



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

Coronavirus

Human Coronavirus Types

Coronaviruses are named for the crown-like spikes on their surface. There are four main sub-groupings of coronaviruses, known as alpha, beta, gamma, and delta.

Human coronaviruses were first identified in the mid-1960s. The seven coronaviruses that can infect people are:

Common human coronaviruses

1. 229E (alpha coronavirus)
2. NL63 (alpha coronavirus)
3. OC43 (beta coronavirus)
4. HKU1 (beta coronavirus)

Other human coronaviruses

5. MERS-CoV (the beta coronavirus that causes Middle East Respiratory Syndrome, or MERS)
6. SARS-CoV (the beta coronavirus that causes severe acute respiratory syndrome, or SARS)
7. 2019 Novel Coronavirus (2019-nCoV)

People around the world commonly get infected with human coronaviruses 229E, NL63, OC43, and HKU1.

Sometimes coronaviruses that infect animals can evolve and make people sick and become a new human coronavirus. Three recent examples of this are 2019-nCoV, SARS-CoV, and MERS-CoV.

2019 Novel Coronavirus (2019-nCoV)

On January 9, 2020, the World Health Organization reported that a novel (new) coronavirus was identified by Chinese authorities. The virus is associated with an outbreak of pneumonia in Wuhan City, Hubei Province, China.

SARS-CoV

Severe acute respiratory syndrome coronavirus (SARS-CoV) was first recognized in China in November 2002. It caused a worldwide outbreak in 2002-2003 with 8,098 probable cases including 774 deaths. Since 2004, there have not been any known cases of SARS-CoV infection reported anywhere in the world.

MERS-CoV

Middle East Respiratory Syndrome Coronavirus (MERS-CoV) was first reported in Saudi Arabia in 2012. It has since caused illness in people from dozens of other countries. All cases to date have been linked to countries in or near the Arabian Peninsula. CDC continues to closely monitor MERS globally and work with partners to better understand the risks of this virus, including the source, how it spreads, and how infections might be prevented.