

## News in focus

However, one of their edited plants grew normally, and the researchers found that this was due to deletion of a portion of chromosome that meant the expression of a gene involved in sugar production was not repressed.

Since then, the researchers have been able to remove that same portion of the chromosome, in addition to the gene that makes the plant susceptible to powdery mildew, generating fungus-resistant wheat varieties that don't have restricted growth.

"This is a very comprehensive and beautifully done piece of work," says Yinong Yang, a plant biologist at Pennsylvania State University in University Park. It also has broad implications for almost all flowering plants, he

says, because powdery mildew can infect some 10,000 plant species.

"It is really exciting work," adds David Jackson, a plant geneticist at Cold Spring Harbor Laboratory in New York, although he cautions that the data on how well the wheat grew were based on relatively few plants largely grown in greenhouses and will need to be confirmed with larger field trials.

Studies such as this are evidence of China's strong track record of research into gene-edited crops, and the new regulations "are set to see China take full advantage of their academic lead", says Penny Hundleby, a plant scientist at the John Innes Centre in Norwich, UK.

lacked risk factors, such as obesity or diabetes.

"It doesn't matter if you are young or old, it doesn't matter if you smoked, or you didn't," says study co-author Ziyad Al-Aly at Washington University in St. Louis, Missouri, and the chief of research and development for the Veterans Affairs (VA) St. Louis Health Care System. "The risk was there."

Al-Aly and his colleagues based their research on an extensive health-record database curated by the United States Department of Veterans Affairs. The researchers compared more than 150,000 veterans who survived for at least 30 days after contracting COVID-19 with two groups of uninfected people: a group of more than five million people who used the VA medical system during the pandemic, and a similarly sized group that used the system in 2017, before SARS-CoV-2 was circulating.

# HEART-DISEASE RISK SOARS AFTER COVID — EVEN WITH A MILD CASE

## Massive study shows a long-term rise in risk of heart attack and stroke after a SARS-CoV-2 infection.

Saima May Sidik

**E**ven a mild case of COVID-19 can increase a person's risk of cardiovascular problems for at least a year after diagnosis, a new study shows. Researchers found that rates of many conditions, such as

heart failure and stroke, were substantially higher in people who had recovered from COVID-19 than in similar people who hadn't had the disease (Y. Xie *et al. Nature Med.* <https://doi.org/gpdqjx>; 2022).

What's more, the risk was elevated even for those who were under 65 years of age and

### Troubled hearts

People who had recovered from COVID-19 showed stark increases in 20 cardiovascular problems over the year after infection. For example, they were 52% more likely to have had a stroke than those in the contemporary control group, meaning that, out of every 1,000 people studied, there were around 4 more people in the COVID-19 group than in the control group who experienced stroke.

The risk of heart failure increased by 72%, or around 12 more people in the COVID-19 group per 1,000 studied. Hospitalization increased the likelihood of future cardiovascular complications, but even people who avoided hospitalization were at higher risk for many conditions.

"I am actually surprised by these findings that cardiovascular complications of COVID can last so long," Hossein Ardehali, a cardiologist at Northwestern University in Chicago, Illinois, wrote in an e-mail to *Nature*. Because severe disease increased the risk of complications much more than mild disease, Ardehali wrote, "it is important that those who are not vaccinated get their vaccine immediately".

Ardehali cautions that the study's observational nature comes with some limitations. For example, people in the contemporary control group weren't tested for COVID-19, so it's possible that some of them actually had mild infections. And because the authors considered only VA patients — a group that's predominantly white and male — their results might not translate to all populations.

Ardehali and Al-Aly agree that health-care providers around the world should be prepared to address an increase in cardiovascular conditions. But with high COVID-19 case counts still straining medical resources, Al-Aly worries that health authorities will delay preparing for the pandemic's aftermath for too long. "We collectively dropped the ball on COVID," he said. "And I feel we're about to drop the ball on long COVID."



The risk of 20 cardiovascular diseases is high for at least a year after a COVID-19 diagnosis.