Vaccinations in Rheumatology
Patient information

This information is for people with certain types of arthritis (known as rheumatologic conditions) to provide general information about vaccination. It does not provide specific advice for each condition or each vaccine.

For information on **COVID-19 vaccination for Rheumatology patients** see here.

Key message
Please get vaccinated.
It's a complex area, so will require discussion between you, your GP and rheumatologist. An infectious diseases specialist may need to be involved.

Why should I get vaccinated?

- People with rheumatologic conditions such as rheumatoid arthritis, psoriatic arthritis and lupus often suffer infections which can be prevented by vaccination.
- These infections may be more severe in people with these conditions.
- If vaccinated, you will be less likely to get the infection you've been vaccinated against. Even if you are infected, it is more likely to be a milder illness.
- Many vaccines (e.g., the influenza vaccine) are free for rheumatology patients taking medication such as prednisolone or methotrexate (MTX), and for people with chronic conditions.

Are there risks with vaccinations?

- There is a small risk (less than 5 in 100) of a reaction (redness, itch, pain) at the injection site.
- The risk of more serious side effects is very low (less than 1 in 10,000).
- It is far more likely that the benefits will outweigh the risks.

What vaccines should I consider?

- It is important your vaccines are kept up to date, including influenza and pneumonia - more detail below.
- It's a tricky area, so you should talk to your general practitioner (GP) and/or rheumatologist about which vaccines are appropriate for you

Are there vaccines to avoid?

"Live" vaccines should be avoided if you are taking medication such as prednisolone at a dose of 20 mg or more a day or a biological or targeted DMARD (b/tsDMARD) (see Zostavax). This is because live vaccines contain a small dose of weakened virus which can cause infection if the immune system is suppressed. For this reason, most vaccines are not live.

Common live vaccines in Australia:

Herpes zoster (Zostavax/shingles) and varicella (chicken pox) vaccine

Measles-mumps-rubella
For children: Rotavirus
For travellers:
Yellow Fever
Oral typhoid vaccine
BCG (Bacille-Calmette–Guérin) vaccine (Tuberculosis)
Japanese encephalitis vaccine

How about the varicella zoster (shingles) vaccine?
Varicella zoster (shingles)
Shingles is a disease caused by reactivation ("waking up") of the chickenpox virus. It causes painful fluid-filled blisters along the course of a nerve, e.g. on the trunk or in the eye. It is relatively common (1 in every 100 people) – especially in older people and in people with certain types of arthritis taking medication which suppresses the immune system.

Sometimes the pain is still there after the blisters go away. This is called "post-herpetic neuralgia" and is due to the virus damaging the nerve. It can last a long time.

There are two varicella zoster vaccines available in Australia
1. **Zostavax – which is a live vaccine**
2. **Shingrix – which is an inactivated (not live) vaccine**

	Type of herpes zoster vaccine	Safe with prednisolone, methotrexate and sulfasalazine	Safe with b/tsDMARDs*	Safe with other csDMARDs**	Cost
Zostavax	Live vaccine	Depends on dose (check with your rheumatologist)	✗	Check with your rheumatologist	Free for people 70-79 yo $200 if not covered
Shingrix	Inactivated vaccine (not live)	✓	✓	✓	Approx. $300 per dose (2 doses required - $600 for the course)

For more information, please refer to the Australian Immunisation Handbook

*b/tsDMARDs – biologic and targeted synthetic disease modifying anti-rheumatic drugs include the following medicines: abatacept, adalimumab, anakinra, baricitinib, certolizumab, etanercept, golimumab, guselkumab, infliximab, ixekizumab, rituximab, secukinumab, tocilizumab, tofacitinib, ustekinumab, upadacitinib.
**Other csDMARDs include the following medicines: hydroxychloroquine, leflunomide.

Because Shingrix vaccine is inactivated (not live) it may be the preferred vaccine in people who are on immunosuppressive therapy as it can be given regardless of the other medicines being taken/used. However, please note that Zostavax can be given with some immunosuppressant medicines depending on the doses being taken and the combination of medicines being used. **The choice of herpes zoster vaccine should be discussed with your rheumatologist.**

NB: See your GP or rheumatologist as soon as possible should you get a viral illness or fluid-filled skin blisters after receiving Zostavax as this may mean a bout of herpes infection from the vaccine. (This is unlikely).

How about the influenza vaccine?

