

# Monoclonal antibody treatment for COVID can be safely given by injection

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(HealthDay)—The best available treatment for COVID-19 infection just

got a lot easier to administer to more people, potentially saving more lives in the process, a new study claims.

Monoclonal antibodies have been shown to dramatically reduce risk of hospitalization and death if given within five days of developing symptoms of COVID.

However, there's a big roadblock to this getting this treatment to as many patients as possible—it's given by IV infusion, which limits the number of health care workers who can administer [monoclonal antibodies](#), as well as the locations that can provide the therapy.

But researchers from the University of Pittsburgh Medical Center (UPMC) now report that giving monoclonal antibodies by a simple injection works just as well as an IV infusion.

"This is very important, because injections given under the skin can be given over less time and are much easier to administer than IV infusions," said lead researcher Erin McCreary, a clinical assistant professor of medicine with the University of Pittsburgh. "With this in mind, we can more than double the number of patients that we treat this way, helping ensure we are treating as many patients as possible and saving as many lives as possible."

At this point in the pandemic, monoclonal antibodies are the top treatment option for people who've become infected with COVID-19, said Dr. Carlos del Rio, president-elect of the Infectious Diseases Society of America (IDSA) board of directors, during an IDSA media briefing.

Monoclonal antibodies are laboratory-manufactured artificial antibodies that mimic the natural defenses against COVID that a person would have if they'd gotten vaccinated or had a recent bout with the coronavirus.

"Currently what we have in our country is Delta, and monoclonal antibodies work really well for Delta. The problem we've had is implementation," said del Rio, a professor of medicine, global health and epidemiology at Emory University in Atlanta.

"There's a huge implementation challenge because you've got to get an IV [and] you've got to go to a hospital or a clinic where they do this infusion, and in many places we really simply have not taken advantage of these available monoclonals in the way we should," del Rio continued.

The [clinical trials](#) that the U.S. Food and Drug Administration reviewed to authorize monoclonal antibodies for emergency use all relied on IV infusion to administer the therapy, McCreary said.

"The perceived benefit of that approach is that you give the drug directly into the patient's bloodstream, so you skip any need to get that drug what we call absorbed, or basically moved from the skin or the stomach into the bloodstream," McCreary said. "It may act faster and you ensure the whole dose gets into the bloodstream to have an impact."

But the FDA approval for one product—a two-antibody cocktail produced by Regeneron Pharmaceuticals—allowed health care workers to give the treatment via injection "when an IV infusion is not feasible or giving an IV infusion would lead to a delay in treatment," McCreary said.

So, during a Delta-sparked COVID surge in September, UPMC doctors started injecting the Regeneron monoclonal antibodies into patients who recently tested positive, McCreary said.

Ultimately more than 1,900 patients received monoclonal antibodies via injection in what McCreary called "the first and largest clinical trial in the world to compare different methods of administrating Regeneron's

casarivimab and imdevimab monoclonal antibody combination product."

People treated with monoclonal antibodies had a 56% lower risk of being hospitalized or dying within 28 days compared to people who didn't receive the therapy, results showed.

Further, administering the therapy by injection was just as effective as by IV, the researchers found.

These results show that health care systems can get monoclonal antibodies to more people sick with COVID, McCreary said.

Pharmacists and other [health care workers](#) can provide injections, and patients don't have to travel to medical centers with IV infusion capability to get monoclonal antibody treatment.

"This could greatly expand available locations for patients to receive treatment, as it's much easier to give and there are more staff available to give this than with the IV infusions," McCreary said. "We've now creatively expanded available staff to administer lifesaving therapies."

People who develop COVID symptoms—even those as mild as a cough or a sneeze—should get tested immediately, because monoclonal [antibodies](#) are most effective when given within five days, McCreary and del Rio said.

However, del Rio warned that vaccine-hesitant people should not consider monoclonal antibody therapy as a legitimate alternative to getting the jab.

People hospitalized with COVID are 2.5 times more likely to drop dead within a year of being released than people who never contracted the coronavirus, according to a study recently published in the journal

*Frontiers in Medicine.*

The risk of death is even higher for hospitalized COVID patients who are younger than 65—more than three times that of the COVID-free and nearly three times that of mild COVID sufferers.

The best way to reduce the potential severity of COVID infection is to get vaccinated, del Rio said.

"You're going to encounter Delta. At some point in time, Delta is going to encounter you. It's highly transmissible. And when you do that, you're much better off vaccinated than unvaccinated," del Rio said.

"It's no different than saying you're going to encounter a traffic accident at some point in time," del Rio continued. "You're much better off wearing the seat belt than not wearing the seat belt. Vaccination continues to be our No. 1 priority."

The new UPMC study received no funding from Regeneron, researchers said. The clinical trial was published on the preprint server *medRxiv* and is still awaiting peer review.

**More information:** The University of Pittsburgh Medical Center has more about [monoclonal antibody treatment for COVID-19](#).

Erin K. McCreary et al, Association of subcutaneous or intravenous route of administration of casirivimab and imdevimab monoclonal antibodies with clinical outcomes in COVID-19, (2021). [DOI: 10.1101/2021.11.30.21266756](#)

Arch G. Mainous et al, COVID-19 Post-acute Sequelae Among Adults: 12 Month Mortality Risk, *Frontiers in Medicine* (2021). [DOI: 10.3389/fmed.2021.778434](#)

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