



Australian Government

COVID-19 VACCINATION

COVID-19 vaccination decision guide for people with immunocompromise

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Version 7.1

What has changed:

- Bivalent COVID-19 vaccines are preferred over original (ancestral) vaccines for the primary course and booster doses in people aged 12 years and older
- Updated advice to remove vaccines which are no longer available in Australia; Moderna (Spikevax) original, and AstraZeneca (Vaxzevria) original

This guide is for immunisation providers and for people with a weakened immune system (known as immunocompromise), including people taking immune-weakening medicines, who are considering COVID-19 vaccination.

Primary COVID-19 vaccination is recommended for everyone aged 5 years and older, and for children aged 6 months to 5 years who have severe immunocompromise, disability, or complex and/or multiple health conditions which increase the risk of severe COVID-19.

To find out more about the available COVID-19 vaccines, visit the Department of Health website: www.health.gov.au/initiatives-and-programs/covid-19-vaccines. To find out more about who should be vaccinated, refer to the ATAGI Clinical Guidance for COVID-19 vaccine providers.

What is immunocompromise?

Being 'immunocompromised' means having a weakened immune system due to a medical condition or particular immunosuppressive medications. Many conditions can cause immunocompromise, including:

- cancer, especially blood cancer (leukaemia or lymphoma)
- treatments for cancer (e.g. chemotherapy, targeted therapies transplants or CAR-T cell therapy)
- immune deficiency syndromes
- HIV infection (if the CD4 count is low)

[For examples of medications that are considered immunosuppressive, refer to ATAGI recommendations on the use of a third primary dose of COVID-19 vaccine in individuals who are severely immunocompromised.](#)

Should I have a COVID-19 vaccine if I am immunocompromised?

Yes, vaccination against COVID-19 is important for people with immunocompromise.

Vaccination is likely to protect you from having severe or prolonged illness and needing to go to hospital due to COVID19.

For people aged 12 years and older, a bivalent vaccine is preferred for the primary course (initial doses) and for any booster doses. For people aged 6 months – 11 years, original (ancestral) vaccines are available for both primary and booster doses.

Is the COVID-19 vaccine safe for me if I am immunocompromised?

Yes, COVID-19 vaccines are safe and recommended for people who are immunocompromised. Pfizer (original or bivalent), Moderna (original or bivalent) and Novavax vaccines are not live vaccines. There is no reason to expect any higher risk of safety issues with Pfizer (original or bivalent), Moderna (original or bivalent), or Novavax vaccines in people with immunocompromise.

Will a COVID-19 vaccine be effective for me if I am immunocompromised?

People with significant immunocompromise can have reduced responses to vaccines, meaning they may not be as well protected as people whose immune system is normal. For this reason, most adults with significant immunocompromise are recommended to have an extra dose of COVID-19 vaccine in their primary course of COVID-19 vaccines (i.e. a 3-dose primary course). This is not a booster dose but is rather an extra dose within their primary schedule.

The one exception to this is children aged 6 months to 4 years who are vaccinated with the Pfizer vaccine. This population should only receive the standard 3-dose primary schedule, and do not require an extra dose in their primary course, even if they are immunocompromised.

Some studies have shown that people with immunocompromise do make antibodies after COVID-19 vaccination, but there may be less of a response than that seen in people without significant immunocompromise. These studies included people who have undergone organ transplants, certain cancers, and people who take significant doses of immune suppressing medication (refer to [ATAGI recommendations on the use of a third primary dose of COVID-19 vaccine in individuals who are severely immunocompromised](#)).

People with HIV infection with normal CD4 cell counts appear to have a similar immune response to COVID-19 vaccines as people without HIV infection.

We do not currently know how well the levels of antibodies reflect the effectiveness of vaccines. In larger population studies conducted earlier in the pandemic, vaccinated immunocompromised people were about 70-90% less likely to become ill from COVID-19 than unvaccinated people. This compares to approximately 84-94% in people without immunocompromise. These studies looked at vaccine effectiveness in people with all types of immunocompromise, and may not reflect vaccine effectiveness in specific immunocompromising conditions.

More information regarding COVID-19 vaccinations for specific populations of immunocompromised individuals can be found here:

www.health.gov.au/resources/publications/atagi-recommendations-on-the-use-of-a-third-primary-dose-of-covid-19-vaccine-in-individuals-who-are-severely-immunocompromised.

How many booster doses do I need if I am immunocompromised?

ATAGI made updated recommendations on boosters in February 2023, which replace previous advice.

