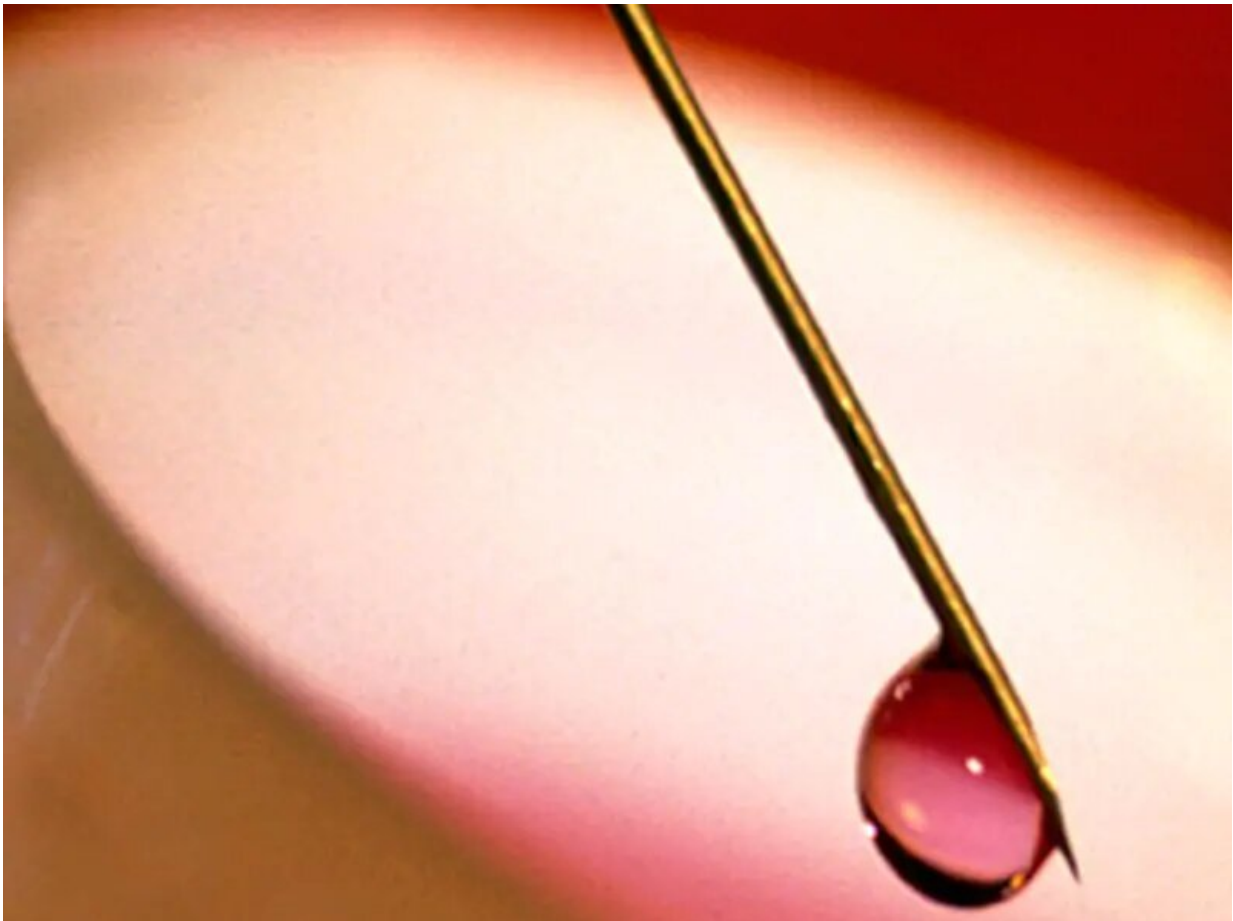


# Blood type, genetics could impact odds for severe COVID-19: study

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A person's genes and blood type may help determine their odds for a

nastier form of COVID-19, should they get infected with the new coronavirus, a new genetics study finds.

Published online June 17 in the *New England Journal of Medicine*, the research helps confirm earlier, more anecdotal evidence that blood type was tied to better or worse illness.

Now a team of European researchers have found that people with blood type A had a 45% higher risk of catching coronavirus and developing "COVID-19 with respiratory failure," compared to people with other blood types. On the other hand, people with type O blood had a 35% lower risk for this more serious form of COVID-19.

There are four main blood types: A, B, AB and O.

It's not clear why blood type might influence susceptibility to severe disease. Dr. Robert Glatter, an emergency medicine physician at Lenox Hill Hospital in New York City, noted that genes that control blood type also play a role in the makeup of the surface of cells. Changes in cell-surface structure might influence the vulnerability of the cell to be infected by the new coronavirus, he said.

"We also know from previous research that blood type affects clotting risk," he said, "and it's now quite evident that critically ill patients with coronavirus demonstrate significant clotting."

The new study was conducted by a multi-institution group of genetic researchers known as the Severe COVID-19 GWAS Group. They analyzed the genetics and blood types of more than 1,600 COVID-19 patients from Italy and Spain, as well as more than 2,200 healthy controls.

Besides the findings on [blood type](#), the group also found that certain

gene clusters were tied to higher odds of developing severe COVID-19—one such cluster raised the risk by 77%, the team reported.

According to Glatter, the genetic insights from the European study could also offer up new targets in the search for a COVID-19 vaccine.

## **Rise in cases in many states**

In the meantime, states such as Arizona, Florida and Texas are all seeing record-high one-day increases in new coronavirus cases after reopening over the past few weeks.

