

## **“Coronavirus, explained: Everything to know about COVID-19, the deadly virus alarming the world.**

***Adrianna Rodriguez, George Petras, Ramon Padilla, Jim Sargent, Janet Loehrke, Grace Hauck, and Ryan W. Miller, USA TODAY*** Updated 1:22 p.m. EST Mar. 2, 2020

*Correction: A previous version of this story misstated the number of SARS cases.*

The spread of the new [coronavirus](#), which has killed thousands of people and infected tens of thousands more across dozens of countries, may have started with something simple – a person buying food for dinner at an outdoor market.

The potency and movement of the virus – now on the verge of a pandemic – has sparked global panic and rallied international cooperation. On Jan. 30, the World Health Organization declared the coronavirus outbreak to be a "public health emergency of international concern," followed a day later by the [United States' own declaration](#).

Health officials in the U.S. warned Tuesday that the virus has met two of the three criteria of a pandemic: The coronavirus has caused sickness and death and sustained person-to-person transmission.

"As community spread is detected in more and more countries, the world moves closer to meeting the third criteria – worldwide spread of the new virus," said Nancy Messonnier, director of the Centers for Disease Control and Prevention's National Center for Immunization and Respiratory Diseases.

President Donald Trump addressed the nation Wednesday about the outbreak and [put Vice President Mike Pence in charge](#) of his administration's response to the virus. The White House also requested \$2.5 billion in emergency funding this week to combat the outbreak, but congressional Democrats slammed the request as "woefully insufficient."

In China, where the death of a whistleblower doctor triggered national backlash, the outbreak has put a spotlight on censorship and free speech in the nation. But researchers say Chinese leaders are sharing their findings with the international scientific community, a contrast to the way they handled the [2003 outbreak of SARS](#), when the government withheld information and received world criticism.

As experts worldwide fight to contain the spread of the virus, the health of thousands of people and the fate of the world economy hang in the balance.

## What is the COVID-19 virus?

The formal name for the new coronavirus is COVID-19. WHO Director-General Tedros Adhanom Ghebreyesus said officials needed a name that did not refer to a geographical location, an animal, an individual or group of people. It also had to be pronounceable and related to the disease.

The infection numbers are startling: Since Jan. 20, cases of COVID-19 worldwide have risen to over 89,196 across at least 68 countries, [according to Johns Hopkins](#). The death toll stands at 3,048 as of Monday. All but 136 of the deaths have been in mainland China.

[Two people have died in King County, Washington](#), near Seattle. One U.S. citizen diagnosed with the coronavirus [died in Wuhan](#). According to John Hopkins, there are [86 cases](#) of the coronavirus in the U.S.

More than 45,100 people worldwide have recovered from the virus, according to Johns Hopkins.

**Get your flu shot:** [Coronavirus is scary, but the flu is deadlier, more widespread](#)

## How does coronavirus compare to SARS, MERS and the common flu?

More minor outbreaks similar to this have happened before, most notably with SARS in 2003 and MERS in 2015. While the new coronavirus has infected and killed more people than those outbreaks, its mortality rate is lower.

SARS, Severe Acute Respiratory Syndrome, is commonly used as a reference in coronavirus coverage, since both originated in China and share characteristics. In all, 8,100 SARS cases were recorded, with a death toll of 774. That's a fatality rate of 9.6%.

MERS, Middle East Respiratory Syndrome, originated in Saudi Arabia and resulted in 2,499 cases and 861 deaths, giving it a higher fatality rate of 34.5%.

With current numbers, the fatality rate for COVID-19 is less than the other outbreaks. As of Wednesday, the mortality rate - a statistic that measures the deadliness of the virus on infected persons - of coronavirus is 3.4 percent. That figure has risen since the initial discovery of the virus, when the mortality rate hovered around 2.2%.

Other types of disease, such as measles and Ebola, are far deadlier than coronaviruses.

The Ebola outbreak of 2014-2016 started in West Africa and became a global epidemic within months, ending with more than 28,600 cases and 11,325 deaths, according to the CDC. The average Ebola case fatality rate is around 50% but has varied from 25% to 90% in past outbreaks, according to the WHO. Ebola is harder to transmit, spreading to other people through direct contact with the body fluids of a person who is sick with or has died from the virus.