People with severe immunocompromise are recommended to have a booster dose in line with the recommendations for the general population. There is no requirement for a specific number of booster doses.

ATAGI recommends a booster dose in 2023 for adults in the following groups, if their last COVID-19 vaccine dose or confirmed infection (whichever is the most recent) was 6 months ago or longer, and regardless of the number of prior doses received:

- all adults aged 65 years or older
- adults aged 18 to 64 years who have medical comorbidities that increase their risk of severe COVID-19, or disability with significant or complex health needs

A booster dose may be considered for children and adolescents aged 5 to 17 years who have medical comorbidities that increase their risk of severe COVID-19, or disability with significant or complex health needs. This should be based on an individual risk–benefit assessment with their immunisation provider.

For further information, see <https://www.health.gov.au/our-work/covid-19-vaccines/advice-for-providers/clinical-guidance/clinical-recommendations>

Chemotherapy

If you are having chemotherapy, discuss the best timing of vaccination with your treating doctor. Some types of chemotherapy can cause a fall in your body's immune (white) cells or platelets. There are no specific safety concerns with Pfizer (original or bivalent), Moderna (original or bivalent), or Novavax in people with low immune (white) cells but vaccines can cause fever, which may lead to extra investigations to look for other causes of the fever. People with low platelet counts may have increased bleeding at the injection site following vaccination.

Immune-weakening treatment

If you are taking an immunosuppressive medication, discuss the best timing of vaccination with your treating doctor.

Advice for providers: Timing of vaccination

- For most people with immunocompromise, COVID-19 vaccines can be given at any time.
- Active disease is not a contraindication to vaccination, though in those with severe illness, a short delay until the active disease is under control may be advisable to avoid incorrect attribution of vaccine-related adverse events to underlying acute illness and vice versa.
- As with any other vaccine, vaccination should be deferred in people who are febrile (fever of 38.5°C or higher).
- For people taking immunosuppressive therapies, the timing of vaccination should be discussed with their treating specialist, considering disease severity, characteristics of the immunosuppressive therapy, and patient preferences. In general, maintenance immunosuppression should not be withheld or deferred for vaccination, unless advised by the treating specialist.
- Deferring immunosuppressive therapy or deferring vaccination for a short period may be recommended in some circumstances, e.g. to allow for a better immune response to the vaccine or to reduce the risk of misattribution of adverse events from an immunosuppressive

therapy to the vaccine. Discuss the optimal timing of vaccination in people taking immunosuppressive therapy (particularly B-cell depleting therapies such as rituximab) with their treating specialist, to maximise the immune response to vaccination.

- For people taking immune checkpoint inhibitors, discuss the timing of vaccination with their treating specialist, to minimise the theoretical risk of immune-related adverse events being triggered by vaccination. Allow at least 3 days of spacing if possible and avoid vaccination on the same day as a regular immunomodulating infusion (e.g., immunoglobulin replacement therapy, immunosuppressant infusion), to avoid incorrect attribution of vaccine-related adverse events to the infusion treatment or vice versa.
- Avoid vaccination during anticipated periods of neutropenia, or during periods of confirmed severe neutropenia (ANC of less than $0.5 \times 10^9/L$). This is to avoid fever, which may result in additional investigations (and treatment) being instigated for other differential diagnoses (such as sepsis).
- Consider temporary deferral of vaccination or use additional precautions during periods of severe thrombocytopenia (e.g. platelet count of less than $50 \times 10^9/L$). After vaccination, the injection site should not be rubbed, and firm pressure should be applied for 5-10 minutes. If a haematoma develops, immobilise the area and apply an ice pack.
- For further information on the optimal timing of vaccination in people with immunocompromise, including recipients of solid organ or haematopoietic stem cell transplants, refer to: <https://immunisationhandbook.health.gov.au/>.

More information

For more information about COVID-19 and COVID-19 vaccines, refer to:

- ATAGI recommendations on the use of a 3rd primary dose of COVID-19 vaccine in individuals who are severely immunocompromised:
www.health.gov.au/resources/publications/atagi-recommendations-on-the-use-of-a-third-primary-dose-of-covid-19-vaccine-in-individuals-who-are-severely-immunocompromised
- Information about COVID-19 vaccines, including boosters:
<https://www.health.gov.au/our-work/covid-19-vaccines>
<https://www.health.gov.au/our-work/covid-19-vaccines/advice-for-providers/clinical-guidance/clinical-recommendations>