According to *The New York Times*, on Tuesday, Florida reported 2,783 new cases, Texas 2,622 and Arizona 2,392. The trio of Sun Belt states are among 20 that have seen upticks in cases over the past two weeks.

Why numbers are rising has become a point of argument between politicians and scientists: Florida Governor Ron DeSantis said in a news conference that the rise in cases in his state is largely due to more widespread testing. But epidemiologists have suggested that increased transmission, due to businesses such as restaurants and bars reopening, is the true cause.

Backing up their claim, epidemiologists point to a concurrent rise in many states of increased coronavirus hospitalizations, as well as a rise in the percentage of positive results from tests.

Concerns are also mounting over hospital bed capacity in states seeing a rise in COVID-19 cases. But according to the *Times*, Texas Governor Greg Abbott believes his state's hospitals still have lots of capacity, even with 2,519 people hospitalized with the illness.

In New York, the former epicenter of the U.S. pandemic, Governor

Andrew Cuomo on Sunday warned that a return to lockdown for his state was possible.

"If we have a high number of violations of the [reopening] policy, which is tantamount to a high likelihood of the spread of the virus, and the [local governments](#) are not monitoring policing, doing the compliance, yes, there is a very real possibility that we would roll back the reopening in those areas. The only alternative would be to pause the entire reopening," Cuomo said at a news conference, *CNN* reported.

By Thursday, the U.S. coronavirus case count had passed 2.1 million as the [death toll](#) topped 117,000.

There was some good news on Tuesday, however. Researchers at Oxford University in England announced that dexamethasone, a widely used, low-cost steroid, appears to cut the death rate for ventilated COVID-19 patients by one-third. It also lowered the death rate for patients who require oxygen (but are not yet on a ventilator) by one-fifth, the *Times* reported.

"Bottom line is, good news," Dr. Anthony Fauci, who directs the U.S. National Institute of Allergy and Infectious Diseases, told the *Associated Press*. "This is a significant improvement in the available therapeutic options that we have."

## **Economic upswing**

On Thursday, another weekly batch of new jobless claims suggested that the damage the pandemic has wrought on the U.S. economy may be slowing. Roughly 1.5 million people filed for state unemployment insurance—bad news, but at least a decline from the 6 million claims seen in a single week in March. More than 45.7 million claims have been filed over the past 13 weeks, *NPR* reported.

"We're slowly seeing the labor market recovery begin to take form," said Robert Rosener, an economist at Morgan Stanley, but "there's still an enormous amount of layoffs going on."

In other news, the U.S. government's supply of remdesivir, a drug known to shorten the course of COVID-19, will run out at the end of the month, Dr. Robert Kadlec, a U.S. Department of Health and Human Services (HHS) official, told *CNN*.

The government's last shipment of the drug will go out the week of June 29. Gilead Sciences, the company that makes remdesivir, is ramping up to make more, but it's unclear how much will be available this summer.

"Right now, we're waiting to hear from Gilead what is their expected delivery availability of the drug as we go from June to July," Kadlec said. "We're kind of not in negotiations, but in discussions with Gilead as they project what the availability of their product will be."

The government has been working to help Gilead "with some of their supply chain challenges in terms of raw materials and being able to accelerate the process," said Kadlec, the HHS assistant secretary for preparedness and response.

He added that it's clear that "whatever the supply may be, there may not be enough for everyone who may need it."

## **Vaccine search**

Meanwhile, the search for an effective vaccine goes on. The HHS said in late May that it would provide up to \$1.2 billion to the drug company AstraZeneca to develop a potential coronavirus vaccine from Oxford University, in England.

The fourth, and largest, vaccine research agreement funds a clinical trial of the potential vaccine in the United States this summer with about 30,000 volunteers, the *Times* reported.

The goal? To make at least 300 million doses that could be available as early as October, the HHS said in a statement.

The United States has already agreed to provide up to \$483 million to the biotech company Moderna and \$500 million to Johnson & Johnson for their vaccine efforts. It is also providing \$30 million to a virus vaccine effort led by the French company Sanofi, the *Times* reported. Moderna said a large clinical trial of its vaccine candidate could begin in July.

According to a *Times* tally, the top five states in coronavirus cases as of Thursday are: New York with almost 390,000; New Jersey with close to 168,000; California with more than 163,000; Illinois with over 135,000; and Massachusetts with over 106,000.

## **Nations grapple with pandemic**

Elsewhere in the world, the situation remains challenging.

Even as the pandemic is easing in Europe and some parts of Asia, it is worsening in India. The country has loosened some of the social distancing enacted in the world's largest lockdown, even as cases surge. As of Thursday, India has almost 367,000 cases, a Johns Hopkins tally shows.

Brazil has also become a hotspot in the [coronavirus](#) pandemic, with over 955,000 confirmed infections by Thursday, according to the Hopkins tally. U.S. President Donald Trump has issued a ban on all foreign travelers from Brazil because of the burgeoning number of COVID-19

cases in that country, *CNN* reported.

Cases are also spiking wildly in Russia: As of Thursday, that country reported the world's third-highest number of COVID-19 cases, at over 560,000, the Hopkins tally showed.

Worldwide, the number of reported infections neared 8.4 million on Thursday, with close to 450,000 deaths, according to the Hopkins tally.

**More information:** The U.S. Centers for Disease Control and Prevention has more on the [new coronavirus](#).

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