

IgG level in convalescent plasma affects COVID-19 death risk

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(HealthDay)—For patients hospitalized with COVID-19 and not receiving mechanical ventilation, the risk for death is reduced with transfusion of plasma with higher versus lower levels of anti-severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) immunoglobulin G (IgG) antibodies, according to a study published online Jan. 13 in the *New England Journal of Medicine*.

Michael J. Joyner, M.D., from the Mayo Clinic in Rochester, Minnesota, and colleagues determined the anti-SARS-CoV-2 IgG levels in convalescent plasma used to treat hospitalized adults with COVID-19. A total of 3,082 patients were included in the analysis: 515 in the high-titer group, 2,006 in the medium-titer group, and 561 in the low-titer group.

The researchers found that death within 30 days after plasma transfusion occurred in 22.3, 27.4, and 29.6 percent of patients in the high-, medium-, and low-titer groups, respectively. The association

between anti-SARS-CoV-2 antibody levels and risk for death from COVID-19 was moderated by [mechanical ventilation](#) status. For patients who had not received mechanical ventilation before transfusion, the risk for death within 30 days was lower in the high- versus low-titer group (relative risk, 0.66; 95 percent confidence interval, 0.48 to 0.91), while no effect on risk for death was seen for patients who had received mechanical ventilation (relative risk, 1.02; 95 percent confidence interval, 0.78 to 1.32).

"These data show that the benefit of [convalescent plasma](#) was most apparent in patients who received plasma transfusions containing higher levels of anti-SARS-CoV-2 IgG antibodies early in the disease course," the authors write.

Several authors disclosed financial ties to [pharmaceutical companies](#), including Millennium Pharmaceuticals and Octapharma U.S., which provided donations for the study.

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