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## **A LOOK AT COVID-19**

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### **ABSTRACT**

*Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Common symptoms include fever, cough, fatigue, shortness of breath, and loss of smell and taste. While the majority of cases result in mild symptoms, some progress to acute respiratory distress syndrome (ARDS) likely precipitated by a cytokine storm, multi-organ failure, septic shock, and blood clots. The time from exposure to onset of symptoms is typically around five days but may range from two to fourteen days. The virus is primarily spread between people during close contact, most often via small droplets produced by coughing, sneezing, and talking. The droplets usually fall to the ground or onto surfaces rather than travelling through air over long distances. Less commonly, people may become infected by touching a contaminated surface and then touching their face. The standard method of diagnosis is by real-time reverse transcription polymerase chain reaction (rRT-PCR) from a nasopharyngeal swab. Recommended measures to prevent infection include frequent hand washing, maintaining physical distance from others (especially from those with symptoms), quarantine (especially for those with symptoms), covering coughs, and keeping unwashed hands away from the face. In areas where SARS-CoV-2 is prevalent, all residents should be encouraged to stay alert for symptoms and practice social distancing by staying home as much as possible and maintaining six feet (two meters) distance from others when they have to leave the home.*

**Keywords :** Coronavirus disease 2019 (COVID-19), (SARS-CoV-2), novel coronavirus-infected pneumonia (NCIP).

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### **INTRODUCTION**

Coronavirus disease 2019 (COVID-19) is defined as illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; formerly called 2019-nCoV), which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China. It was initially reported to the WHO on December 31, 2019. On January 30, 2020, the WHO declared the COVID-19 outbreak a global health emergency. On March 11, 2020, the WHO declared COVID-19 a global pandemic, its first such designation since declaring H1N1 influenza a pandemic in 2009.

### **WHAT ARE THE OTHER NAMES OF COVID 19**

- Coronavirus
- Corona
- COVID
- 2019-nCoV acute respiratory disease
- Novel coronavirus pneumonia<sup>[1][2]</sup>
- Severe pneumonia with novel pathogens

## **WHAT IS CORONAVIRUS**

Coronaviruses are a large family of viruses which may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease COVID-19.

## **WHAT IS COVID 19**

COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. COVID-19 is now a pandemic affecting many countries globally.

## **MATERIAL AND METHODS**

### **PATHOLOGY OF COVID 19**

**Stage 1:** Asymptomatic state (initial 1–2 days of infection)

The inhaled virus SARS-CoV-2 likely binds to epithelial cells in the nasal cavity and starts replicating. ACE2 is the main receptor for both SARS-CoV2 and SARS-CoV

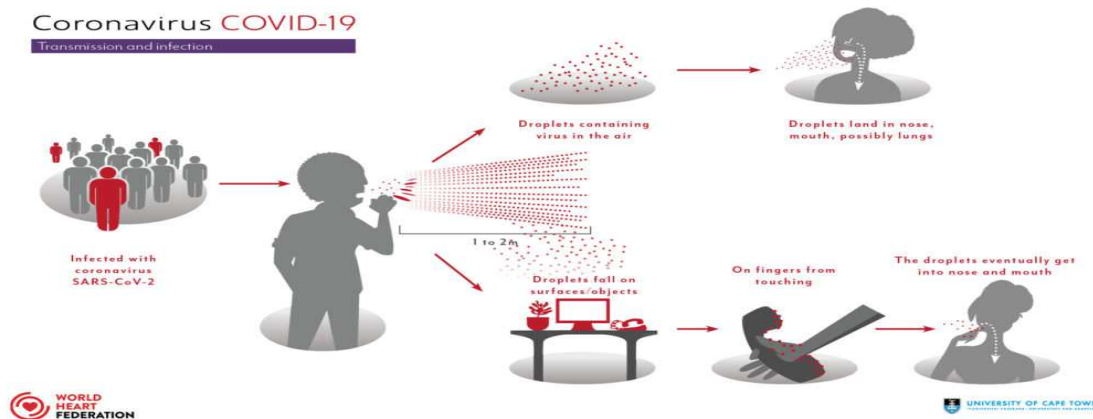
**Stage 2:** Upper airway and conducting airway response (next few days)

The virus propagates and migrates down the respiratory tract along the conducting airways, and a more robust innate immune response is triggered. Nasal swabs or sputum should yield the virus (SARS-CoV-2) as well as early markers of the innate immune response. At this time, the disease COVID-19 is clinically manifest.

