

# Could an ancient drug help fight severe COVID-19?

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(HealthDay)—As researchers hunt for ways to treat severe COVID-19

infections, a new trial will ask whether an old arthritis drug can prevent serious complications in the first place.

The medication, called colchicine, is an oral anti-inflammatory that has long been prescribed for gout, a form of arthritis. Its history goes back thousands of years, and the drug was first sourced from the autumn crocus flower.

Doctors also sometimes use colchicine to treat pericarditis, where the sac around the heart becomes inflamed.

Now researchers in the United States and Canada are testing it for a different purpose: Keeping high-risk COVID-19 patients from getting sick enough to land in the hospital.

Colchicine is just one of several anti-inflammatory drugs currently in [clinical trials](#) for treating COVID-19.

It's all part of a growing belief that the worst effects of the [coronavirus](#) infection are caused not by the virus itself, but by a massive overreaction of the immune system, known as a [cytokine](#) storm.

"I think there's pretty substantial evidence that cytokine storm is involved," said Dr. Randy Cron, a rheumatologist at the University of Alabama at Birmingham.

In a cytokine storm, the immune system goes into overdrive—flooding the body with proteins (cytokines) that trigger widespread inflammation. That causes often fatal damage to organs.

Cron, who was not involved in the new trial, literally wrote the textbook on cytokine storms—the 2019 *Cytokine Storm Syndrome*.

He explained that the immune reaction is not unique to COVID-19: Cytokine storms can arise in response to other infections, to cancer, to certain cancer therapies, or in people with autoimmune diseases.

The storm that brews against the new coronavirus does appear to be unique in certain ways, according to Cron.

"One example is that it sets up shop in the lungs first," he said.

Still, Cron and other researchers believe that treatments for cytokine storm could ultimately prove key in battling the coronavirus pandemic.

A few powerful anti-inflammatory drugs, used for conditions like rheumatoid arthritis, are already in late-stage [trials](#). Those studies involve patients already hospitalized with COVID-19 pneumonia.

The colchicine study is different, said researcher Dr. Priscilla Hsue, a professor of medicine at the University of California, San Francisco (UCSF).

"One of the unique aspects is that we're trying to hit this before people need to be hospitalized," Hsue said.

Colchicine is the medication of choice for a few reasons, Hsue explained: Unlike the drugs being tested in [hospital patients](#)—which are given by infusion or injection—colchicine tablets are easy to take and inexpensive. And the medication has a long history of safe use for gout, she added.

Beyond that, Hsue added, a recent trial found that low-dose colchicine benefits people who've recently suffered a heart attack. Patients who took one tablet a day curbed their risk of further heart complications or stroke over the next two years.

Heart injury is a common problem in people who become seriously ill with COVID-19—at least partly, researchers suspect, because of cytokine [storm](#). Hsue said it all raises the question of whether colchicine could help prevent such heart issues.

The trial aims to enroll 6,000 patients newly diagnosed with COVID-19 who are at increased risk of serious illness—because they are older than 69, or have conditions like heart or lung disease.

To keep those patients isolated at home, the study has an unusual "contactless" design: Patients will receive the medication by courier, and have follow-up visits via video or phone. The researchers will look at whether the tactic lowers hospitalization rates and deaths over one month.

While Cron believes that targeting cytokine storms in COVID-19 is wise, he had some reservations about giving colchicine to people with no signs of the severe immune reaction. Could any dampening of their immune response against the virus backfire?

"My concern is, could it make the infection worse?" Cron said.

Hsue, however, pointed to the safety record of the medication, and noted that the dose given in the trial will be lower than what's routinely used for gout.

In the end, Cron said, the only way to definitively prove any medication works for COVID-19 is through clinical trials.

The colchicine study is currently recruiting patients, with UCSF and New York University School of Medicine being the first two U.S. sites involved.

**More information:** The World Health Organization has updates on [COVID-19](#).

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