

# Prescribed blood thinners can help reduce hospitalizations related to COVID-19

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The NIH has reported that many individuals with COVID-19 develop abnormal blood clots from high inflammation, which can lead to serious health complications and mortality. To find ways to decrease clotting related to COVID-19, researchers from the University of Minnesota and Basel University in Switzerland looked at reducing hospitalizations by using prescribed blood thinners.

"We know that COVID-19 causes [blood clots](#) that can kill patients," said lead author Sameh Hozayen, MD, MSC, an assistant professor of medicine at the U of M Medical School. "But, do [blood thinners](#) save lives in COVID-19? Blood thinners are medications prescribed to prevent blood clots in patients with a prior blood clot in their lungs or legs. They also prevent blood clots in the brain secondary to [abnormal heart rhythms](#), like atrial fibrillation. Blood thinners are the standard of treatment in these diseases, which is why we looked at data to see if it impacted hospitalizations related to COVID-19."

"We already know that overwhelmed hospitals have a higher risk for death among their patients, so reducing hospitalization may have a [positive impact](#) during a COVID-19 surge," Hozayen said.

Published in Lancet's Open Access *EClinical Medicine*, the study found that:

- patients on blood thinners before having COVID-19 were admitted less often to the hospital, despite being older and having more [chronic medical conditions](#) than their peers;
- blood thinners—regardless of if they are being used before being infected with COVID-19 or started when admitted to the hospital for treatment of COVID-19—reduce deaths by almost half; and,
- hospitalized COVID-19 patients benefit from blood thinners regardless of the type or dose of the medication used.

"Unfortunately, about half of patients who are being prescribed blood thinners for blood clots in their legs, lungs, abnormal heart rhythms or other reasons, do not take them. By increasing adherence for people already prescribed blood thinners, we can potentially reduce the bad effects of COVID-19," Hozayen said. "At M Health Fairview and most centers around the world now, there are protocols for starting blood thinners when patients are first admitted to the hospital for

COVID-19—as it is a proven vital treatment option. Outside of COVID-19, the use of blood thinners is proven to be lifesaving for those with blood coagulations conditions."

Using de-identified data from M Health Fairview and after obtaining appropriate ethical committee approval, the study was a [collaborative effort](#) between U of M Medical School faculty Chris Tignanelli, Michael Usher, Zachary Kaltenborn, Surbhi Shah, and Diana Zychowski; U of M School of Public Health faculty Ryan Demmer, Pamela Lutsey, and Sydney Benson; and Basel University Pathology Institute faculty Alexander Tzankov and Jasmin Haslbauer.

Researchers note that the next steps for this work is to ensure that the results of this study are consistent and not isolated to the health care systems in advanced countries—like the United States and Switzerland—or in certain populations, like Caucasians. They are currently working with research groups in other parts of the world, like Egypt, to look at how [blood](#) thinners impact patients in less-invested health care systems and in different patient populations.

**More information:** Sameh M. Hozayen et al, Outpatient and inpatient anticoagulation therapy and the risk for hospital admission and death among COVID-19 patients, *EClinicalMedicine* (2021). [DOI: 10.1016/j.eclinm.2021.101139](#)

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