**Stage 3:** Hypoxia, ground glass infiltrates, and progression to ARDS

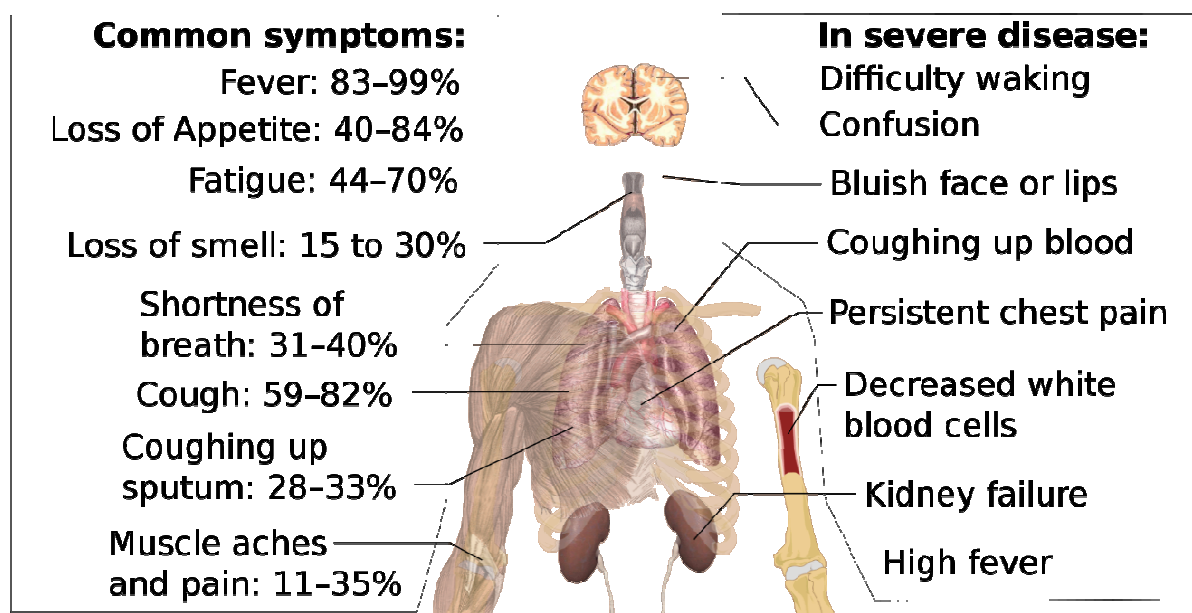
Unfortunately, about 20% of the infected patients will progress to stage 3 disease and will develop pulmonary infiltrates and some of these will develop very severe disease. Initial estimates of the fatality rate are around 2%, but this varies markedly with age . The fatality and morbidity rates may be revised once the prevalence of mild and asymptomatic cases is better defined. The virus now reaches the gas exchange units of the lung and infects alveolar type II cells

## **HOW COVID 19 IS TRANSMITTED**



## WHAT ARE THE SYMPTOMS OF COVID-19

COVID-19 affects different people in different ways. Most infected people will develop mild to moderate illness and recover without hospitalization.



## WHAT TREATMENTS ARE AVAILABLE

There's currently no treatment specifically approved for COVID-19, and no cure for an infection, although treatments and vaccines are currently under study.

Instead, treatment focuses on managing symptoms as the virus runs its course.

Examples of therapies used for these illnesses include:

- Antiviral or retroviral medications
- Breathing support, such as mechanical ventilation
- Steroids to reduce lung swelling

- Blood plasma transfusions

### **WHAT ARE THE POSSIBLE COMPLICATIONS FROM COVID-19?**

The most serious complication of COVID-19 is a type of pneumonia that's been called 2019 novel coronavirus-infected pneumonia (NCIP). Results from a [2020 study](#) of 138 people admitted into hospitals in Wuhan, China, with NCIP, found that 26 percent of those admitted had severe cases and needed to be treated in the intensive care unit (ICU). About 4.3 percent of the people who were admitted to the ICU died from this type of pneumonia. It should be noted that people who were admitted to the ICU were on average older and had more underlying health conditions than people who didn't go to the ICU. So far, NCIP is the only complication specifically linked to the 2019 coronavirus. Researchers have seen the following complications in people who have developed COVID-19:

- ARDS
- Irregular heart rate
- Cardiovascular shock
- Severe muscle pain
- Fatigue
- Heart damage

### **WHAT SHOULD I DO WITH MINOR SYMPTOMS OF CORONA VIRUS**

If you have minor symptoms, such as a slight cough or a mild fever, there is generally no need to seek medical care. Stay at home, self-isolate and monitor your symptoms. Follow national guidance on self-isolation.

