health partners

Q: Am I at risk for MERS-CoV infection in the United States?

A: The U.S. cases of MERS represent a very low risk to the general public in this country. You are not considered to be at risk for MERS-CoV infection if you have not had close contact, such as caring for or living with someone who is being evaluated for MERS-CoV infection.

Q: Can I still travel to countries in the Arabian Peninsula or neighboring countries where MERS cases have occurred?

A: Yes. CDC does not recommend that anyone change their travel plans because of MERS. The current CDC travel notice is an Alert (Level 2), which provides special precautions for travelers. Because spread of MERS has occurred in healthcare settings, the alert advises travelers going to countries in or near the Arabian Peninsula to provide health care services to practice CDC's recommendations for infection control of confirmed or suspected cases and to monitor their health closely. Travelers who are going to the area for other reasons are advised to follow standard precautions, such as hand washing and avoiding contact with people who are ill.

For more information, see CDC's travel notice on MERS in the Arabian Peninsula (http://wwwnc.cdc.gov/travel/notices/alert/coronavirus-arabian-peninsula-uk) .

Q: What if I recently traveled to countries in the Arabian Peninsula or neighboring countries and got sick?

A: If you develop a fever and symptoms of respiratory illness, such as cough or shortness of breath, within 14 days after traveling from countries in the Arabian Peninsula or neighboring countries[2 (#foot1)], you should see your healthcare provider and mention your recent travel.

Q: How can I help protect myself?

A: CDC advises that people follow these tips to help prevent respiratory illnesses:

- Wash your hands often with soap and water for 20 seconds, and help young children do the same. If soap and water are not available, use an alcohol-based hand sanitizer.
- Cover your nose and mouth with a tissue when you cough or sneeze then throw the tissue in the trash.
- Avoid touching your eyes, nose, and mouth with unwashed hands.
- Avoid close contact, such as kissing, sharing cups, or sharing eating utensils, with sick people.
- Clean and disinfect frequently touched surfaces, such as toys and doorknobs.

Q: Is there a vaccine?

A: No, but CDC is discussing with partners the possibility of developing one.

Q: What are the treatments?

A: There are no specific treatments recommended for illnesses caused by MERS-CoV. Medical care is supportive and to help relieve symptoms.

Q: Is there a lab test?

A: Lab tests (polymerase chain reaction or PCR) for MERS-CoV are available at state health departments, CDC, and some international labs. Otherwise, MERS-CoV tests are not routinely available. There are a limited number of commercial tests available, but these are not FDA-approved.

Q: What should healthcare providers and health departments do?

A: For recommendations and guidance on the case definitions; infection control, including personal protective equipment guidance; home care and isolation; case investigation; and specimen collection and shipment, see Interim Guidance for Health Professionals (/coronavirus/mers/interim-guidance.html) .

Footnotes

1. Close contact is defined as a) any person who provided care for the patient, including a healthcare worker or family member, or had similarly close physical contact; or b) any person who stayed at the same place (e.g. lived with, visited) as the patient while the patient was ill.
2. **Countries in the Arabian Peninsula and neighboring countries:** Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Palestinian territories, Oman, Qatar, Saudi Arabia, Syria, the United Arab Emirates (UAE), and Yemen.

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Case Definitions

Patient Under Investigation (PUI)

A patient under investigation (PUI) is a person with the following characteristics:

A. Fever (≥38°C, 100.4°F) and pneumonia or acute respiratory distress syndrome (based on clinical or radiological evidence) AND EITHER:
   - a history of travel from countries in or near the Arabian Peninsula[1] within 14 days before symptom onset, OR
   - close contact[2] with a symptomatic traveler who developed fever and acute respiratory illness (not necessarily pneumonia) within 14 days after traveling from countries in or near the Arabian Peninsula[1] OR
   - a member of a cluster of patients with severe acute respiratory illness (e.g. fever and pneumonia requiring hospitalization) of unknown etiology in which MERS-CoV is being evaluated, in consultation with state and local health departments.

   OR

B. Close contact[2] with a confirmed or probable case of MERS while the case was ill AND
   - fever (>100°F) or symptoms of respiratory illness within 14 days following the close contact. (This is a lower threshold than category A.)

PUIs should be evaluated in consultation with the state and local health departments. For more information, see CDC's Interim Guidance for Health Professionals (/coronavirus/MERS/interim-guidance.html) .

Confirmed Case

A confirmed case is a person with laboratory confirmation[3] of MERS-CoV infection.

Probable Case

A probable case is a PUI with absent or inconclusive[4] laboratory results for MERS-CoV infection who is a close contact[2] of a laboratory-confirmed MERS-CoV case.

Footnotes

1. Countries considered in or near the Arabian Peninsula: Bahrain, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian territories, Qatar, Saudi Arabia, Syria, the United Arab Emirates (UAE), and Yemen.
2. Close contact is defined as a) any person who provided care for the patient, including a healthcare worker or family member, or had similarly close physical contact; or b) any person who stayed at the same place (e.g. lived with, visited) as the patient while the patient was ill.
3. Confirmatory laboratory testing requires a positive PCR on at least two specific genomic targets or a single positive target with sequencing on a second.
4. Examples of laboratory results that may be considered inconclusive include a positive test on a single PCR target, a positive test with an assay that has limited performance data available, or a negative test on an inadequate specimen.

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