However, mortality rates don't always tell the whole story. The numbers are a simple snapshot based on infections and deaths, and the actual death rate of any virus is likely to be less, since many minor cases are not reported.

The reported numbers are biased by cases that require medical treatment, and there are likely many more cases that are mild and don't require treatment, said Lauren Gardner, a Johns Hopkins professor who has been mapping the outbreak.

However, confirmed coronavirus cases boomed this month as China altered its method for counting amid concerns over its handling of the crisis. China previously counted cases only when a person tested positive for the virus. Chest imaging and other medical diagnoses are now included.

Most coronavirus cases reported to date "have been milder, with about 20% of those infected experiencing severe illness," the WHO said.

These numbers are still incomparable to this season's influenza impact. Based on its weekly influenza report, [the CDC estimates](#) that there have been at least 32 million cases of flu, 310,000 hospitalizations and 18,000 deaths – including 125 children – in the U.S. this influenza season.

"Everybody is being cautious because we're still learning about it, but right now you're sitting in the midst of an influenza seasonal busy-ness," said Dr. David Hooper, chief of the Infection Control Unit at Massachusetts General Hospital.

"The risk is much higher for influenza for people in the U.S. than this new coronavirus."

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Mainland China has seen the greatest number of cases, with more than 80,000 confirmed cases as of Monday, according to Johns Hopkins.

As infection numbers rise, China has ordered some 60 million people in several cities in central Hubei province to [stay where they are under strict lockdown measures](#). The government is doubling down, too, and ordered lockdowns expanded to include residential communities within urban and rural areas of the region. The government also closed non-essential public places and banned public gatherings and the use of private vehicles.

Wuhan has been hardest hit. Airports and railway stations are closed and public transportation halted. Residents wear face masks to protect against infection. While a new, 1,000-bed coronavirus hospital was constructed in 10 days, there are shortages of medicine, protective masks and other supplies.

But it's not just China. For the first time, on Tuesday, more new cases of the virus were reported outside mainland China than inside. Panic is spreading through Europe and the Middle East, which are witnessing a boom of cases.

About a dozen ["hot spot" cities and towns across northern Italy](#) were locked down this week. Several regions closed schools, universities, museums, monuments and libraries and banned public events that attract crowds.

As of Monday, there were more than 9,100 confirmed cases outside mainland China, including deaths in Iran, Italy, South Korea, Japan, France, Hong Kong, U.S., Australia, Taiwan, Thailand, the Philippines and on a cruise ship, according to Johns Hopkins.

In the U.S., at least 86 people are known to be infected. Health officials in January reported the [first U.S. case of person-to-person spread](#) of the virus – the husband of a Chicago woman who recently came down with the illness after visiting China.

At least one member of the U.S. military has been infected. The [23-year-old soldier in South Korea](#) is in self quarantine at his off-base residence.

Some parts of the nation are preparing for the worst. Across California, more than 8,000 people who may have been exposed to the coronavirus [are being monitored](#). [San Francisco issued an emergency declaration](#) even though no cases of the virus have been confirmed in the city. Nearby counties issued similar declarations to raise awareness, mobilize city resources, accelerate emergency planning and coordinate agencies.

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Meanwhile, the U.S. government has evacuated more than 800 Americans from central China to California on chartered flights in recent weeks.

The first flight carried 195 [American diplomats and some citizens](#) at the end of January. The evacuees were placed in quarantine at U.S. military bases after U.S. health officials [issued a federal quarantine order](#) for the first time in a half-century. They were all released and cleared to begin traveling to their homes.

Subsequent flights carried Americans to military bases in California, Texas and Nebraska.

## **A crisis for cruise ships, airlines, hotels**

Cruise ships are also quarantining thousands of passengers after several ships were impacted by the coronavirus. [Diamond Princess](#), a Princess Cruises ship that was quarantined off the coast of Japan through Feb. 19, has had [at least 705 confirmed cases of coronavirus](#), including [at least 40 Americans](#) now back in the U.S.

Nearly 400 American passengers were [evacuated from the ship](#), including 14 who were allowed to fly back to the United States despite testing positive for the virus, the U.S. State Department and Health and Human Services said in a joint statement. They were not symptomatic.

