What are coronaviruses?

Coronaviruses are a large family of viruses that can infect humans or animals. Sometimes an animal coronavirus can change so that it can infect people and become a human coronavirus. There are seven known types of human coronaviruses. Four types (229E, NL63, OC43, and KHU1) are common and cause mild to moderate respiratory infections, like the common cold. Two types, Severe Acute Respiratory Syndrome coronavirus (SARS-CoV) and Middle East Respiratory Syndrome coronavirus (MERS-CoV), can cause severe respiratory infections. The seventh type (SARS-CoV-2) is the newest coronavirus. It first emerged in the Wuhan Province in China in December 2019. The infectious respiratory disease caused by this virus was named Coronavirus Disease 2019, or more commonly COVID-19.

Who gets coronavirus infections?

Most people become infected with coronaviruses that cause the common cold at some point during their lives. These infections often occur in the fall or winter.

The initial SARS-CoV infection (SARS), which occurred in China in 2002, spread quickly to more than two dozen countries in North America, South America, Europe and Asia before it was controlled. During the 2002-2003 SARS outbreak, nearly 8,100 people became infected. In the United States, eight people with laboratory-confirmed SARS infection were identified. These individuals had traveled to areas where the virus was spreading. Since 2004, no cases of SARS-CoV have been reported in the world.

Since it was discovered in 2012, nearly 2,500 people infected with MERS-CoV have been identified. All these cases have been linked to travel to or residence in and near the Arabian Peninsula. Countries in or near the Arabian Peninsula include Bahrain, Iraq, Iran, Israel, the West Bank and Gaza, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, the United Arab Emirates, and Yemen. Two people in the United States have had MERS and both traveled to Saudi Arabia where they likely became infected.

By far, the greatest impact from coronavirus infections has been caused by SARS-CoV-2. Since its discovery in late 2019, the virus spread worldwide and caused a global pandemic. In the United States, there have been many millions of cases. The virus is highly contagious and causes mild to severe respiratory symptoms.

How do coronaviruses spread?

Human coronaviruses most commonly spread from an infected person to others through respiratory droplets produced when an infected person coughs or sneezes, close personal contact (such as caring for, living with or having physical contact with an infected person), or touching an object or surface with the virus on it and then touching your mouth or eyes before washing your hands. Some coronaviruses can be spread from infected animals to people through contact, but this is rare. There are some instances where the COVID-19 virus has spread from infected humans to animals.

What are the symptoms of coronavirus infections?

Coronaviruses typically cause respiratory symptoms, such as runny nose, headache, cough, sore throat, and fever. Symptoms can range from mild to severe illness and death. Coronaviruses can cause more severe infections, such as pneumonia (infection of the lungs) or kidney failure. The symptoms more commonly seen with COVID-19 include fever or chills, cough, shortness of breath, fatigue and a new loss of taste or smell, with more severe illness moving to difficulty breathing, pain in the chest, and confusion.

How soon after exposure do symptoms occur?

It depends on the type of coronavirus. In general, symptoms usually appear 2–14 days after exposure.

How are coronavirus infections diagnosed?

Special laboratory tests for respiratory or blood samples are needed to diagnose coronavirus infection. Specifically for COVID-19, the United States Food and Drug Administration (FDA) has issued Emergency Use Authorizations (EUAs) for different types of tests. Some tests are used to diagnose a current infection with the virus, while other tests are used to detect recent or prior infection.

What is the treatment for coronaviruses?

Those with mild symptoms should stay home, rest, drink plenty of fluids and take over-the- counter (OTC) medications to relieve their symptoms. Those with more serious illness should talk with their healthcare provider, or in emergency situations, call 9-1-1.

At this time, there is no cure for COVID-19. Healthcare providers might recommend OTC medications to relive the person's symptoms. Depending on how severe the illness is, other treatments might be recommended, such as an antiviral drug or monoclonal antibodies.

How can coronavirus infection be prevented?

People should follow these tips to help prevent respiratory illnesses of any kind:

- Wash your hands often with soap and water for at least 20 seconds, and help young children do the same. If soap and water are not available, use an alcohol-based hand sanitizer (containing at least 60% alcohol). Wash your hands especially after coughing and sneezing, before and after caring for an ill person, and before preparing foods and before eating.
- Cover your nose and mouth with a tissue when you cough or sneeze and then throw the tissue in the trash.
- Avoid touching your eyes, nose, or mouth with unwashed hands.
- Avoid close contact (such as kissing, sharing cups, or sharing eating utensils) with people who are sick.
- Clean and disinfect frequently touched surfaces and objects, such as toys and doorknobs,

especially if someone is sick.

- Stay home when you are sick, except when you need to get medical care.
- Wash hands after animal contact and after visiting farms, markets, barns, petting zoos, and agricultural fairs.
- Avoid contact with animals who are sick.

In addition to these preventive measures, additional actions should be taken to prevent COVID-19 infection:

- Get vaccinated against COVID-19 with any of the vaccines available.
- Wear a mask over your mouth or nose in indoor and outdoor settings as required or recommended by local or state officials.
- Practice physical distancing by staying at least six feet from people who do not live with you.

How can I learn more about coronaviruses?

- If you have concerns about coronaviruses, contact your healthcare provider.
- Call your local health department. A directory of local health departments is located at https://www.vdh.virginia.gov/local-health-districts/.
- Visit the Centers for Disease Control and Prevention (CDC) website at https://www.cdc.gov/coronavirus/index.html.

July 2021