

Moderna Scientists Warn mRNA Vaccines Carry Toxicity Risks

The technology used in Moderna's COVID-19 vaccine carries toxicity risks, scientists with the company said in a new paper.

“A major challenge now is how to efficiently de-risk potential toxicities associated with mRNA technology,” the scientists wrote in the paper, which was published [by Nature Reviews Drug Discovery](#) on Jan. 23.

The mRNA vaccines have multiple known side effects, including heart inflammation and severe allergic shock. Those may stem from hypersensitivity reactions, which can be elicited by “any LNP-mRNA component” but are most likely triggered by PEGlyated lipid nanoparticles, which is “the most potentially reactogenic component,” according to the scientists.







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Insights into new-onset autoimmune diseases after COVID-19 vaccination

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Highlights

- Despite vaccination against COVID-19 is effective in reducing disease severity and mortality, COVID-19 Vaccines may cause rare autoimmune diseases.



Case Report

A Lethal Case of Acute Exacerbation of Rheumatoid Arthritis – Related Interstitial Lung Disease Induced by the COVID Vaccine.


[Rayan Mohamad](#) , [Rami Hallak](#) , [Imad Bou Akl](#) , [Hisham Bou Fakhreddine](#)  


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Abstract

Interstitial lung disease (ILD) exacerbation is a serious condition that can have a high morbidity and mortality. Identifying the triggers of ILD exacerbations is very challenging. Several case reports described COVID-19 vaccine-induced exacerbation of underlying interstitial lung disease, namely idiopathic interstitial pneumonias. The clinical implications of this adverse effect is underrecognized. We are reporting a case of fatal respiratory failure in a patient with rheumatoid arthritis Interstitial Lung disease few days following the second dose of COVID vaccine. Identifying risk factors of this complication is of utmost importance to aid in the rapid recognition and early initiation of treatment.



COVID-19 Vaccines and Myocarditis: An Overview of Current Evidence

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Willibald Wonisch, Academic Editor

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Abstract

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COVID-19 vaccines have been widely used to reduce the incidence and disease severity of COVID-19. Questions have lately been raised about the possibility of an association between COVID-19 vaccines and myocarditis, an inflammatory condition affecting the myocardium, or the middle layer of the heart. Myocarditis can be caused by infections, immune reactions, or toxic exposure. The incidence rate of myocarditis and pericarditis was calculated to be 5.98 instances per million COVID-19 vaccine doses delivered, which is less than half of the incidences after SARS-CoV-2 infection. Myocarditis rates in people aged 12 to 39 years are around 12.6 cases per million doses following the second dose of mRNA vaccination. Adolescent men are more likely than women to develop myocarditis after receiving mRNA vaccines. The objectives of this systematic review and meta-analysis are to find out how often myocarditis occurs after receiving the COVID-19 vaccine, as well as the risk factors and clinical repercussions of this condition. Nevertheless, the causal relationship between vaccination and myocarditis has been difficult to establish, and further research is required. It is also essential to distinguish between suggested cases of myocarditis and those confirmed by endomyocardial biopsy.

Myocarditis with COVID-19 mRNA vaccines

[B Bozkurt](#), [I Kamat](#), [PJ Hotez](#) - *Circulation*, 2021 - Am Heart Assoc

... **Myocarditis** has been recognized as a rare complication of **coronavirus** disease 2019 (**COVID-19**) mRNA **vaccinations**... Disease Control and Prevention, **myocarditis**/pericarditis rates are ...

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[D Mevorach](#), [E Anis](#), [N Cedar](#)... - ... *England Journal of ...*, 2021 - Mass Medical Soc

... To assess the incidence of **myocarditis** among **vaccine** recipients, we ... **vaccinated** and unvaccinated persons. To calculate the risk difference, we determined the risk of **myocarditis** per ...

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Article | [Published: 12 December 2022](#)

Apparent risks of postural orthostatic tachycardia syndrome diagnoses after COVID-19 vaccination and SARS-Cov-2 Infection

[Alan C. Kwan](#) , [Joseph E. Ebinger](#), [Janet Wei](#), [Catherine N. Le](#), [Jillian R. Oft](#), [Rachel Zabner](#), [Debbie Teodorescu](#), [Patrick G. Botting](#), [Jesse Navarrette](#), [David Ouyang](#), [Matthew Driver](#), [Brian Claggett](#), [Brittany N. Weber](#), [Peng-Sheng Chen](#) & [Susan Cheng](#)

[Nature Cardiovascular Research](#) **1**, 1187–1194 (2022) | [Cite this article](#)

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Abstract

Postural orthostatic tachycardia syndrome (POTS) was previously described after severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection; however, limited data are available on the relation of POTS with Coronavirus Disease 2019 (COVID-19) vaccination. Here we show, in a cohort of 284,592 COVID-19-vaccinated individuals, using a sequence–symmetry analysis, that the odds of POTS are higher 90 days after vaccine exposure than 90 days before exposure; we also show that the odds for POTS are higher than referent conventional primary care diagnoses but lower than the odds of new POTS diagnosis after SARS-CoV-2 infection. Our results identify a possible association between COVID-19 vaccination and incidence of POTS. Notwithstanding the probable low incidence of POTS after COVID-19 vaccination, particularly when compared to SARS-Cov-2 post-infection odds, our results suggest that further studies are needed to investigate the incidence and etiology of POTS occurring after COVID-19 vaccination.