

A cluster of stylized virus particles, each consisting of a central circle with radiating lines and smaller circles at the ends, arranged in a loose, overlapping pattern.

General questions

COVID-19 Prevention and Control

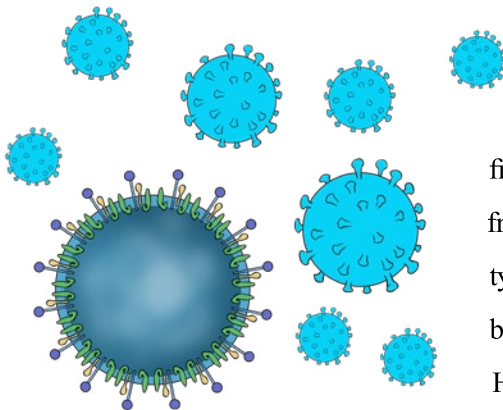
General questions

1. What is the novel coronavirus (2019-nCoV) (2019-nCoV for short)?

Virus or viruses are an entity similar to organisms with a non-cellular form composed of a nucleic acid molecule (DNA or RNA) and protein. Unable to live on their own, they exist as an organic species between living and non-living organisms that live inside the host living cells. These simple organisms can utilize the host's cellular system for self-replication, but cannot grow and replicate independently.

(Reference: Wikipedia)

As a positive-sense single-stranded RNA virus, coronavirus is a large family of viruses that exist widely in nature. It is named after corona for the corona-looking spikes that protrude from the envelopes of the virus. Coronavirus can cause multiple diseases in humans and animals, including respiratory diseases, gastrointestinal diseases, neurological diseases such as Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS).



In the recent epidemic outbreak control, among the patients with pneumonia of an unknown cause first identified in Wuhan, the virus isolated from their lower respiratory tract is a new type of coronavirus, named as 2019-nCoV by the World Health Organization (WHO). However, the specific animal vector(s) that



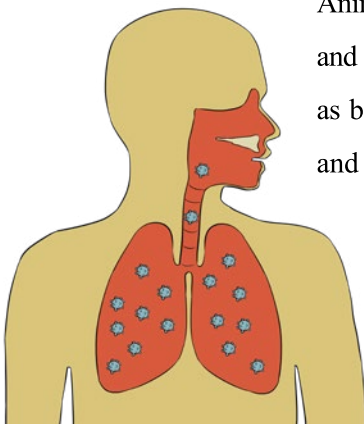
transmit the 2019-nCoV to humans remain(s) to be further studied. As a Group Beta coronavirus, the 2019-nCoV has an envelope and round or oval particles with a diameter of 60-140nm, and is often polymorphic. 2019-nCoV is sensitive to ultraviolet rays and heat and be effectively inactivated by 56 ° C for 30 minutes and lipid solvents such as ether, 75% ethanol, chlorine-containing disinfectants, peracetic acid, and chloroform.

(Reference: National Health Commission and China Health Education Center “*Health Education Manual for Novel Coronavirus Pneumonia Control*”; National Health Commission and National Administration of Traditional Chinese Medicine “*Diagnosis and Treatment Protocol of Novel Coronavirus Pneumonia Infection (Fifth Edition for Trial Implementation)*”)

The genetic characteristics of the 2019-nCoV are significantly different from SARSr-CoV and MERSr-CoV. Current researches have shown that it has a homology of more than 85% with bat SARS-like coronavirus (bat-SL-CoVZC45).

(Reference: National Health Commission and National Administration of Traditional Chinese Medicine “*Diagnosis and Treatment Protocol of Novel Coronavirus Pneumonia Infection (Fifth Edition for Trial Implementation)*”)

2. What is the source of 2019-nCoV?



Animal coronaviruses include mammalian coronaviruses and avian coronaviruses, which can infect mammals such as bats and birds such as chickens. Human contact with, and processing, and consumption of wild animals may cause the transmission of coronaviruses across species and cause human diseases.

(Reference: National Health and China Health Education Center: “*Health Education Manual for Novel Coronavirus Pneumonia Control*”)

3. What are the routes of transmission 2019-nCoV?

The main routes of transmission of the 2019-nCoV are transmissions via respiratory droplets and contact including: 1) Inhalation of respiratory droplets from patients or virus carriers when they cough or sneeze; 2) Conjunctiva, nasal mucosa contaminated with the sputum, blood, vomit, body fluids and secretions of patients or virus carriers; 3) Hands contaminated with the sputum, blood, vomit, body fluids, secretions of patients or virus carriers, or hands touching the mouth, eyes, nose after touching the articles and appliances contaminated by these secretions. Other routes of transmission such as aerosol and digestive tract transmission are yet to be confirmed.

(Reference: National Health Commission and China Health Education Center: *"Health Education Manual for Novel Coronavirus Pneumonia Control"*)

4. Which population groups are more susceptible to the 2019-nCoV infection?

The whole population is susceptible. Whether or not individuals will be infected depends mainly on their contact with 2019-nCoV infected patients or other individuals with asymptomatic infections. In the elderly and those with chronic underlying diseases, their conditions may progress faster, be more severe, and have a poorer prognosis after infection. According to the current treatment of patients, most of them have a good prognosis, and a few patients are critically ill and even die.

