

Q&A: Donating blood to get back to work during COVID-19

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Dear Mayo Clinic: I saw an article recently about how donating blood could help treat people who have been diagnosed with COVID-19 and maybe let people go back to work. My neighbor said she was going to

have a test and then donate blood, but she was not diagnosed with COVID-19, as far as I know. I think I may have had it based on my symptoms, but I never went to the hospital. Can I donate blood to help someone else? Or better yet, will it show that it's OK for me to go back to work?

Answer: Certainly there is a lot of information about the various tests that are available for COVID-19 and [blood](#) donations. It is important to understand that there are two main types of tests: [molecular tests](#) and serologic tests.

Molecular tests, frequently done with nose swabs, detect the genetic material of the [virus](#) and indicate whether the patient currently has and is infected with the virus. Serology tests, which are likely what your neighbor is referring to, are tests performed on [blood samples](#) and detect our [immune response](#) to the virus by looking for [antibodies](#). Antibodies, which are essentially proteins produced by our immune system, are a major component of how we fight off any infectious disease. They will attach to and essentially kill or inactivate the virus.

Importantly, everyone's [immune system](#) is a little bit different, so the time it takes for each person to develop these antibodies and how long they last can vary. So even if you or your neighbor had COVID-19 and didn't know it, it would take anywhere from a few days to a couple of weeks for this antibody response to develop. And because of this, antibody tests are not used to diagnose infection, but rather are used to determine if a patient has been infected at some point in the past.

Blood donation has been in the news lately for several reasons. First, blood donations are always needed, and it is important to continue to donate blood as we weather the COVID-19 pandemic so that we can ensure we have enough supply to take care of people who might need a transfusion for any reason. Secondly, blood, or more specifically plasma

obtained from individuals with antibodies to COVID-19, is being used to treat some patients that are currently infected and hospitalized with COVID-19.

To meet criteria to be a convalescent plasma donor, you would require a prior positive result by a COVID-19 molecular test, be recovered without symptoms and test positive for antibodies to the virus.

Preliminary reports indicate that these convalescent plasma transfusions are providing relief to some of the sickest patients, and it is such a generous gift that some of us can provide to those fighting the virus, providing hope to someone else.

I know that a lot of people are eager to get tested to know if they have been infected with COVID-19 and have since recovered—in part because there's really been a lot of interest at the local, state and national levels to use serologic testing for return-to-work initiatives.

Unfortunately, given what we know, I would be cautious against relying solely on a serologic test result to guide return-to-work decisions and recommendations.

We need to exercise caution with how we use the results from these tests. Individuals who [test](#) positive for antibodies to COVID-19 may be at lower risk for reinfection compared to an antibody-negative individual, but we still really don't understand or know the level or the duration of protective immunity against reinfection that these antibodies provide us.

One of the biggest questions that we are trying to answer is whether an individual will develop complete or partial immunity to COVID-19 after diagnosis and recovery, and, if so, how long does that last? To be honest, because we've really only been dealing with this virus for four or five months, we don't have a good sense of the level or duration of such protective immunity. From prior studies during the SARS outbreak in

the early-2000s, we know that at least some protective immunity against that virus, which is closely related to SARS-CoV-2, seemed to be detectable for about two to three years after infection. But there are some other preliminary animal studies suggesting only short-term immunity.

We really need more studies in this area before we can make any conclusive comments on the duration of antibody protection from reinfection.

Right now, if you are able, please consider [blood donation](#) regardless of whether or not you meet current criteria to be a COVID-19 convalescent plasma donor.

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