"The [quarantine process failed](#)," Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases at the National Institutes of Health, said Monday.

Other cruise lines, airlines and hotels are facing problems, too.

In Cambodia, passengers from [Holland America's MS Westerdam](#) finally disembarked after the ship had been turned away from several ports, leaving the ship in limbo despite having no known coronavirus cases. The ship departed from Hong Kong on Feb. 1.

MSC Cruises' Meraviglia is facing a similar problem: Both Jamaica and the Cayman Islands [turned away the ship](#) Tuesday over a flu-stricken crew member despite no cases of the coronavirus.

Meanwhile, [Delta, United and American airlines canceled](#) all of their China flights until late April in response to the coronavirus outbreak, becoming the first domestic carriers to make the move. Delta also said Wednesday that it plans to temporarily cut flights from South Korea.

Hotels are following suit with Hilton, Wyndham Hotels & Resorts, Best Western Hotels & Resorts, Marriott closing dozens of locations in China. Some hotels such as Marriott and Hyatt are waiving cancellation fees for guests staying in China or traveling elsewhere from China. Airbnb has also suspended some bookings.

In Austria, the [Grand Hotel Europa temporarily closed](#) Tuesday following two confirmed coronavirus cases.

## Travel advisories: Where can't Americans go?

On Jan. 30, the U.S. State Department [elevated its China travel advisory](#) to level 4, recommending that Americans do not travel there. The CDC recommends travelers avoid nonessential travel to China, a level 3 warning, also its most severe warning.

Several other health-related warnings are in place for countries reporting cases of the coronavirus. The [CDC issued a level 3 advisory](#) to South Korea and a level 2 advisory ("practice enhanced precautions") to Japan, Italy and Iran. The CDC issued a level 1 "watch" advisory to Hong Kong but does not recommend postponing or canceling travel there.

The State Department is warning travelers to reconsider going on a cruise to or within Asia.

## Face masks selling out, prices soar

The U.S. has a [stockpile of 30 million face masks](#) but needs at least 270 million more to protect health care workers should the coronavirus spread widely across the nation, according to Health and Human Services Secretary Alex Azar.

Azar told a Senate subcommittee meeting that N95 facemask/respirators made by Honeywell are required. But at more than \$10 a mask, that would cost a cool \$2.7 billion. That's more than President Donald Trump's entire allocation – \$2.5 billion – to combat the virus.

In Italy, authorities opened an investigation this week into [soaring online prices for hygienic masks and sanitizing gels](#).

But infectious-disease experts say [a face mask can offer only slight protection](#) against airborne illness. A more effective defense against a virus is washing your hands thoroughly with soap and warm water after using the restroom and before eating.

## When did the outbreak start? Where did coronavirus come from?

According to Chinese officials, COVID-19 first appeared Dec. 12 about 700 miles south of Beijing in Wuhan, a city with more people than New York and Chicago combined. Health officials say the outbreak originated at the Huanan Seafood Market.

Huanan Seafood, closed by officials on Jan. 1, was a wet market, one of a series of outdoor stalls selling fish and meat, some of it from wildlife. They are called wet markets because sellers slaughter and cut up animals and fish while customers wait.

The market is suspected because coronaviruses transmit zoonotic diseases, meaning they are transferred from infected animals to humans.

Researchers theorize that someone bought contaminated meat at the market, ate it, got sick and infected others, creating a ripple effect around the world. Bloomberg reported a 61-year-old man, a regular customer of the Huanan market, was the first to die from the virus.

**Coronavirus name:** [The coronavirus has nothing to do with Corona beer](#)

Not everyone believes the market theory. A Jan. 24 study by the British medical journal The Lancet [suggests the outbreak started earlier](#) than December and casts doubt on the market connection.

Pat Lord, teaching professor in the department of biology at Wake Forest University, said this particular outbreak probably came from a virus that originated in bats and another animal and then transformed to be able to infect humans. Health experts have confirmed human-to-human transmission in a number of countries.

The virus may have [transferred to humans through pangolins](#), researchers at South China Agricultural University said last Friday.