(Reference: National Health Commission and China Health Education Center: *"Health Education Manual for Novel Coronavirus Pneumonia Control"*)

As of 12:55 on February 15, 2020, a total of 57,298 cases have been confirmed worldwide. For the real-time updates of the epidemic, please refer to the link https://ncov.dxy.cn/ncovh5/view/pneumonia_peopleapp?from=groupmessage&isappinstalled=0



5. What are the common symptoms after infection?

Novel coronavirus pneumonia (NCP) refers to pneumonia caused by the 2019-nCoV infection, which is mainly manifested by fever, fatigue, and dry cough. A few patients have symptoms such as nasal congestion, runny nose, and diarrhea. In many severe patients, breathing difficulty and/or hypoxemia occurs after one week, and those critical cases can quickly progress to acute respiratory distress syndrome, septic shock, and metabolic acidosis and coagulation dysfunction that are difficult to be corrected etc. Notably, severe and critical patients may have moderate to low-grade fever or even no obvious fever during the course of the disease. Mild cases only show low-grade fever, mild fatigue, and no signs of pneumonia. Most patients have a good prognosis, and a few patients are critically ill. Deaths are more common in the elderly and those with chronic underlying conditions.

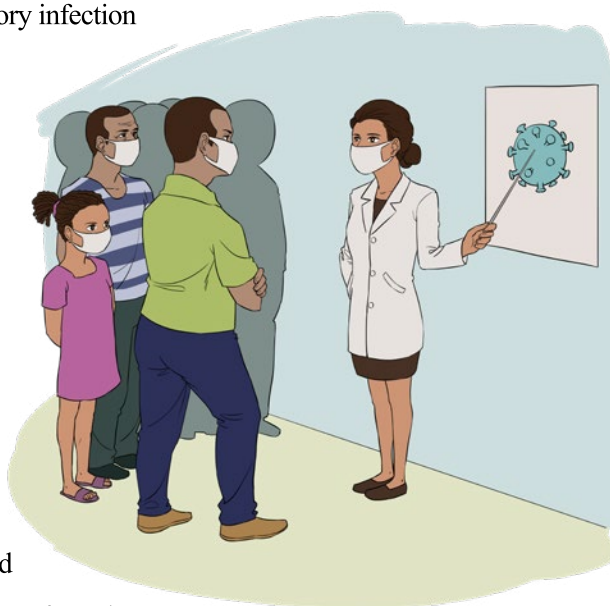
(Reference: National Health Commission and China Health Education Center “*Health Education Manual for Novel Coronavirus Pneumonia Control*”; National Health Commission and National Administration of Traditional Chinese Medicine “*Diagnosis and Treatment Protocol of Novel Coronavirus Pneumonia Infection (Fifth Edition for Trial Implementation)*”)

6. How can we distinguish between common cold, influenza and 2019-nCoV infection?

First, the pathogens of these three diseases are different. Second, the symptoms of the Novel Coronavirus Pneumonia are different from those of the common cold and influenza. The common cold is usually manifested through upper respiratory symptoms, such as nasal congestion, runny nose, and sneezing. But there are no obvious fever, fatigue, headache, joint pain, aches and pains, or loss of appetite. Generally speaking, for patients of common cold, they have more severe upper respiratory symptoms, but mild constitutional symptoms.

Influenza is a contagious respiratory infection caused by influenza viruses, which is characterized by acute onset. Patients may develop symptoms such as high-grade fever, sore throat, headache, muscle aches, fatigue, and loss of appetite, etc.

The main symptoms of Novel Coronavirus Pneumonia include fever, fatigue and dry cough, and a few patients also have symptoms of nasal congestion, runny nose, and diarrhea, etc. In mild cases, only low-grade fever and mild fatigue are observed, with no symptoms of pneumonia. The diagnosis needs to be combined with epidemiological history and laboratory test results.



(Reference: National Health Commission and China Health Education Center: "Health Education Manual for Novel Coronavirus Pneumonia Control")

7. How long is the incubation period of 2019-nCoV infection?

Based on the current epidemiological investigation, the symptoms of Novel Coronavirus Pneumonia may appear in as few as 1 day or as long as 14 days after exposure, mostly 3-7 days.

(Reference: National Health Commission and National Administration of Traditional Chinese Medicine "Diagnosis and Treatment Protocol of Novel Coronavirus Pneumonia Infection (Fifth Edition for Trial Implementation)")



8. How long can the 2019-nCoV survive in vitro?

The 2019-nCoV can survive for several hours on a smooth surface, for one day if the temperature and humidity are suitable, and can even survive up to five days according to observation.

(Reference: People's Daily, and Expert Group of National Health Commission)

9. What is the case fatality rate of Novel Coronavirus Pneumonia?

As of 24 pm on February 14, the cumulative number of confirmed cases of Novel Coronavirus Pneumonia nationwide totaled 66,492, and the cumulative deaths were 1,523. Based on this figure, the national case fatality rate (accumulated death cases accounted for the cumulative confirmed cases) is 2.29%. However, the fatal cases were mainly concentrated in Hubei Province. A total of 1,457 deaths or 95.67% of the nationwide fatal cases found in this province has registered a 2.68% case fatality rate. Among the 1,457 cases, 1123 deaths found in Wuhan or 73.74% of the nationwide cases have registered a case fatality rate at 2.96% in this city. Therefore, the case fatality rates in Hubei and Wuhan are higher than the national level.

(Reference: National Health Commission)

10. Will the 2019-nCoV mutate?

Asymptomatic infections have been found throughout the country, but no virus mutations have been detected. The relevant departments are closely monitoring the situation.

(Reference: People's Daily, and National Health Commission)

