

*Middle East Respiratory Syndrome Coronavirus (MERS-CoV) was identified in 2012. It has caused severe respiratory illness and death in people from several countries. There has been limited spread from infected people to others, particularly in hospitals and other health care settings.*

# Middle East Respiratory Syndrome coronavirus (MERS-CoV)

Last updated: 07 September 2016

## What is MERS coronavirus?

Coronaviruses are a large and diverse family of viruses that include viruses that are known to cause illness in humans (including the common cold) and animals. However in 2012, the MERS (for "Middle East respiratory syndrome") coronavirus (also known as MERS-CoV) was identified as a new type of coronavirus that could cause a rapid onset of severe respiratory disease in people. Many of the cases have occurred in people with underlying conditions that may make them more likely to get respiratory infections.

MERS-CoV is different from any other coronavirus previously found in people. It is also different from the coronavirus that caused SARS (Severe Acute respiratory syndrome) in 2002-03. However, like the SARS virus, MERS-CoV is most similar to other coronaviruses found in bats.

All cases of human infection with MERS-CoV identified to date have been in people who lived in or travelled to the Middle East, or who have had close contact with people who acquired the infection in the Middle East. MERS-CoV has occurred in those who have travelled or lived in Jordan, the Kingdom of Saudi Arabia, Qatar and the United Arab Emirates (UAE).

People who have been infected with MERS-CoV in the Middle East have also been identified in other countries, including Italy, the United Kingdom, France, Tunisia, Germany, Kuwait, Oman, Malaysia, the Philippines, Greece and the Republic of Korea (South Korea), and Thailand. Limited further transmission from exported cases has occurred in France, the United Kingdom to family members or people who shared a hospital room.

The largest known outbreak of MERS outside the Arabian Peninsula occurred in the Republic of Korea in 2015 as a multi-centre hospital outbreak. The outbreak was associated with a traveller returning from the Arabian Peninsula.

There have been no cases in Australia.

## What are the symptoms?

Many confirmed cases have had a rapid onset of serious respiratory illness, especially pneumonia. Symptoms include fever, cough, and shortness of breath.

A variety of other symptoms have been reported in some cases including muscle pain, diarrhoea, vomiting and nausea.

An increasing number of infections are being identified in people with only mild symptoms or no symptoms (asymptomatic) who were tested because they were close contacts of seriously-ill cases.

## How is it spread?

The virus is likely to have originated in bats, but infections are not necessarily spread from bats directly to people. Although camels are suspected to be the primary source of infection for humans, the exact routes of exposure remain unknown.

Many of the cases reported recently have likely acquired infection through human-to-human transmission. These have included a number of cases identified through outbreaks in health facilities in the Middle East which have involved limited transmission of the virus from infected patients to health care workers and to other patients. It is not yet known if people with asymptomatic infections can pass the infection onto others.

## Who is at risk?

People who are living in or travelling to affected areas of the Middle East or who have had contact with other cases may be at risk of catching the disease. People with underlying illnesses that make them more vulnerable to respiratory disease, including those with diabetes, chronic lung disease, pre-existing kidney failure, or those who have suppressed immune systems, may be at a higher risk.

## How is it prevented?

There is no vaccine to prevent MERS-CoV infections. People who are travelling to at risk areas should practice normal hygiene measures. Wash your hands often, and use a hand sanitiser if soap and water is not available.

When visiting a farm or a barn good hygiene measures should be practiced, such as regular hand washing before and after touching animals, avoiding contact with sick animals, and following good food hygiene practices, including avoiding drinking raw milk or eating food that may be contaminated with animal products unless they are properly washed, peeled, or cooked.

People at high risk of severe disease due to MERS-CoV (see above) should consider taking additional precautions while travelling in the Middle East, such as avoiding visiting farms, barn areas or market environments where camels are present.

## What should I do if I become unwell after travel in the Middle East?

If you become ill or feel unwell while travelling in the Middle East, you should not wait until you arrive back in Australia to seek medical assistance. Instead you should see a doctor or go to the local emergency department.

If you return from travel to the Middle East and feel unwell you should see your doctor or go to the emergency department to work out why you are ill, and you should mention you have been in the Middle East.

## How is it diagnosed?

MERS coronavirus disease is diagnosed by finding genetic material from the virus in respiratory samples such as fluid from the lungs. Testing for MERS-CoV is done in public health laboratories.

## How is it treated?

There is currently no specific treatment for people who are sick with MERS-CoV but general supportive medical care can be life-saving.

## What is the public health response?

There have been no cases in Australia, but special procedures to prevent the spread of MERS-CoV would be put in place in the event of a suspected case. MERS-CoV is a notifiable infection in NSW so doctors and laboratories must notify the local public health unit of any suspected or confirmed MERS-CoV cases.

Public health unit staff will investigate all cases to find out how the infection occurred, identify other people at risk of infection, implement control measures and provide other advice.

## Further information

- World Health Organization MERS-CoV updates - [www.who.int/csr/disease/coronavirus\\_infections/en/](http://www.who.int/csr/disease/coronavirus_infections/en/) .
- NSW Health Information for clinicians, laboratories and public health personnel on MERS coronavirus <http://www.health.nsw.gov.au/Infectious/alerts/Pages/MERS-Alerts.aspx>
- Australian Department of Health MERS coronavirus website (including information for GP's) <https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-MERS>
- NSW Health Advice for Hajj and Umrah pilgrims <http://www.health.nsw.gov.au/Infectious/factsheets/Pages/hajj-travel-advice.aspx>
- Australian Department of Foreign Affairs and Trade provides information for travellers on the Smartraveller website - [www.smartraveller.gov.au/](http://www.smartraveller.gov.au/)

For further information please call your local Public Health Unit on **1300 066 055**