

COVID vaccination in people with rheumatic and musculoskeletal diseases

This is the lay version of a paper describing the safety of COVID-19 vaccination based on data from the COVAX registry. The original publication can be downloaded from the following link:

[Machado PM, Lawson-Tovey S, Strangfeld A, et al. Safety of vaccination against SARS-CoV-2 in people with rheumatic and musculoskeletal diseases: results from the EULAR Coronavirus Vaccine \(COVAX\) physician-reported registry. Annals of the Rheumatic Diseases Published Online First: 31 December 2021. doi: 10.1136/annrheumdis-2021-221490](https://doi.org/10.1136/annrheumdis-2021-221490)

Introduction

EULAR gives advice to doctors, nurses and patients about the best way to treat and manage diseases. The organization also supports studies and data collection to further understanding about rheumatic and musculoskeletal disease (RMD).

The EULAR Coronavirus Vaccine (COVAX) physician-reported registry was launched in February 2021. Information is entered voluntarily by rheumatologists. The users were asked to report as many cases as possible of people with RMDs who had received a COVID vaccine, whether or not they had experienced side effects.

What do we already know?

COVID-19 is the infection caused by the SARS-CoV-2 virus. The outbreak of this virus was declared a pandemic in 2020 by the World Health Organization. Since then, almost 200 different vaccines for COVID have been developed, with more than 100 having reached human trial phases. In general, people with inflammatory or autoimmune rheumatic and musculoskeletal diseases (shortened to I-RMDs) have not been included in the clinical trials for these vaccines. This has led to questions about the safety and effectiveness of COVID vaccines in people with I-RMDs.

What does the paper say?

- **COVAX is a large international registry collecting information about COVID vaccination in people with RMDs.**
The registry is collecting information about people with RMDs who have had a COVID vaccine. The information published in this paper includes 5,121 people from 30 countries. Of these, 90% had an inflammatory RMD, and the other 10% had a non-inflammatory RMD. The most common inflammatory RMDs were rheumatoid arthritis, axial spondyloarthritis, and psoriatic arthritis. The most common non-inflammatory RMDs were osteoarthritis and osteoporosis. Among people with inflammatory RMDs,, 54% were taking a conventional synthetic disease-modifying antirheumatic drug (csDMARD), 42% were on biological DMARDs (bDMARDs), and 35% were taking immunosuppressant medicines for their RMD.
- **Most people in the COVAX registry had received the Pfizer/BioNTech vaccine.**
Overall, 70% had received the Pfizer/BioNTech vaccine, 17% had the AstraZeneca/Oxford vaccine, and 8% received the Moderna vaccine, reflecting vaccine availability and access across reporting countries.
- **The overwhelming majority of people with inflammatory RMDs tolerate COVID vaccination well.**
The registry has received rare reports of people having a flare of their inflammatory RMD after receiving a COVID vaccine. Flares included arthritis (joint pain) and fatigue (tiredness). Overall, fewer than 5% of

people had a flare, and only 0.6% were classed as severe. Medication changes were needed in just 1.5% of people. These results suggest the risk of having a flare after receiving a COVID vaccine is low, and not linked to any particular type of vaccine. Of note, these flares were not necessarily caused by the vaccine, as flares are also expected to occur as part of the natural history of the disease.

- **There are very few breakthrough infections in people with inflammatory RMDs.**
After vaccination, 46 people were diagnosed with COVID-19; over half had not received both vaccine doses. In fully vaccinated people, only 0.7% of those with an inflammatory RMD had a breakthrough infection after receiving a COVID vaccine. The rate was 1.1% in people with a non-inflammatory RMD.
- **The safety profile in people with inflammatory RMDs is similar to that in other groups of people.**
In general, the most adverse events seen in people with inflammatory RMDs were not serious. These were typically short-lived reactions to the injection. This is similar to the safety profile found in people with non-inflammatory RMDs, and those in the general population.

Summary

These findings should provide reassurance to rheumatologists, other health professionals and vaccine recipients, and promote confidence in the safety of COVID vaccination in people with inflammatory RMDs.

Overall, these findings from the COVAX will support discussions about the safety and benefit/risk ratio of COVID vaccination for people with inflammatory RMDs. The information will also help support the development of new and updated recommendations by competent organisations.

If you have any questions or concerns about your disease or your medication, you should speak to a health professional involved in your care.