

## For COVID-19, general health status matters more than inflammatory arthritis



For people with inflammatory arthritis, overall COVID-19 risks are low and similar to those in the general population

### INTRODUCTION

COVID-19 is the disease caused by a new type of coronavirus called severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). It was declared a pandemic by the World Health Organization on 11 March 2020. COVID-19 has forced people to change their behaviours to try to limit the spread of infection.

Inflammatory joint diseases include rheumatoid arthritis, psoriatic arthritis, spondyloarthritides, and juvenile idiopathic arthritis. Each has its own particular features, but common symptoms include joint pain and stiffness, which is caused by inflammation in the joint (arthritis).

### WHAT DID THE AUTHORS HOPE TO FIND?

The authors wanted to see whether people with an inflammatory joint disease were at higher risk of hospitalisation or death than people in the general population during the initial phase of the COVID-19 pandemic, and in comparison to previous years.

They also wanted to see whether people with inflammatory joint disease had an increased risk of hospitalisation, admission to intensive care, or death specifically due to COVID-19. Finally, the research looked at how treatment with biologic or targeted disease modifying anti-rheumatic drugs (often shortened to b- or tsDMARDs) affected these risks.

### WHO WAS STUDIED?

The study looked at over 110,000 adults with inflammatory joint diseases living in Sweden. Almost 500,000 people from the general population in Sweden were used to compare against.

### HOW WAS THE STUDY CONDUCTED?

This was a retrospective observational study. This means that the authors used existing databases of patient records. They looked for information about people with inflammatory joint diseases, and records of deaths and hospital admissions due to COVID-19 between March and September 2020.

Rates were compared between people with inflammatory joint diseases, and between those taking different treatments. These rates were compared to similar individuals in the general population.

### WHAT WAS THE MAIN FINDING?

The authors found that the rate of death due to any cause was increased both in people with inflammatory joint diseases and in the general population during the first wave of the pandemic in 2020 compared to any year between 2015 and 2020.

For people with inflammatory joint disease, the risks of hospitalisation, admission to intensive care, and death due to COVID-19 were low in absolute terms. Although low, the risks were still higher than those for people in the general population. However, the authors note that these increased risks could be explained by other differences. For example, differences in general health and socioeconomic characteristics between people with inflammatory joint disease and the general population, as well as by the underlying effects of the arthritis itself. There was not much evidence that the drugs used to treat inflammatory joint diseases were associated with worse COVID-19 outcomes.

### ARE THESE FINDINGS NEW?

Yes. Many studies in this area have focused on comparing risks in people with inflammatory joint disease, rather than put results into context by comparing them to similar individuals from the general population.

### WHAT ARE THE LIMITATIONS OF THIS STUDY?

The data sources used meant that it was possible to look at a large study population, but also provided some limitations. When using existing health records, it is not possible to be completely sure that the information on a disease is correct. Similarly, although the databases contain information about prescriptions, it is not possible to tell whether a person actually took their medication.

The authors were not able to identify risks associated with getting SARS-CoV-2 infection. They also did not have information on people's weight or blood pressure, which are known COVID-19 risk factors. Finally, drawing conclusions was difficult for some outcomes where there were small numbers.

### WHAT DO THE AUTHORS PLAN TO DO WITH THIS INFORMATION?

The next step is to extend this study to follow people through the later phases of the pandemic. This will allow the authors to see how the pandemic has affected care of inflammatory joint diseases in Sweden.

### WHAT DOES THIS MEAN FOR ME?

If you have a type of inflammatory arthritis, these results suggest that you should not be worried that your disease or the medicine used to treat it will put you at increased risk of hospitalisation, admission to intensive care unit, or death due to COVID-19. However, rheumatic diseases do increase risks for many adverse health outcomes, including those related to COVID-19.

Protect yourself from COVID-19 by following the advice of the government in your country. The best protection is getting vaccinated, but you should also wash your hands regularly, avoid touching your face, and follow social distancing rules. Maintaining good ventilation may also help stop the virus spreading.

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