FAQs About COVID-19

— Answers to frequently asked questions based on the latest medical research and public health data

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**What about mild or asymptomatic cases of COVID-19?**

Asymptomatic transmission has [not only been confirmed in China](https://www.medpagetoday.com/infectiousdisease/publichealth/85027), but recent modeling data found that mild or asymptomatic cases that went undetected ("undocumented") [accounted for 85% of total infections](https://www.medpagetoday.com/infectiousdisease/covid19/85448) in the earliest stages of the outbreak. The study found these cases were less infectious on a per-contact basis, but because those individuals weren't isolated they infected more people in total.

The big unknown, however, is how common it may be for people to become infected but with symptoms too mild to seek treatment. Currently, detection is based on molecular testing, which is performed only on individuals who come into contact with the healthcare system. The prevalence of such mild or asymptomatic infections won't be known until an inexpensive serological test, detecting antibodies to the virus that signal previous exposure, is available for use with routine blood draws. Thus, the extent of exposure in the population may not be known for years.

**How do you contract COVID-19?**

Research points to droplet and fomite transmission, with recent data suggesting the [virus can survive on surfaces](https://www.medpagetoday.com/infectiousdisease/covid19/85466) such as plastic and stainless steel for up to several days. It can also survive in the air for a few hours, indicating it may also potentially be aerosol transmissible.

The virus may also be [transmitted through the fecal-oral route](https://www.medpagetoday.com/infectiousdisease/covid19/85315), with research suggesting some patients develop gastrointestinal symptoms, and that the virus is shed through stool.

**How infectious is the COVID-19 coronavirus?**

Research from China found a [similar viral load in symptomatic and asymptomatic patients](https://www.medpagetoday.com/infectiousdisease/publichealth/84988), which may suggest patients can transmit the virus whether they have mild or severe disease.

Latest data fromthe [World Health Organization estimated the "R0" as 2.0 to 2.5](https://www.who.int/news-room/q-a-detail/q-a-similarities-and-differences-covid-19-and-influenza), meaning infected individuals transmit it to 2-2.5 others on average. By contrast, the R0 for measles is 12-18, while for seasonal influenza it's a little over 1.

**How virulent is COVID-19?**

According to *worldometers.info*, the [WHO estimated the global mortality rate for COVID-19](https://www.worldometers.info/coronavirus/coronavirus-death-rate/#who-03-03-20) is 3.4%.

CDC examined [the first 4,200 U.S. cases](https://www.cdc.gov/mmwr/volumes/69/wr/mm6912e2.htm), and found 508 (12%) of patients were hospitalized, and of those, 121 were known to be admitted to an intensive care unit, and 44 patients died. Similar to China, both hospitalization and mortality rates increased with increasing age, though this data indicated 20% of hospitalized patients and 12% of patients admitted to an ICU were ages 20-44. Nine patients ages 20-44 died, though in the entire group most deaths were among adults ages 65 and older.

**What are early symptoms of COVID-19?**

A large study of hospitalized patients in China found [two-thirds of patients presented with a cough](https://www.medpagetoday.com/infectiousdisease/covid19/85156), and only around 40% presented with a fever (though about 89% developed fever in the hospital). Gastrointestinal symptoms, such as diarrhea and vomiting, were rare, and reported in under 5% of cases, though [some patients appear to present with gastrointestinal symptoms](https://www.medpagetoday.com/gastroenterology/generalgastroenterology/85471) prior to respiratory symptoms.

It appears not all patients present with symptoms, with [research out of Germany](https://www.medpagetoday.com/infectiousdisease/publichealth/84948) finding patients testing positive for COVID-19, despite being afebrile and reporting no symptoms on symptom screeners.

**How is COVID-19 diagnosed?**

[CDC criteria for testing](https://www.cdc.gov/coronavirus/2019-nCoV/hcp/clinical-criteria.html) include hospitalized patients with symptoms of COVID-19, older symptomatic adults with chronic medical conditions and/or who are immunocompromised, and anyone who has been in close contact with a suspected or confirmed COVID-19 case within 14 days, including healthcare professionals, or anyone who has traveled to affected geographic areas within 14 days of symptom onset.

