



Coronavirus pandemic world wide

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Abstract

Coronavirus is causing an outbreak first identified in Wuhan City, Hubei Province, China. Chinese health authorities have reported that patients have experienced fever, cough, difficulty breathing and pneumonia. Coronaviruses are named for the spikes that protrude from their membranes, like the sun's corona. Such viruses cause several illnesses of the respiratory tract, ranging from the common cold to severe diseases like SARS. According to the World Health Organization, common signs of infection include fever, cough, and respiratory difficulties like shortness of breath. Serious cases can lead to pneumonia, kidney failure and even death.

Keywords: introduction, symptoms, types, transmission, treatment

Introduction

Coronaviruses are types of viruses that typically affect the respiratory tract of mammals, including humans [1]. They are associated with the common cold, pneumonia, and severe acute respiratory syndrome (SARS) and can also affect the gut [1]. A coronavirus was first isolated in 1937 from an infectious bronchitis virus in birds that has the ability to seriously devastate poultry stocks [1]. These viruses are responsible for between 15 and 30 percent of common colds [1]. Over the last 70 years, scientists have found that coronaviruses can infect mice, rats, dogs, cats, turkeys, horses, pigs, and cattle [2, 3]. This MNT Knowledge Center article will focus on the different types of human coronaviruses, their symptoms, how they are transmitted, and two particularly dangerous diseases that can be caused by coronaviruses: SARS and MERS [1].

Fast facts on coronaviruses

There is no cure for the common cold. A coronavirus causes both SARS and MERS. Coronaviruses infect many different species [1]. There are six known human coronaviruses. SARS spread from China to cause infection in 37 countries, killing 774 people [1].

Coronaviruses

Human coronaviruses (HCoV) were first identified in the 1960s in the noses of patients with the common cold. Two human coronaviruses are responsible for a large proportion of common colds OC43 and 229E [1]. Coronaviruses were given their name based on the crown-like projections on their surfaces. "Corona" in Latin means "halo" or "crown." Among

humans, infection most often occurs during the winter months as well as early spring [1]. It is not uncommon for a person to become ill with a cold that is caused by a coronavirus [1] and then catch it again about four months later [1]. This is because coronavirus antibodies do not last for a very long time. Also, the antibodies for one strain of coronavirus may be useless against other strains [1, 4].

Symptoms

Common human coronaviruses, including types 229E, NL63, OC43, and HKU1, usually cause mild to moderate upper-respiratory tract illnesses, like the common cold. Most people get infected with these viruses at some point in their lives [1]. These illnesses usually only last for a short amount of time [1]. Symptoms may include Runny nose Headache Cough Sore throat Fever A general feeling of being unwell Human coronaviruses can sometimes cause lower-respiratory tract illnesses, such as pneumonia or bronchitis [1]. This is more common in people with cardiopulmonary disease, people with weakened immune systems, infants, and older adults [1]. Two other human coronaviruses [1], MERS- CoV and SARS-CoV have been known to frequently cause severe symptoms [1]. MERS symptoms usually include fever, cough, and shortness of breath which often progress to pneumonia [1]. About 3 or 4 out of every 10 patients reported with MERS have died [1]. MERS cases continue to occur, primarily in the Arabian Peninsula [1]. SARS symptoms often included fever, chills, and body aches which usually progressed to pneumonia [1]. No human cases of SARS have been reported anywhere in the world since 2004 [1, 5].

Transmission

Human coronaviruses most commonly spread from an infected person to others through The air by coughing and sneezing Close personal contact, such as touching or shaking hands Touching an object or surface with the virus on it, then touching your mouth ^[1, 6], nose, or eyes before washing your hands Rarely, fecal contamination In the United States, people usually get infected with common human coronaviruses in the fall and winter ^[1, 7]. However, get infected at any time of the year ^[1]. Most people will get infected with one or more of the common human coronaviruses in their lifetime ^[1]. Young children are most likely to get infected. However, people can have multiple infections in their lifetime ^[1].

Prevention and Treatment

There are currently no vaccines available to protect against human coronavirus infection. Wash hands often with soap and water for at least 20 seconds ^[1]. Avoid touching eyes, nose, or mouth with unwashed hands ^[1].

Protection

Stay home while are sick Avoid close contact with others Cover mouth and nose with a tissue when you cough or sneeze, then throw the tissue in the trash ^[1] and wash your hands Clean and disinfect objects and surfaces ^[1].

Treatment

There are no specific treatments for illnesses caused by human coronaviruses. Most people with common human coronavirus illness will recover on their own ^[1]. Take pain and fever medications (Caution: do not give Aspirin to children) ^[1, 5, 7, 26] Use a room humidifier or take a hot shower to help ease a sore throat and cough Drink plenty of liquids Stay home and rest ^[1, 27].

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