

# COVID-19 vaccination is safe in patients with previous myocarditis

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A small study has shown that SARS-CoV-2 vaccination in patients who had an inflamed heart muscle in the past is not associated with a recurrence of the condition or other serious side effects. The research is presented at ESC Acute CardioVascular Care 2022, a scientific congress of the European Society of Cardiology (ESC).

"These results provide reassuring data that may encourage [patients](#) with a history of myocarditis to get vaccinated against SARS-CoV-2," said study author Dr. Iyad Abou Saleh of Hospices Civils de Lyon, France. "It should be noted that the majority of patients in our study received the BNT162b2 mRNA vaccine and therefore the findings may not apply to other vaccines."

Myocarditis is an inflammation of the heart muscle. Signs and symptoms include fatigue, [chest pain](#), shortness of breath, and rapid heartbeats. The inflammation can reduce the heart's ability to pump and can also cause arrhythmias (irregular heartbeats). Prevalence is estimated at 10 to 106 cases per 100,000 individuals worldwide. The leading cause of myocarditis is viral infection.

Rare cases of myocarditis following SARS-CoV-2 vaccination have been reported in the [scientific literature](#) with a prevalence of 2.1 cases for 100,000 inhabitants. However, there are a lack of data regarding the risk of myocarditis recurrence after SARS-CoV-2 vaccination in patients with a history of the condition.

Dr. Abou Saleh pointed out: "Our experience shows that in some situations patients have avoided vaccination because they, or their GP, were afraid it could cause another bout of myocarditis. We hypothesized that SARS-CoV-2 vaccination would not increase the risk of myocarditis recurrence in patients who had the condition in the past."

The researchers included all patients hospitalized in Hospices Civils de Lyon during the last five years (from January 2016 to June 2021) with a diagnosis of acute myocarditis. Patients were contacted by telephone and asked if they had been vaccinated, with which vaccine, how many times, and whether they had any side effects. Patients were also asked if they currently had COVID-19 or had contracted it in the past.

A total of 142 patients with a prior history of confirmed acute myocarditis were enrolled in the study. The average age was 31 years and 20.3% were women. Among them, [vaccination status](#) was known for 71 patients (50%): 55 patients were vaccinated and 16 were not vaccinated. The main reason given for not getting the vaccine was the fear of myocarditis recurrence (12 patients, 75% of non-vaccinated patients). Vaccination status was unknown for 66 patients and five patients had died before the COVID-19 outbreak.

Among the vaccinated patients, 12 had one dose and 43 had two doses. Patients were mainly vaccinated with BNT162b2 mRNA (53 patients, 96.4%). One patient had the mRNA-1273 vaccine and one had the Ad26.COVS-S [recombinant] vaccine.

The researchers also obtained information about side effects following vaccination from medical records. These included serious events such as death, arrhythmias, and recurrent myocarditis. There were no serious adverse events after SARS-CoV-2 vaccination.

Dr. Abou Saleh said: "We showed that SARS-CoV-2 vaccination in patients with a history of acute myocarditis is not associated with a risk of recurrent myocarditis or other [serious side effects](#). Our results should be interpreted with caution due to the small number of patients and the predominant use of one type of [vaccine](#)."

**More information:** Safety of SARS-CoV-2 vaccination in people with a history of acute myocarditis. [digital-congress.escardio.org/.../17-e-posters-session](https://digital-congress.escardio.org/.../17-e-posters-session)

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