

Holding mycophenolate mofetil for 10 days or more may improve COVID-19 vaccine response

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	Non-Hold	Hold <10 Days	Hold ≥10 Days
Anti-RBD <250 U/ml	126 (71%)	15 (71%)	8 (36%)
Anti-RBD ≥ 250 U/ml	51 (29%)	6 (29%)	14 (64%)
Total	177	21	22

Anti-spike antibody response following two dose SARS-CoV_2 vaccine dose in RMD, stratified by peri-vaccination mycophenolate hold duration. Credit: Increased Duration of Mycophenolate Hold Improves Antibody Response to SARS-CoV-2 Vaccination in Patients with Rheumatic and Musculoskeletal Disease (2022) <https://acrabstracts.org/abstract/increased-duration-of-mycophenolate-hold-improves-antibody-response-to-sars-cov-2-vaccination-in-patients-with-rheumatic-and-musculoskeletal-disease/>

New research presented this week at ACR Convergence 2022, the American College of Rheumatology's annual meeting, demonstrated that withholding mycophenolate mofetil for at least 10 days significantly increased antibody response after two doses of COVID-19 vaccine, without a significant increase in flares.

Mycophenolate mofetil is a disease-modifying anti-rheumatic drug (DMARD) used to treat [rheumatic diseases](#) such as [systemic lupus erythematosus](#) (SLE, lupus), myositis and vasculitis. It has been shown to blunt the SARS-CoV-2 vaccine response, which prompted the American College of Rheumatology (ACR) to recommend withholding mycophenolate mofetil for one week in the peri-vaccination period.

The optimal duration to withhold the drug isn't known. This prospective observational study aimed to determine the effect of the duration of holding mycophenolate mofetil on antibody response and flares in patients with rheumatic and musculoskeletal diseases.

Participants included 220 patients with rheumatic diseases with no history of COVID-19 who had received two doses of an mRNA coronavirus vaccine and reported treatment with mycophenolate mofetil.

They underwent antibody (serology) testing at two weeks, one month, and three months after the second vaccine dose using an immunoassay (Roche Elecsys) that detects COVID-19 antibody titers. The researchers used the highest available titer from each test period where a high titer was defined as an antibody response greater than 250U/mL.

One month after the second vaccine dose, participants were invited to complete a detailed questionnaire about their flare history and the symptoms, duration and treatment of flares that required medical care.

About 80% of the participants (177 of 220) did not stop mycophenolate mofetil in the peri-vaccination period. Among the 43 who did, half withheld the medication for at least 10 days, while the rest withheld treatment for fewer than 10 days.

According to the data, a higher proportion of participants who withheld treatment for a minimum of 10 days had a higher antibody response

(64%) compared to those who continued treatment (29%) or withheld therapy for less time (29%). The rate of flares was similar among the three groups.

"We had hypothesized that withholding mycophenolate mofetil for a longer duration would result in an augmented post-vaccination antibody response, and we were encouraged when we saw consistent results in our data. We were concerned that the longer duration could potentially result in higher rates of disease flare, which we did not observe. However, this requires further evaluation in larger cohorts," says Caoilfhionn Connolly, MD, MSc, a postdoctoral rheumatology fellow at Johns Hopkins University School of Medicine and a lead co-author.

She adds that though the sample size was small, the findings support withholding [mycophenolate mofetil](#) in the peri-vaccination period as a strategy for increasing COVID-19 vaccine response.

"Our early data suggest that holding the medication longer than 10 days could further augment [vaccine response](#), but should only be considered among appropriate patients," Dr. Connolly says. "We also hope to evaluate the impact of medication withholding on the [immune response](#) to additional vaccine doses in the future."

More information: [Conference abstract](#)

Conference: www.rheumatology.org/Annual-Meeting

Provided by American College of Rheumatology

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