The research team tested more than 1,000 samples from wild animals and found a 99% match between the genome sequences of viruses found in pangolins – a scaly, heavily trafficked mammal – and those in human patients, the AFP reported, citing Chinese state media.

Similarly, SARS originated from a fruit bat that was transmitted to civet cats and then eaten as a delicacy in China, Lord said.

"Bats seem to be a reservoir for quite a few viruses, like the rabies, Ebola or the Marburg virus," she said.

## What are the symptoms of coronavirus?

Common signs of infection include fever, cough, shortness of breath and breathing difficulties. Experts are unsure of whether the virus is able to transmit before symptoms appear or after. If it worsens, it can cause pneumonia, severe acute respiratory syndrome, kidney failure or even death.

The virus can be spread from animals to people. But it also can be spread by coughing, sneezing and through close contact with an infected person or an object carrying the virus. Experts are still figuring out how long an infected person is contagious as they try to determine a point of transmission.

The coronavirus when viewed microscopically has spikes that adorn the outer surface of the virus, which impart the look of a crown.

Coronaviruses are named after their appearance, round with a series of spikes made of proteins, resulting in a crown-like look. They're one of many viruses that cause colds and flu.

A new, evolved version, such as COVID-19, can cause more serious illnesses, some of which can be deadly to older people or those with weakened immune systems.

**Coronavirus misinformation:** [Facebook, Google, YouTube and Twitter scramble to contain it](#)

**Fact check:** [Bogus coronavirus conspiracy theory about patents, vaccine spreads on social media](#)

Coronaviruses are found in a variety of animals. If passed from animal to human, the virus can change and infect other humans, who can spread the infection to others, according to the CDC.

Lord said that bats' evolution has made them become carriers of these diseases without actually getting sick. She thinks they pass around these viruses to each other because they live in such large colonies in relatively small quarters.

Humans are partly to blame for outbreaks as development encroaches on bats' natural habitats, Lord said. Taking care of the environment to contain bats and keeping live markets clean are two ways humans can work to prevent outbreaks.

"The health of environment, the health of animals and the health of humans are all related," she said. "We have to think about the whole big picture, we have to protect everything."

## Is there a vaccine for the coronavirus?

Chinese scientists have decoded the COVID-19 DNA and made it public. There are no drugs or vaccines for coronaviruses yet, including COVID-19. Doctors can only treat the symptoms they cause.

However, scientists at The Peter Doherty Institute for Infection and Immunity in Melbourne, Australia, say they were able to successfully grow the coronavirus in cell culture outside of China for the first time ever.

Dr. Mike Catton, deputy director of the Doherty Institute, said in a statement the breakthrough provides crucial information "to assist in the assessment of effectiveness of trial vaccines."

According to the [South China Morning Post](#), China might already have a vaccine developed but needs more time to test it. Hong Kong University professor Yuen Kwok-yung told the paper it will take months to test the vaccine on animals and at least another year to conduct clinical trials on humans.

Scientists from [Regeneron, a New York-based biotechnology giant](#), are using genetically altered mice to find rapid diagnostics, a vaccine and effective treatments. Engineered to mimic the human immune system, the mice are being exposed to pseudo coronavirus in hopes that they produce antibodies that block and treat the real infectious disease.

## Who is most at risk of getting coronavirus?

Hooper said that experts are still learning about the virus and information remains limited.

However, he points to elderly and people who are sick with other conditions as a demographic who are over-represented in the coronavirus death toll.



"For those who do have the disease, it seems like the elderly and people with comorbid conditions are more likely to have serious illness," he said.

Hooper said it's unknown if women infected with the virus can have complications while pregnant, like the Zika virus, which causes [microcephaly](#) and other fetal brain defects.

## Does coronavirus affect pregnancy?

It's unclear [how the coronavirus may affect pregnant women](#). In general, pregnant women may experience changes to their body that could make them more susceptible to viral respiratory infections, according to the CDC.

In the case of SARS and MERS, pregnant women were more at risk for severe illness, and some experienced miscarriage and stillbirth, according to the CDC.

There is no evidence that the virus can be transmitted from an infected mother to her fetus, and, in a limited number of recent cases of infants born to mothers with COVID-19, none of the infants have tested positive for the virus, the CDC said.

