

Australian clinician guide for the use of immunomodulatory drugs in autoimmune rheumatic diseases at the time of COVID-19 vaccination

- This clinician guide has been developed as part of the [Australian Living Guideline for the Pharmacological Management of Inflammatory Arthritis](#) and is designed to be used in conjunction with the recommendations on COVID-19 vaccination for people with autoimmune inflammatory rheumatic diseases (AIRD) on immunomodulatory therapies
- Advice contained in this clinician guide is *general* and has not been developed through a formal GRADE process
- This advice is not intended to replace a shared decision between patient and prescriber that is based on specific clinical circumstances including disease activity, co-morbidities and risk of COVID-19
- While any immunomodulatory regimen may affect vaccine efficacy, current data suggest that B-cell depleting therapies (eg rituximab) and, to a lesser extent, abatacept, mycophenolate and high-dose glucocorticoids may be more likely to reduce immunogenicity than other medications
- Although the immune response to COVID-19 vaccination may be reduced in people with AIRD on immunomodulatory therapies, the extent to which protection from disease is reduced remains unknown and may vary between individuals. Therefore [vaccination is recommended](#) in this population. In people at risk of reduced immunogenicity, a [third primary vaccine dose](#) may be required
- Where practical, any decision to alter an immunomodulatory treatment regimen should be discussed with the treating specialist
- This document and the associated [recommendations](#) are living resources that will be updated as new evidence emerges

Methotrexate	<p>Do not routinely interrupt methotrexate at the time of COVID-19 vaccination</p> <p>In patients with stable rheumatic disease at low risk of flare, or in those for whom protection from COVID-19 is of particular importance, consider holding methotrexate for one or two doses following each vaccine dose</p>
Leflunomide	Do not routinely interrupt leflunomide therapy at the time of COVID-19 vaccination
Sulfasalazine	Do not routinely interrupt sulfasalazine therapy at the time of COVID-19 vaccination
Hydroxychloroquine	Do not routinely interrupt hydroxychloroquine therapy at the time of COVID-19 vaccination
TNF inhibitors	Do not routinely interrupt TNFi therapy at the time of COVID-19 vaccination
Cytokine inhibitors (IL-1, IL-6, IL-17, IL-12/23, IL-23)	Do not routinely interrupt anti-cytokine therapy at the time of COVID-19 vaccination
JAK inhibitors	Do not routinely interrupt JAKi therapy at the time of COVID-19 vaccination
Abatacept	Withhold subcutaneous abatacept both 1 week prior to and 1 week after each COVID-19 vaccine dose
Rituximab	<p>Aim to perform COVID-19 vaccination towards the end of a rituximab dosing cycle or before initiation of rituximab therapy</p> <p>Where possible, aim to defer vaccination until at least 3 months after the most recent dose of rituximab</p> <p>Aim to administer the second (and subsequent) vaccine doses at least 2 weeks before rituximab infusion</p> <p>For patients receiving the AstraZeneca vaccine, consider reducing the interval between vaccine doses (eg 6-8 weeks) to permit both doses before the next rituximab cycle</p>
Glucocorticoids	<p>Do not routinely modify dose for people on stable chronic glucocorticoid therapy</p> <p>In people on higher doses who are planning to taper, consider deferring vaccination until the dose is lower (eg <10mg/day), depending on the individual disease, comorbidities, likely trajectory of glucocorticoid therapy and an estimate of the risk of COVID-19</p>
Mycophenolate	Do not routinely interrupt mycophenolate therapy at the time of COVID-19 vaccination
Azathioprine	Do not routinely interrupt azathioprine therapy at the time of COVID-19 vaccination
Cyclophosphamide	<p>Aim to perform COVID-19 vaccination towards the end of an IV cyclophosphamide dosing cycle or before initiation of IV cyclophosphamide therapy</p> <p>Aim to administer the vaccine at least 3 weeks after the last dose of IV cyclophosphamide and 1 week prior to the next dose</p> <p>Do not routinely interrupt oral cyclophosphamide therapy at the time of COVID-19 vaccination</p>

Australian clinician guide for the use of immunomodulatory drugs in autoimmune rheumatic diseases at the time of COVID-19 vaccination

General Considerations

All decisions about vaccination and the use of immunomodulatory medications should be based on a shared-decision making approach

Advice regarding the timing of vaccination and adjustment of DMARDs is general and aimed at supporting a shared decision between the clinician and individual patient that is based on the values and preferences of the patient, the underlying disease and its current activity, age and comorbidities, and risk of COVID-19 infection

The timing of vaccine administration should take into account the individual disease status and trajectory and risk of COVID-19 infection and severe COVID disease

The potential for reduced immunogenicity due to DMARDs should be weighed against risk of disease flare due to alteration of therapy

In newly-diagnosed patients or those who have not yet commenced immunomodulatory therapy, consider giving the first dose of COVID-19 vaccine prior to commencing DMARDs, if the clinical circumstances permit

Most current data on immunogenicity is extrapolated from other vaccines or immunosuppressed populations and may not apply to COVID-19 vaccines in people with AIRD

The extent to which a serological response to vaccine correlates with protection from infection or severe disease consequences is still unknown; there is currently no role for using serological testing to guide clinical decisions about COVID-19 vaccination

People with autoimmune rheumatic diseases at high risk of severe COVID-19 should still take appropriate physical precautions against infection even after vaccination

Vaccination of other household members and close contacts of people with autoimmune rheumatic diseases who are using immunomodulatory drugs is likely to further reduce the risk of infection and therefore should be encouraged

There is no evidence to suggest that the potential effect of immunomodulatory drugs on immunogenicity differs between mRNA vaccines and adenovirus vector vaccines

A detailed **rationale** for the guidance contained in this document may be found [here](#).



Link to Australian Living
Recommendation