However

- People who live in an area with malaria or dengue fever it is important not ignore symptoms of fever. Seek medical help.
- When attending the health facility wear a mask I, keep at least 1 metre distance from other people and do not touch surfaces with the hands.
- If it is a child who is sick help the child stick to this advice.

### **HOW TO SAFE GUARD OURSELVES**

## Prevention:

### WEAR A CLOTH FACE MASK



**Protect yourself and others in public** with a cloth face mask, particularly where it's difficult to maintain a 6-foot distance from others.

### WASH YOUR HANDS



**Stop the spread of** disease-causing germs by washing your hands often. Use hand sanitizer if soap and water are not available.

### COVER YOUR MOUTH AND NOSE



**When you cough or sneeze,** cover your mouth and nose with a tissue or your sleeve, rather than your hands. Try to avoid touching your face.

### AVOID CARE FACILITIES



**Do not visit nursing homes,** long-term care facilities or retirement communities, unless you're providing critical assistance.

### PRACTICE SOCIAL DISTANCING



**Work from home (if possible),** engage in social distancing, maintain a 6-foot distance from other people and avoid crowded places and gathering in groups.

### CLEAN AND DISINFECT



**Use a virus-killing** disinfectant to clean frequently used surfaces such as doorknobs.

### STAY HOME WHEN SICK



**Avoid leaving the house if you are sick.** Connect with healthcare providers by phone or through virtual visits.

### MAINTAIN HEALTHY HABITS



**Get enough sleep, eat** healthy foods, drink plenty of liquids and exercise, if you are able, to help keep your immune system strong.

## CAN COVID COVID 19 SPREAD FROM PERSONS WITHOUT SYMPTOMS

COVID-19 is mainly spread through respiratory droplets expelled by someone who is coughing or has other symptoms such as fever or tiredness. Many people with COVID-19 experience only mild symptoms. This is particularly true in the early stages of the disease. It is possible to catch COVID-19 from someone who has just a mild cough and does not feel ill. Some reports have indicated that people with no symptoms can transmit the virus. It is not yet known how often it happens. WHO is assessing ongoing research on the topic and will continue to share updated findings.

## RESULTS AND DISCUSSION

### WHAT SHOULD BE DONE IF IN CLOSE CONTACT WITH COVID 19 PATIENT

Close contact means that you live with or have been in settings of less than 1 metre from those who have the disease. In these cases, it is best to stay at home

- If you become ill, even with very mild symptoms you must self-isolate
- Even if you don't think you have been exposed to COVID-19 but develop symptoms, then self-isolate and monitor yourself
- You are more likely to infect others in the early stages of the disease when you just have

mild symptoms, therefore early self-isolation is very important.

- If you do not have symptoms, but have been exposed to an infected person, self-quarantine for 14 days.
- If you have definitely had COVID-19 (confirmed by a test) self-isolate for 14 days even after symptoms have disappeared as a precautionary measure – it is not yet known exactly how long people remain infectious after they have recovered. Follow national advice on self-isolation.

## **SELF ISOLATION**

Self-isolation is an important measure taken by those who have COVID-19 symptoms to avoid infecting others in the community, including family members. Self-isolation is when a person who is experiencing fever, cough or other COVID-19 symptoms stays at home and does not go to work, school or public places. This can be voluntarily or based on his/her health care provider's recommendation.

- If a person is in self-isolation, it is because he/she is ill but not severely ill (requiring medical attention)

- have a large, well-ventilated with hand-hygiene and toilet facilities
- If this is not possible, place beds at least 1 metre apart
- Keep at least 1 metre from others, even from your family members
- Monitor your symptoms daily Isolate for 14 days, even if you feel healthy
- If you develop difficulty breathing, contact your healthcare provider immediately – call them first if possible
- Stay positive and energized by keeping in touch with loved ones by phone or online, and by exercising yourself at home.

## **COVID-19.**

### **CAN I GET COVID FROM PETS**

Several dogs and cats (domestic cats and tigers) in contact with infected humans have tested positive for COVID-19. In addition, ferrets appear to be susceptible to the infection. In experimental conditions, both cats and ferrets were able to transmit infection to other animals of the same species. However, there is no evidence that these animals can transmit the disease to humans and spread COVID-19. COVID-19 is mainly spread through droplets produced when an infected person coughs, sneezes, or speaks.