## How can you prepare for the coronavirus?

As there's no available vaccine, the CDC recommends taking [preventative measures to decrease the likelihood of infection](#):

- Wash hands often with soap and water for at least 20 seconds
- Avoid touching the face with unwashed hands
- Avoid close contact with people who are sick
- Cough or sneeze into your elbow or use a tissue to cover it, and throw the tissue away
- Clean and disinfect frequently touched objects and surfaces

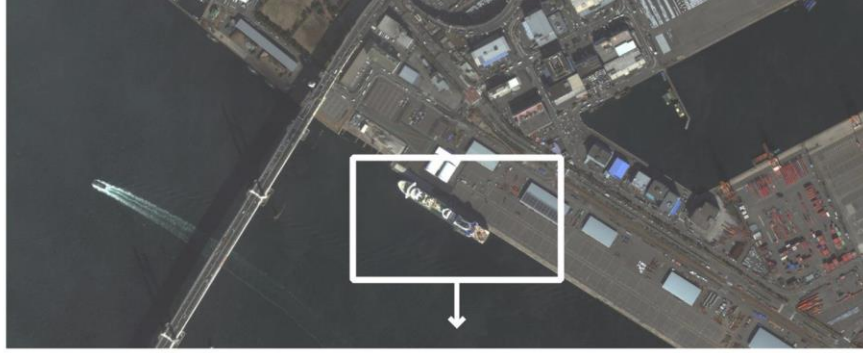
## How do doctors treat the coronavirus?

There's no specific treatment for illnesses caused by human coronaviruses but the CDC recommends taking pain and fever medications, drinking plenty of liquids and staying home to rest.

**SOURCE:** USA TODAY reporting; Johns Hopkins University; World Health Organization; Centers for Disease Control and Prevention; Food and Drug Administration; Associated Press; Reuters; sciencenews.org

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Updated 1:22 p.m. EST Mar. 2, 2020



## **Visual guide to the cruise ship quarantined due to coronavirus**

### **At least 20 Americans were among those infected with the coronavirus on a cruise ship quarantined in Japan.**

Javier Zarracina, Janet Loehrke, and George Petras, USA TODAY Updated 6:25 p.m. EST Feb. 18, 2020

As the fast-moving coronavirus spreads across China and the world, more than 3,000 people are confronting the infection on an intimate level – locked aboard the cruise ship Diamond Princess, under quarantine in Japan. Some 174 passengers have been infected.

Affected persons have been transferred to city hospitals in Japan. The rest are confined aboard the ship until Feb. 19, when the quarantine is scheduled to end.

### **The voyage of the Diamond Princess**

The first hint of the coronavirus aboard ship came Feb. 4, when the cruise line held the vessel in Yokohama, Japan, to check passengers for signs of infection.

Princess Cruises reported that a passenger from Hong Kong got on the ship in Yokohama, stayed aboard for five days, and disembarked in Hong Kong on Jan. 25.

Six days later, on Feb. 1, the passenger tested positive for coronavirus in a Hong Kong hospital. The company canceled the next Diamond Princess cruise on Feb. 4, announced 10 cases of infections, and put the ship under quarantine. A Feb. 12 cruise has also been canceled.

## **People aboard**

Reports say at least 174 people have tested positive for the virus, mostly passengers, with at least 20 Americans among them. About 20 crew members have been infected as well.

About half of the passengers are from Japan. In addition to the Americans, Princess Cruises reported Feb. 9 that 45 people from Japan were infected, along several other cases from different nationalities.

The cruise ship has the largest concentration of cases – about 23% – of the respiratory virus outside mainland China.

## **Characteristics of the ship**

The Diamond Princess has 2,666 passengers and a crew of 1,045. It's 952 feet long and 205 feet high, with 18 decks. It entered service in March 2004 and was refurbished in February 2019. Tonnage is 115,875.

Passengers remain confined to their cabins, which vary in size from suite-like spaces to rooms the size of a single-car garage or smaller.

Meals are delivered three times a day and are dropped off, along with other items, at the door to reduce the risk of infection.

Those with interior rooms without windows or exterior access are allowed 90 minutes in the open air on deck, but they must wear masks and gloves and maintain at least three feet between themselves and other passengers.

