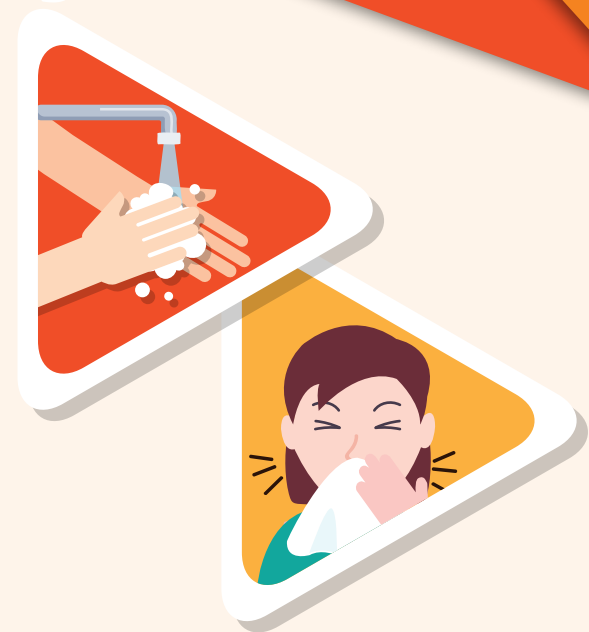


Middle East Respiratory Syndrome



▶ Causative agent

Middle East respiratory syndrome (MERS) is a viral respiratory disease caused by a novel coronavirus that was first identified in Saudi Arabia in 2012. Coronaviruses are a large family of viruses which include viruses that may cause mild illness like common cold as well as severe illness like severe acute respiratory syndrome (SARS) in humans. There are four subgroups of coronaviruses: alpha (α), beta (β), gamma (γ), and delta (δ). Middle East Respiratory Syndrome Coronavirus (MERS-CoV) is a beta coronavirus which has not been identified in humans before and is different from other coronaviruses (including SARS-coronavirus) that have been found in humans or animals.

▶ Clinical features

Infected persons may present with acute serious respiratory illness with symptoms including fever, cough, shortness of breath and breathing difficulties. Patients with MERS may develop severe complications such as pneumonia and kidney failure. Some also have gastrointestinal symptoms including diarrhoea and nausea/ vomiting. In people with immune deficiencies, the disease may have atypical presentation. Some laboratory-confirmed cases of MERS-CoV infection are reported as asymptomatic. Approximately 35% of reported MERS patients died.

▶ Mode of transmission

At present, the exact route of transmission is still unclear. Scientific studies support that dromedary camels serve as a major reservoir host for MER-CoV and an animal source of infection in humans. People may be infected upon exposure to infected animals (especially dromedary camels) or contaminated animal products.

Based on the current information, MERS-CoV may also spread through close contact with infected persons. Secondary cases were mainly healthcare workers who were in close contact with or providing unprotected care to patients with MERS-CoV infection and were infected within healthcare settings.

▶ Incubation period

2 – 14 days

▶ Management

There is currently no specific treatment for the disease. Treatment is supportive.

▶ Prevention

No vaccine is currently available to protect against MERS. The best preventive measure is to maintain good personal and environmental hygiene. While in Hong Kong or during travel, members of the public are advised to wear a surgical mask and seek medical advice promptly if respiratory symptoms develop.

1 Maintain good personal hygiene

- Perform hand hygiene frequently, especially before touching one's mouth, nose or eyes; before eating; after using the toilet; after touching public installations such as handrails or door knobs or when hands are contaminated by respiratory secretion after coughing or sneezing.
- Wash hands with liquid soap and water, and rub for at least 20 seconds. Then rinse with water and dry with a disposable paper towel or hand dryer. If hand washing facilities are not available, or when hands are not visibly soiled, hand hygiene with 70 to 80% alcohol-based handrub is an effective alternative.
- Cover your mouth and nose with tissue paper when sneezing or coughing. Dispose of soiled tissues into a lidded rubbish bin, then wash hands thoroughly.
- When having respiratory symptoms, wear a surgical mask, refrain from work or school, avoid going to crowded places and seek medical advice promptly.
- Build up good body immunity by having a balanced diet, regular exercise and adequate rest, do not smoke and avoid alcohol consumption.

2 Maintain good environmental hygiene

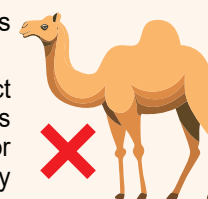
Though coronaviruses may survive for some time in the environment, they are easily destroyed by most detergents and cleaning agents. It is important to:

- Regularly clean and disinfect frequently touched surfaces such as furniture, toys and commonly shared items with 1 in 99 diluted household bleach (mixing 10 ml of household bleach containing 5.25% sodium hypochlorite with 990 ml of water), leave for 15 - 30 minutes, and then rinse with water and keep dry. For metallic surface, disinfect with 70% alcohol.
- Use absorbent disposable towels to wipe away obvious contaminants such as respiratory secretions, and then disinfect the surface and the neighbouring areas with 1 in 49 diluted household bleach (mixing 10 ml of household bleach containing 5.25% sodium hypochlorite with 490 ml of water), leave for 15 - 30 minutes and then rinse with water and keep dry. For metallic surface, disinfect with 70% alcohol.
- Maintain good indoor ventilation.
- Avoid going to crowded or poor ventilated public places; high-risk individuals may consider wearing a surgical mask when staying in such places.

▶ Travel health advice

Consult a health care provider at least 6 weeks before travelling to review the risk, as pre-existing major medical conditions including diabetes, chronic lung disease, pre-existing renal failure, or immunocompromised conditions can increase the likelihood of medical problems, including MERS, during travel.

- Avoid going to farms, barns and markets with camels.
- Avoid direct physical contact with animals, especially camels including riding camels or participating in any activity involving contact with camels (including touching or grooming).



- Wash hands before and after touching animals in case of visits to farms, barns or markets with camels.
- Avoid close contact with sick people, especially with those suffering from acute respiratory infections, and avoid visit to healthcare settings with MERS patients.
- Adhere to food safety and hygiene rules such as avoiding consuming raw or undercooked animal products, including milk and meat, or foods which may be contaminated by animal secretions, excretions (such as urine) or products, unless they have been properly cooked, washed or peeled.
- If feeling unwell, put on a surgical mask and seek medical attention immediately.
 - Before departure: postpone your trip until recovery.
 - While overseas: inform hotel staff or tour leader.
 - After returning home: during medical consultation, inform doctor of recent travel history, including any transit stops.



Centre for Health Protection Website www.chp.gov.hk

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