It is still recommended that people who are sick with COVID-19 and people who are at risk limit contact with companion and other animals. When handling and caring for animals, basic hygiene measures should always be implemented. This includes hand washing after handling animals, their food or supplies, as well as avoiding kissing, licking or sharing food.

### **CAN WOMEN WITH CONFIRMED OR SUSPECTED COVID-19 CAN BREASTFEED**

Yes. Women with confirmed or suspected COVID-19 can breastfeed if they wish to do so. They should:

- Wash hands frequently with soap and water or use alcohol-based hand rub and especially before touching the baby;
- Wear a medical mask during any contact with the baby, including while feeding;
- Sneeze or cough into a tissue. Then dispose of it immediately and wash hands again;
- Routinely clean and disinfect surfaces that mothers have touched.

## **WHICH DISINFECTANT TO BE USED IN DISINFECTANTING THE NON HEALTHCARE SETTINGS**

In non-health care settings, sodium hypochlorite (bleach / chlorine) may be used at a recommended concentration of 0.1% or 1,000ppm (1 part of 5% strength household bleach to 49 parts of water). Alcohol at 70-90% can also be used for surface disinfection. Surfaces must be cleaned with water and soap or a detergent first to remove dirt, followed by disinfection. Cleaning should always start from the least soiled (cleanest) area to the most soiled (dirtiest) area in order to not spread the dirty to areas that are less soiled.

All disinfectant solutions should be stored in opaque containers, in a well-ventilated, covered area that is not exposed to direct sunlight and ideally should be freshly prepared every day.

In indoor spaces, routine application of disinfectants to surfaces via spraying is not recommended for COVID-19. If disinfectants are to be applied, these should be via a cloth or wipe which is soaked in the disinfectant.

## **HOW TO DISINFECT GROCERIES , FRUITS AND VEGETABLES**

**Wash nonporous containers.** The FDA says there's no current evidence to support the transmission of the virus from food packaging. But if you're concerned, it can't hurt to wipe down non-porous containers like glass or cans with disinfectant wipes.

If that's not practical, wash your hands well after putting away all packaging, including paper boxes and bags. "It all comes down to hand hygiene," says Liz Garman, a spokesperson for the Association for Professionals in Infection Control and Epidemiology in Arlington, Va.

One preliminary study found that the coronavirus responsible for the current pandemic doesn't survive on cardboard longer than 24 hours. Results of the study, conducted by researchers at the National Institute of Allergy and Infectious Diseases and other experts, were published on March 17 in a letter to the editor of the New England Journal of Medicine.

**Wash your hands, counter, and other surfaces you've touched.** Do this after you've put away the groceries. Keep in mind that using a disinfectant isn't necessary unless you're sharing a space with someone who is exhibiting signs of respiratory illness or has been exposed to the virus.

**Wash produce.** Rubbing fruit and vegetables under running water—and scrubbing those with hard skins—can help remove pesticides.

But there's no data to show that COVID-19 is spread by consuming food, says James E. Rogers, Ph.D., Consumer Reports' director of food safety research and testing. "The risk of getting the virus from your food is considered low," Rogers says. (

## **If You're Getting Your Groceries Delivered**

- Avoid a direct hand-off.



- Tip electronically.
- Order earlier than you usually do.

### CONCLUSION

Corona virus is a kind of common virus that causes an infection in your nose, or upper throat. Most coronaviruses aren't dangerous. In early 2020, after a December 2019 outbreak in China, the World Health Organization identified SARS-CoV-2 as a new type of corona. The outbreak quickly spread around the world. Covid 19 is a disease caused by SARS-CoV-2 that can trigger what doctors call a respiratory tract infection. It can affect your upper respiratory tract (nose, and throat) or lower respiratory tract (windpipe and lungs). It spreads the same way other coronaviruses do, mainly through person-to-person contact. Infections range from mild to deadly. SARS-CoV-2 is one of seven types of coronavirus, including the ones that cause severe diseases like Middle East respiratory syndrome (MERS) and sudden acute respiratory syndrome (SARS). The other coronaviruses cause most of the colds that affect us during the year but aren't a serious threat for otherwise healthy people. It's normal for a virus to change, or mutate, as it infects people. The virus can lead to pneumonia, respiratory failure, and death.

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