Those aboard have internet access, satellite TV, video on demand and other distractions. Princess Cruises says it will refund fares and expenses for passengers.

## **Coronavirus disrupts cruise line industry**

Since early February, cruise ship lines have detained thousands of their passengers in reaction to the rise in coronavirus infections. Some of the ships affected:

SOURCE USA TODAY reporting; Associated Press; Getty Images; Princess Cruises; Aerial photo: Satellite image ©2020 Maxar Technologies; USA TODAY research

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In Austria, the [Grand Hotel Europa temporarily closed](#) Tuesday following two confirmed coronavirus cases.

## Travel advisories: Where can't Americans go?

On Jan. 30, the U.S. State Department [elevated its China travel advisory](#) to level 4, recommending that Americans do not travel there. The CDC recommends travelers avoid nonessential travel to China, a level 3 warning, also its most severe warning.

Several other health-related warnings are in place for countries reporting cases of the coronavirus. The [CDC issued a level 3 advisory](#) to South Korea and a level 2 advisory ("practice enhanced precautions") to Japan, Italy and Iran. The CDC issued a level 1 "watch" advisory to Hong Kong but does not recommend postponing or canceling travel there.

The State Department is warning travelers to reconsider going on a cruise to or within Asia.

## Face masks selling out, prices soar

The U.S. has a [stockpile of 30 million face masks](#) but needs at least 270 million more to protect health care workers should the coronavirus spread widely across the nation, according to Health and Human Services Secretary Alex Azar.

Azar told a Senate subcommittee meeting that N95 facemask/respirators made by Honeywell are required. But at more than \$10 a mask, that would cost a cool \$2.7 billion. That's more than President Donald Trump's entire allocation – \$2.5 billion – to combat the virus.

In Italy, authorities opened an investigation this week into [soaring online prices for hygienic masks and sanitizing gels](#).

But infectious-disease experts say [a face mask can offer only slight protection](#) against airborne illness. A more effective defense against a virus is washing your hands thoroughly with soap and warm water after using the restroom and before eating.

## When did the outbreak start? Where did coronavirus come from?

According to Chinese officials, COVID-19 first appeared Dec. 12 about 700 miles south of Beijing in Wuhan, a city with more people than New York and Chicago combined. Health officials say the outbreak originated at the Huanan Seafood Market.

Huanan Seafood, closed by officials on Jan. 1, was a wet market, one of a series of outdoor stalls selling fish and meat, some of it from wildlife. They are called wet markets because sellers slaughter and cut up animals and fish while customers wait.

The market is suspected because coronaviruses transmit zoonotic diseases, meaning they are transferred from infected animals to humans.

Researchers theorize that someone bought contaminated meat at the market, ate it, got sick and infected others, creating a ripple effect around the world. Bloomberg reported a 61-year-old man, a regular customer of the Huanan market, was the first to die from the virus.

**Coronavirus name:** [The coronavirus has nothing to do with Corona beer](#)

Not everyone believes the market theory. A Jan. 24 study by the British medical journal The Lancet [suggests the outbreak started earlier](#) than December and casts doubt on the market connection.

Pat Lord, teaching professor in the department of biology at Wake Forest University, said this particular outbreak probably came from a virus that originated in bats and another animal and then transformed to be able to infect humans. Health experts have confirmed human-to-human transmission in a number of countries.

The virus may have [transferred to humans through pangolins](#), researchers at South China Agricultural University said last Friday.

The research team tested more than 1,000 samples from wild animals and found a 99% match between the genome sequences of viruses found in pangolins – a scaly, heavily trafficked mammal – and those in human patients, the AFP reported, citing Chinese state media.

Similarly, SARS originated from a fruit bat that was transmitted to civet cats and then eaten as a delicacy in China, Lord said.

"Bats seem to be a reservoir for quite a few viruses, like the rabies, Ebola or the Marburg virus," she said.

## **What are the symptoms of coronavirus?**

Common signs of infection include fever, cough, shortness of breath and breathing difficulties. Experts are unsure of whether the virus is able to transmit before symptoms appear or after. If it worsens, it can cause pneumonia, severe acute respiratory syndrome, kidney failure or even death.

