

# WHAT THERE IS TO KNOW ABOUT THE CORONAVIRUS – COVID-19



## **What is it?**

These days, “coronavirus” is often prefaced with the word “novel,” because that’s precisely what it is: a new strain in a family of viruses we’ve all seen before — and, in some form, had. According to the WHO, coronaviruses are a large family of viruses that range from the common cold to much more serious diseases. These diseases can infect both humans and animals. The strain that began spreading in Wuhan, the capital of China’s Hubei province, is related to two other coronaviruses that have caused major outbreaks in recent years: severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS).

Symptoms of a coronavirus infection range in severity from respiratory problems to cases of pneumonia, kidney failure and a buildup of fluid in the lungs.

## **How deadly is it?**

Public health officials say the novel coronavirus is less deadly than SARS, which killed about 10 percent of people who were infected during the outbreak that began in 2002. But epidemiologists are still trying to determine exactly how deadly covid-19 is.

About 2 percent of reported cases have been fatal, but many experts say the death rate could be lower. That’s because early in an outbreak, mild illnesses may not be reported. If only people with severe illness — who are more likely to die — seek care, the virus will appear much more deadly than it really is because of all the uncounted people with milder symptoms.

Early in the outbreak, one expert estimated that although 2,000 cases had been reported, 100,000 people probably were sick. Under counting cases can artificially increase the infection’s mortality rate.

## **How does it spread?**

Covid-19 spreads more easily than SARS and is similar to other coronaviruses that cause cold-like symptoms, experts have said. It appears to be highly transmissible, and since cases are mild, the disease may be more widespread than current testing numbers suggest.

There have been reports of people transmitting the virus before they show symptoms, but most experts think this is probably not a major driver of new infections. What is concerning, however, is that symptoms can be mild, and the disease can clearly spread before people realize they’re sick. SARS spread when people had full-blown illness, which is one reason it was possible to contain it — it was easier to tell who had the virus.

A report in the New England Journal of Medicine suggested covid-19 reaches peak infectiousness shortly after people start to feel sick, spreading in the manner of the flu. A study published in JAMA chronicled the case of a 20-year-old Wuhan woman who appeared to infect five relatives, even though she never showed signs of illness.

### **Who is most at risk of severe illness?**

Similar to other respiratory illnesses, older people and those with illnesses such as diabetes and high blood pressure are at increased risk. Early studies have also suggested men are at greater risk.

But, as with other diseases, there can be tremendous individual variation in how people respond. There will be people with known risk factors who recover as well as people who develop severe cases for reasons we don't understand.

"It may be a very specific thing about the way your immune system interacts with a particular pathogen," said Allison McGeer, an infectious-disease epidemiologist at the University of Toronto. "It may also be just about exactly what your exposure is."

### **What's it like to have covid-19?**

Symptoms are primarily respiratory. Coughing and shortness of breath are common, according to the CDC. Fever is also possible. The severity of the symptoms depends highly on the patient's age and immune system.

For the elderly and those with underlying heart disease, diabetes or other conditions, coronavirus can cause pneumonia and lead to organ failure and death. But for most people, cases have been mild, requiring little to no medical intervention.

Carl Goldman, the owner of a California radio station, is one of those people.

"I have the coronavirus," he wrote in an op-ed for The Post. "And it hasn't been that bad."

Goldman, who is in his late 60s, says a bad case of bronchitis a few years ago was much worse.

"This has been much easier: no chills, no body aches," he wrote of coronavirus. "I breathe easily, and I don't have a stuffy nose. My chest feels tight, and I have coughing spells. If I were at home with similar symptoms, I probably would have gone to work as usual."

But Goldman was aboard the Diamond Princess cruise ship, where dozens of Americans were infected.

"If you told me when I left home in January that I wouldn't be back until March — that, instead, I would be confined for more than 24 days because I'd catch a novel virus at the center of what could become a pandemic — that would have completely freaked me out," Goldman wrote. "But now that it's happening, I'm just taking it one day at a time."

### **How should I prepare?**

The virus may be novel, but you don't need to buy anything new or special to brace for it. Epidemiology experts said the most important aspect of preparedness costs nothing at all — calm.

"Don't panic," said Timothy Brewer, a professor of epidemiology and medicine at UCLA. "There's no value in panicking or telling people to be afraid. Don't let fear and emotion drive the response to this virus."

There are some basic precautions you can take, which are the same as what you should be doing every day to stave off other respiratory diseases. You've seen the guidance before: Wash your hands regularly. Cover your nose and mouth when you sneeze. And when you're sick, stay home from work or school and drink lots of fluids.