A patient is swabbed, then the sample is tested via reverse transcription polymerase chain reaction (RT-PCR) to determine presence of viral RNA (serology tests are not yet available). All positive tests are sent to CDC for confirmation.

**What does severe disease look like?**

Data from China indicated [nearly all hospitalized patients develop pneumonia.](https://www.medpagetoday.com/infectiousdisease/covid19/85156) Abnormalities on chest CT imaging were common among more severe patients, with "ground-glass opacity" present for around 60% of severe patients. More severe patients have also required supplemental oxygen, and in some cases, mechanical ventilation.

*JAMA* detailed [21 patients from Washington state](https://jamanetwork.com/journals/jama/fullarticle/2763485?guestAccessKey=969b9fcf-9df5-4b64-be9a-de0c5aa668b1&utm_source=silverchair&utm_medium=email&utm_campaign=article_alert-jama&utm_content=olf&utm_term=031920), 15 of whom needed mechanical ventilation. All 15 had acute respiratory distress syndrome, and eight developed severe ARDS by 72 hours. Vasopressors were used for 14 patients, though most patients did not present with evidence of shock, and seven patients developed cardiomyopathy. Mortality among this group was 67%, 24% remained critically ill and 9.5% were discharged from the ICU, as of March 17.

**How is the disease treated?**

In China, researchers reported the majority of patients received IV antibiotics. They have also been treated with antiviral oseltamivir (Tamiflu), which is FDA approved to treat influenza, as well as supplemental oxygen.

**What are the drug/vaccine prospects?**

Investigational therapies include [antiviral remdesivir](https://www.medpagetoday.com/infectiousdisease/publichealth/85099), which is currently being investigated in several clinical trials. The FDA announced [investigations into hydroxychloroquine](https://www.medpagetoday.com/infectiousdisease/covid19/85522), which is most commonly used to treat patients with malaria, as well as arthritis and systemic lupus erythematosus, though its [safety and efficacy remains under debate](https://www.medpagetoday.com/infectiousdisease/covid19/85621). Lopinavir/ritonavir (Kaletra), a protease inhibitor used to treat HIV, was being used, but recent trial data indicated[no benefit](https://www.medpagetoday.com/infectiousdisease/covid19/85499) in COVID-19 patients.

A small case series in China found [three of five patients treated with convalescent plasma](https://www.medpagetoday.com/infectiousdisease/covid19/85656) were later discharged from the hospital, though questions about scaling this as a potential therapy remain.

Several companies and public health agencies have vaccines in development, including the National Institute of Allergy and Infectious Diseases. [Phase I trials with vaccines](https://www.niaid.nih.gov/news-events/nih-clinical-trial-investigational-vaccine-covid-19-begins) are underway, with a timeline of 12-18 months for a vaccine to be ready for wide-scale deployment.

**What is the prognosis for patients with COVID-19?**

Reports from China indicate disease is much more severe in older patients, with the highest mortality rate among adults age 80 and older. Patients with other comorbidities are also the most at risk. The disease appears to be less severe among younger patients. Although only [limited data have been reported](https://www.medpagetoday.com/infectiousdisease/covid19/85452), children seem to acquire milder forms of the infection, though there have been [cases of moderate to severe disease.](https://www.medpagetoday.com/infectiousdisease/covid19/85391)

Research is starting to come from China that COVID-19 [vertical transmission from mother to baby](https://www.medpagetoday.com/infectiousdisease/covid19/85619) is possible, given several isolated case reports.

**What are the long-term sequelae of COVID-19?**

It is unclear whether or how often COVID-19 survivors will experience persistent pulmonary or other problems, or for how long. Many patients have remained hospitalized with the illness for weeks outside of China, out of an abundance of caution and for public health reasons.

Researchers from China pointed to [cardiovascular system abnormalities](https://www.medpagetoday.com/infectiousdisease/covid19/85577) in nearly half of a small group of SARS patients in a 12-year follow-up cohort, as well as about two-thirds with high lipids and 60% with glucose metabolism problems. They suggested COVID-19 may also cause chronic damage to the cardiovascular system, as the virus has a similar structure to SARS.

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