The virus can be spread from animals to people. But it also can be spread by coughing, sneezing and through close contact with an infected person or an object carrying the virus. Experts are still figuring out how long an infected person is contagious as they try to determine a point of transmission.

The coronavirus when viewed microscopically has spikes that adorn the outer surface of the virus, which impart the look of a crown.

Coronaviruses are named after their appearance, round with a series of spikes made of proteins, resulting in a crown-like look. They're one of many viruses that cause colds and flu.

A new, evolved version, such as COVID-19, can cause more serious illnesses, some of which can be deadly to older people or those with weakened immune systems.

Coronaviruses are found in a variety of animals. If passed from animal to human, the virus can change and infect other humans, who can spread the infection to others, according to the CDC.

Lord said that bats' evolution has made them become carriers of these diseases without actually getting sick. She thinks they pass around these viruses to each other because they live in such large colonies in relatively small quarters.

Humans are partly to blame for outbreaks as development encroaches on bats' natural habitats, Lord said. Taking care of the environment to contain bats and keeping live markets clean are two ways humans can work to prevent outbreaks.

"The health of environment, the health of animals and the health of humans are all related," she said. "We have to think about the whole big picture, we have to protect everything."



## Is there a vaccine for the coronavirus?

Chinese scientists have decoded the COVID-19 DNA and made it public. There are no drugs or vaccines for coronaviruses yet, including COVID-19. Doctors can only treat the symptoms they cause.

However, scientists at The Peter Doherty Institute for Infection and Immunity in Melbourne, Australia, say they were able to successfully grow the coronavirus in cell culture outside of China for the first time ever.

Dr. Mike Catton, deputy director of the Doherty Institute, said in a statement the breakthrough provides crucial information “to assist in the assessment of effectiveness of trial vaccines.”

According to the [South China Morning Post](#), China might already have a vaccine developed but needs more time to test it. Hong Kong University professor Yuen Kwok-yung told the paper it will take months to test the vaccine on animals and at least another year to conduct clinical trials on humans.

Scientists from [Regeneron, a New York-based biotechnology giant](#), are using genetically altered mice to find rapid diagnostics, a vaccine and effective treatments. Engineered to mimic the human immune system, the mice are being exposed to pseudo coronavirus in hopes that they produce antibodies that block and treat the real infectious disease.

## Who is most at risk of getting coronavirus?

Hooper said that experts are still learning about the virus and information remains limited.

However, he points to elderly and people who are sick with other conditions as a demographic who are over-represented in the coronavirus death toll.

"For those who do have the disease, it seems like the elderly and people with comorbid conditions are more likely to have serious illness," he said.

Hooper said it's unknown if women infected with the virus can have complications while pregnant, like the Zika virus, which causes [microcephaly](#) and other fetal brain defects.

## Does coronavirus affect pregnancy?

It's unclear [how the coronavirus may affect pregnant women](#). In general, pregnant women may experience changes to their body that could make them more susceptible to viral respiratory infections, according to the CDC.

In the case of SARS and MERS, pregnant women were more at risk for severe illness, and some experienced miscarriage and stillbirth, according to the CDC.

There is no evidence that the virus can be transmitted from an infected mother to her fetus, and, in a limited number of recent cases of infants born to mothers with COVID-19, none of the infants have tested positive for the virus, the CDC said.

## How can you prepare for the coronavirus?

As there's no available vaccine, the CDC recommends taking [preventative measures to decrease the likelihood of infection](#):

- Wash hands often with soap and water for at least 20 seconds
- Avoid touching the face with unwashed hands
- Avoid close contact with people who are sick
- Cough or sneeze into your elbow or use a tissue to cover it, and throw the tissue away
- Clean and disinfect frequently touched objects and surfaces

## How do doctors treat the coronavirus?

There's no specific treatment for illnesses caused by human coronaviruses but the CDC recommends taking pain and fever medications, drinking plenty of liquids and staying home to rest.

**SOURCE:** USA TODAY reporting; Johns Hopkins University; World Health Organization; Centers for Disease Control and Prevention; Food and Drug Administration; Associated Press; Reuters; sciencenews.org

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