The CDC recommends washing with soap and water for at least 20 seconds after using the bathroom, before eating and after blowing your nose or sneezing. It also advises not to touch your eyes, nose and mouth and to clean objects and surfaces you touch often.

### **Do I need to wear a mask?**

If you're not already sick and you're not a health-care worker, the short answer is no. And you certainly don't need to buy every box your local pharmacy has in stock.

"The main point of the mask is to keep someone who is infected with the virus from spreading it to others," Brewer said.

The CDC agrees, writing on its website: "CDC does not recommend that people who are well wear a facemask to protect themselves from respiratory diseases."

Common surgical masks block the droplets coming out of a sick person from getting into the air, but they are not tight enough to prevent what's already in the air from getting in.

There are specialized masks — known as N95 masks because they filter out 95 percent of airborne particles — that are more effective, and some online retailers are sold out of them. But there's a problem: The masks are difficult to use without training. They must be fitted and tested to work properly.

### **What do reports of a patient being 'cured' mean?**

There are two kinds of "cured" in an infectious disease context, said Bruce Ribner, a professor at the Emory University School of Medicine.

"Clinically cured" is when someone feels better and stops showing symptoms such as fever and coughing. "Pathogen cured" is when doctors determine the virus is indeed no longer in the body and therefore the patient can't transmit the disease.

The former is clear to a patient. The latter, "we don't yet have a good handle on what it takes," Ribner said.

There's still no antiviral to treat the novel coronavirus. But Todd Ellerin, director of infectious diseases at South Shore Health in Massachusetts, said, "most patients are cured of this on their own" by their immune system fighting the virus, just as with influenza. But for at-risk patients, the novel coronavirus infection can be far more severe.

### **When will it end?**

This coronavirus could follow a seasonal pattern, peaking in the winter months. It could infect lots of people now and then recede in the Northern Hemisphere before returning in the fall. It could take hold in the Southern Hemisphere.

"This virus can do anything it wants," McGeer said. "That pattern of how it's going to spread is completely unknown, but it is critical to what the burden is going to be to all of us. ... It

could be just like another coronavirus, a bunch of colds. It could be like a regular flu season. It's possible it could be different and worse."

### **Terms to know**

#### **Coronavirus:**

This term refers to a family of seven known viruses that can infect people, ranging from the common cold to severe acute respiratory syndrome (SARS) and the even deadlier Middle East respiratory syndrome (MERS). The name comes from the virus's shape, which under a microscope looks like a blob surrounded by crown-like spikes.

#### **Covid-19:**

Sometimes used interchangeably with coronavirus and the official name SARS-CoV-2, covid-19 refers to the disease the virus causes. So SARS-CoV-2 causes covid-19, just as HIV causes AIDS.

#### **Zoonotic:**

The new coronavirus was transmitted from animals to people, making it zoonotic. SARS came from civets, which are like cats, and MERS came from camels, but it's not yet known what animal caused the current coronavirus outbreak. The prime suspect so far is the pangolin.

#### **Community transmission:**

This happens when a disease circulates among people in a certain area who did not travel to an affected location and have no close link to other confirmed cases. To date, almost all cases in the United States have been imported by Americans infected abroad or by a spouse or close contact with the virus. But U.S. officials have identified at least one case in California that is being called the first known instance of community transmission.

#### **Asymptomatic transmission:**

Asymptomatic carriers of the virus are people who show no signs of being sick but have the virus and can spread it to others. It is unclear how common asymptomatic transmissions are with the new coronavirus.

#### **Outbreak:**

A sudden increase in the number of cases of a disease in a particular place and time.

#### **Epidemic:**

A large outbreak that spreads among a population or in a region.

#### **Pandemic:**

An epidemic that has become rampant in multiple countries and continents simultaneously. So far, the World Health Organization has held off declaring the current crisis a pandemic, but many experts think the virus's geographic spread is already at that level or will be before long.

#### **Isolation:**

Keeping those who are sick and infected away from those who aren't is referred to as isolation. Hospitals have taken strict measures to isolate coronavirus patients using isolation wards, ventilators that prevent air from circulating more widely and heavy protective gear for health workers.

Quarantine:

Restricting the movement of people who seem healthy but may have been exposed to the virus is known as a quarantine. Americans who were evacuated from Wuhan and cruise ships, for example, have been kept in strict quarantine on military bases for 14 days, which is what experts believe is the virus's incubation period.

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