If you are taking medication such as prednisolone or MTX, which suppresses the immune system, you are more likely to get severe influenza (the "flu"). Please get the influenza vaccination every year.

Depending on your age, there are different types of influenza vaccine, but your GP will know which one to use. Influenza vaccine should not worsen your rheumatologic condition.

As influenza vaccine contains **killed** virus, it cannot give you the "flu". You therefore do not need to stop medication that suppresses your immune system. Some international guidelines recommend withholding MTX for 2 weeks after influenza vaccine to improve the efficacy of the vaccine. Fluvax only contains 3-4 strains of the virus, so it won't protect you against every flu virus out there.

You should get influenza vaccine before the start of the flu season as protection is greatest in the first 4 months after vaccination. Discuss the timing with your GP or rheumatologist.

If a new influenza virus is detected, for example during an influenza pandemic, people who have lowered immunity (such as rheumatology patients) should receive 2 does of inactivated influenza vaccine at least 4 weeks apart, regardless of previous influenza vaccine.

How about the "pneumonia" or pneumococcal vaccine?

Again, if you are taking medication such as prednisolone, MTX or a b/tsDMARD, which suppresses the immune system, you are more likely to get severe lung infection (pneumonia) from a bacteria called "Strep pneumonia". This can be prevented by the vaccine – which does not contain a live bacteria. You therefore cannot get pneumonia from it, nor do you need to stop rheumatology medication beforehand. Two different pneumococcal vaccines are available.

If you have never received the pneumococcal vaccine before, you should get the Prevenar-13 (13vPCV) vaccine first, and then, 2-12 months later, the Pneumovax-23 (23vPPV).

If you have received the pneumococcal vaccine (Pneumovax-23 or 23vPPV) before, we recommend the Prevenar-13 (13vPCV) vaccine 1 year after the Pneumovax-23 (23vPPV).

Travel vaccination

- There are lots of travel vaccines and which ones you need will depend on where you are going.
- Talk to your GP at least 6 months before travelling.
- If you are taking medication such as prednisone, MTX or a b/tsDMARD which suppresses the immune system, you may need to avoid "live" travel vaccines such as Yellow Fever.

- Some countries require the Yellow Fever vaccine to enter or leave. The strong recommendation is to avoid travelling to areas where Yellow Fever is common if on medication which lowers immunity. However, if you need to go, please discuss the risks of vaccination versus risk of the disease with your doctor.

What about the rotavirus vaccine for my baby?

Most b/tsDMARD medicines, other than certolizumab, taken during pregnancy and breastfeeding will cross the placenta and enter the baby's bloodstream. As a result, your baby's immune system may also be suppressed, so live vaccines for your baby should be avoided until they are weaned.

Rotavirus can cause severe diarrhoea in babies. The rotavirus vaccine is the only live vaccine routinely given to babies less than 12 months old. Recent updates confirm rotavirus vaccine can be given to babies of mothers who have continued TNFIs* during pregnancy and in the first 6 months of life. The likelihood of rotavirus infection is less in infants younger than 6-months old, so if the vaccine is missed, a "catch-up" dose is probably not needed. Most babies in Australia gets the rotavirus vaccine, so there's only a low chance your baby will be infected with rotavirus. If your baby does not have the rotavirus vaccine, you will need to discuss the implications (e.g. for child-care) with your GP and/or your Immunisation provider.
The other live vaccines (measles-mumps-rubella and varicella [chickenpox]) are given at 12 months of age or more.

*TNFI's include; adalimumab, certolizumab, etanercept, golimumab and infliximab

Useful websites

https://www.health.gov.au/initiatives-and-programs/national-immunisation-program
https://www.health.gov.au/health-topics/immunisation
https://immunisationhandbook.health.gov.au
https://www.health.gov.au/resources/publications/national-immunisation-program-pneumococcal-vaccination-schedule-from-1-july-2020-clinical-decision-tree-for-vaccination-providers

Useful references for your GP are available on the ARA website here and at the following urls:

https://rheumatology.org.au/Portals/2/Documents/Public/Professionals/Vaccination%20Information/220927%20Vaccinations%20in%20AIRD%20for%20GPs%20and%20AHPs.pdf?ver=2022-09-29-154716-643
https://rheumatology.org.au/Portals/2/Documents/Public/Professionals/Vaccination%20Information/230306%20Table%20of%20Vaccinations%20for%20patients%20with%20AIIRD%20FINAL.pdf?ver=2023-03-06-113455-413