

COVID-19 vaccination advice for people living with HIV

For consumers

Pfizer BioNTech COVID-19 vaccine (Comirnaty) is highly effective at preventing severe disease and death from COVID-19. We recommend all people living with HIV (PHIV) be vaccinated and remain up to date with booster and additional doses. Although protection from infection with Omicron variants is reduced, the vaccine is still effective at reducing severe COVID-19 infection and deaths. Those who were first vaccinated when their CD4 count was less than 200 should have two additional primary doses. Preferably, a second dose is given 8 weeks after dose one, and a third dose given a further 8 weeks after the second.

Large population-based studies have demonstrated lower or similar incidence of SARS-CoV-2 infection among PHIV when compared to those without HIV in the general population. However, some studies show PHIV have a higher rate of severe or fatal COVID-19 than those without HIV. Low CD4 count, unsuppressed viral load and tuberculosis co-infection are associated with severe disease.

Although COVID-19 is now part of our daily lives, it remains widespread in NZ and continues to cause illness, hospitalisations and deaths. In 2023 nearly 1,000 people died of COVID-19 in New Zealand and many developed persisting symptoms following infection. Facing the virus having a dose of the vaccine in the previous 6 months reduces the risks of severe infection and complications.

Will the vaccine multiply in my body?

No, Comirnaty does not contain any virus. It is a messenger ribonucleic acid (mRNA) vaccine that contains small amounts of modified RNA contained inside a lipid bubble. It is safe for people with suppressed immune systems.

How does the vaccine work?

All the COVID-19 vaccines stimulate our bodies to make antibodies against the spike protein found on the surface of the SARS-CoV-2 virus. The virus' spike protein allows it to attach to and infect cells in our respiratory tract, and if unchecked, to spread elsewhere in our bodies.

With antibodies covering the spikes, the virus cannot attach. The antibodies also help to direct the immune system to kill the virus. The mRNA in Comirnaty provides the instruction code for our cells to manufacture copies of this spike protein. After a few days the mRNA degrades.

The Comirnaty Omicron 30mcg JN.1 vaccine, which replaced the earlier Comirnaty vaccines in early 2025, contains a slightly different mRNA code to improve the match between the current variants and thus improve protection.

Is Comirnaty (Pfizer BioNTech vaccine) safe and effective for people living with HIV?

The vaccine has been through rigorous testing to ensure safety and efficacy and has now been given to many millions of people with ongoing monitoring.

A reduced immune response is seen in those with CD4 counts <200 and thus additional primary doses are recommended. Immune responses in those with CD4 counts >500 is comparable to HIV-negative people.

Although protection against reinfection with Omicron variants now wanes within weeks of additional doses, protection remains sustained against severe disease. It is not yet certain how long the protection from COVID-19 vaccines and infection lasts. For most, it appears that protection against severe disease extends beyond 6 months as immune memory develops. The immune function of some people, particularly older age groups and those with weakened immune systems is not as robust as it is in younger healthy people. This means that any protection they gain from the vaccine is shorter-lived, increasing the risk of severe COVID-19 as their immunity wanes. Additional doses help to bolster this immunity and have been shown to be highly protective, at least for several months, against COVID-19-related hospitalisation and death.

What side effects may be expected?

The overwhelming majority of side effects are injection-site reactions (a sore arm, for example) and general symptoms such as 'flu-like' illness, headache, chills, tiredness, nausea, fever, dizziness, weakness or aching muscles. Generally, these happen within a day or two after the vaccination and are not associated with more serious or lasting illness. These types of reactions reflect the normal immune response triggered by the body to the vaccines. They resolve within a day or two. Paracetamol should not be taken before having the vaccine but can be used after it if required to alleviate symptoms. Occasionally, people can develop swollen lymph nodes in the armpit or neck near the vaccinated arm, this can last for a couple of weeks.

In addition, as with any vaccine, there is a risk of allergic reactions shortly after the vaccinations. Because of this, recipients should wait at a vaccination centre, as instructed, after having their vaccine. Those with previous allergic reactions or anaphylaxis should tell their vaccinator before going ahead.

Inflammation of the heart (myocarditis), or the lining around the heart (pericarditis), can occur after vaccination. After the second dose, in males aged 12–30 years, the risk of myocarditis has been reported internationally to be from 1 to 13 per 100,000 vaccine doses. The risk following additional doses is lower than after dose two.

The risk of pericarditis is highest in people aged 18–39 and the risk is similar in males and females. Rates of pericarditis in Australia following Comirnaty are 4.4 per 100,000 for those aged 18–29 and 4.5 per 100,000 for those aged 30–39 years.

Vaccine recipients and their health care providers are encouraged to report possible side effects. People with concerning symptoms including chest pain; chest heaviness, discomfort or tightness; shortness of breath or breathing difficulty; feeling lightheaded, faint or dizzy; heart palpitations; racing or fluttering heart; or a feeling of skipped beats, should see a health care provider.

The side effects following the Comirnaty JN.1 vaccine are the same as after previous Comirnaty vaccines. Among people in Australia who had a JN.1 COVID-19 vaccine, 3% were unable to do their usual activities in the next day or so, and local reactions (pain, redness, itching or swelling at the injection site) are the most common reported symptom.

Will the vaccines interfere with HIV medications?

No, HIV medications do not alter the effectiveness of the COVID-19 vaccines and the vaccines do not affect how well HIV medications work either.

Should I get tested to check if the vaccine worked?

No. It is not necessary nor recommended.

Can I have my influenza vaccine at the same time as my COVID-19 vaccine?

Yes. Any routine vaccine can be given at the same time.

Will I need a third primary dose and additional doses?

People living with HIV who were first vaccinated when their CD4 count was less than 200 should have 2 additional primary doses. Preferably, a second dose is given 8 weeks after dose one, and a third dose given at least a further 8 weeks after the second dose. Everyone aged over 18 years is recommended to have a further dose, given at least 6 months after they completed their primary series.

People living with HIV are recommended to receive additional doses at least annually - at least 6 months after their previous dose or most recent COVID-19 infection. Those aged 65 years and over, Māori and Pacific peoples aged 50 years and over, those with CD4 counts below 200 when vaccinated, and those with additional medical conditions are recommended to have additional doses 6-monthly.

Call 0800 IMMUNE (0800 466 863) for clinical advice

References

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