

# MERS

Middle East Respiratory Syndrome, known as MERS (Middle East Respiratory Syndrome), is a viral respiratory disease.

## Originator

MERS is caused by the MERS-CoV virus. The first human infection with this virus was detected in 2012 in Saudi Arabia. This virus is a beta coronavirus. Coronaviruses also include the more well-known SARS-CoV and common-cold virus. It is a single-stranded RNA virus. Due to RNA-dependent RNA polymerase and the high frequency of RNA recombination, there is a great diversity of coronaviruses and, in addition, coronavirus diseases adapt to new hosts.

## Transmission

Like SARS-CoV, this newly discovered virus causes pneumonia. Unlike SARS-CoV, however, it does not spread so easily through the air. MERS-CoV binds to DPP4 receptors. Only 20% of airway epithelial cells were found to contain these receptors. The dose of inhaled air required for infection must therefore probably be high. So far, the risk of transmission between people seems to be very low. Nevertheless, there has already been a transfer between people in close contact and between sick and caring staff. Bats and camels are the reservoir of this viral disease, so it is probably a zoonosis.

## Symptoms

Symptoms of MERS include fever, cough, dyspnoea, acute pneumonia, or renal failure. Of the 136 registered infected, 58 patients died as a result of the infection. The lethality is therefore 43%.

## Prevention, treatment and diagnosis

The CDC (Center for Disease and Control Prevention) recommends:

- Observe hygiene and wash your hands thoroughly with soap and water or alcohol disinfectant. Zakrýt nos a ústa kapesníkem při kašli nebo smrkání.
- Avoid touching eyes, nose and mouth with unwashed hands.
- Avoid close contact, such as kissing and sharing drinks with sick people.

The vaccine does not yet exist, the treatment is only symptomatic. The virus can be diagnosed by PCR.

## Links

- The whole situation is closely monitored by the WHO. You can find the latest findings and recommendations on the website here ([http://www.who.int/csr/disease/coronavirus\\_infections/update\\_20130813/en/](http://www.who.int/csr/disease/coronavirus_infections/update_20130813/en/))

## Related articles

- SARS
- Coronaviruses

## External links

- SARS (<https://cs.wikipedia.org/wiki/SARS>)

## References

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2. HESMAN SAEY, Tina. Scientists race to understand deadly new virus. *ScienceNews* [online]. 2013, vol. 183, no. 6, s. 5-6, also available from: <https://www.sciencenews.org/article/scientists-race-understand-deadly-new-virus>
3. <http://www.nature.com/news/receptor-for-new-coronavirus-found-1.12584>
4. [http://www.who.int/csr/don/2013\\_02\\_13/en/](http://www.who.int/csr/don/2013_02_13/en/)
5. <https://www.sciencedaily.com/releases/2012/12/121211083210.htm>
6. <https://www.cdc.gov/coronavirus/mers/faq.html>

