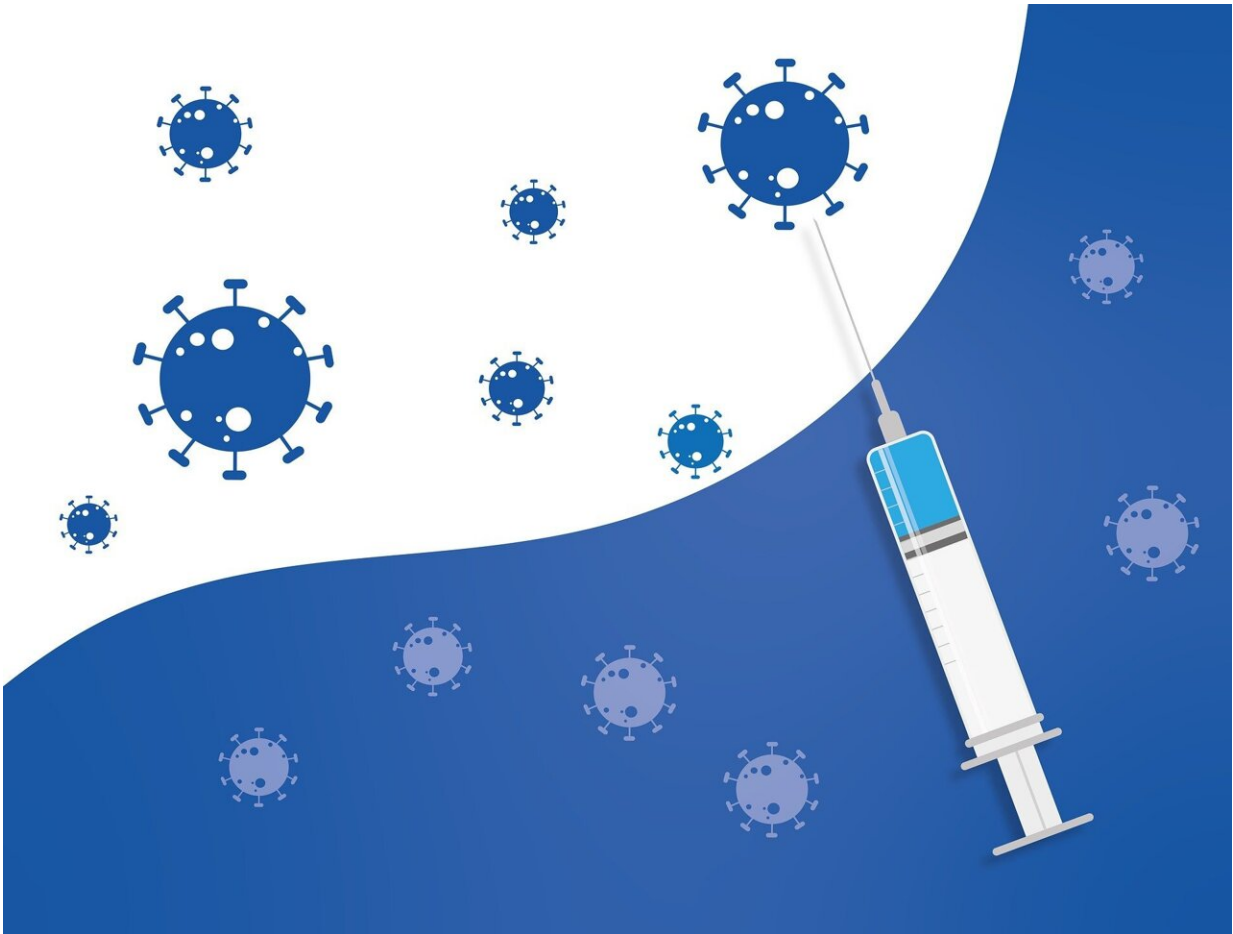


New antibody treatment for COVID-19

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A new treatment could prevent serious illness in case of COVID-19 infections during the pandemic. This would prevent hospitalization of patients and thus ease the burden on the healthcare system. For several

months, inpatients at the Klinikum rechts der Isar university hospital of the Technical University of Munich (TUM) have been successfully treated with neutralizing antibodies. This treatment option at the Antibody Center has now been extended to outpatients.

The new form of [treatment](#) has proven highly effective against severe COVID-19 illness above all in persons with [chronic conditions](#) who do not respond sufficiently to an active vaccination.

"With approval by the European Medicines Agency (EMA) on November 12, the [neutralizing antibodies](#) can now be widely used at an early stage of the illness," said Adjunct Teaching Professor Dr. Christoph Spinner, infectious disease specialist and pandemic officer at Klinikum rechts der Isar, and his colleague, Adjunct Teaching Professor Dr. Jochen Schneider, who heads the new COVID-19 outpatient clinic for monoclonal antibody treatment at the same hospital.

New treatment soon to be widely available

With the current surge in patient numbers, especially in Bavaria, the experts believe that this treatment can benefit many people and should therefore be made widely available as quickly as possible.

"To make that happen, we will be happy to share our skills and experience from a university clinic with colleagues at other hospitals in the fight against the pandemic," says Dr. Spinner.

Antibodies stop virus from multiplying in the body

The treatment basically consists of highly specialized antibodies that act as a "passive vaccination." Dr. Spinner explains: "Neutralizing antibodies produced in the lab can deactivate—basically checkmate—the SARS-

CoV-2 virus."

It can be injected intravenously or subcutaneously—in other words, under the skin. The antibodies fight viruses by preventing them from entering cells. This stops them from multiplying. But according to experts, it is crucial for patients to receive the antibodies within seven days of the onset of symptoms, either as outpatients or while hospitalized. Only then can the treatment achieve its full potential.

Consequently, it is no longer beneficial if used later. Studies have shown that it is no longer the SARS-CoV-2 virus itself, but rather the overreacting [immune system](#) that causes the serious cases. "Patients tolerate the one-time dose of this treatment very well," says Dr. Schneider. "Significant side effects are extremely rare."

'Passive vaccination' may also be provided as preventive care

Especially people with chronic conditions or immune deficiencies can benefit greatly from the antibody treatment because they often show a weak response to an active vaccination, but still have a high risk of serious illness in case of a COVID-19 infection. "The new treatment is over 80 percent effective against serious cases," says Dr. Spinner. It is a passive injection because [antibodies](#) produced in the lab are injected into the body.

It can even be used as a preventive treatment or immediately after contact with SARS-CoV-2, which can be an important protection for persons with chronic conditions. A specific example: a high-risk patient is living in the same household with someone who tests positive. However, regulatory changes are needed before the treatment can be used on a preventive basis.

More information: Karagiannidis, Christian, et al.: Treatment and prevention: antibodies against COVID-19 (in German). Dtsch Arztebl 2021; 118(47): A-2212 / B-1825. www.aerzteblatt.de/archiv/222202

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