The Immunisation Advisory Centre

COVID-19 vaccination advice for People Living with HIV

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 be vaccinated. Those who were vaccinated when their CD4 count was less than 200 can have a third primary dose at least 8 weeks after their second dose.

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-CoV2 virus. The virus's 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 spikes, the virus cannot attach. The antibodies also help to direct the immune system to kill the virus. The mRNA in the Comirnaty contains provides the instruction code for our cells to manufacture copies of this spike protein. After a few days the mRNA degrades.

How effective is the vaccine?

The vaccine is very effective at reducing severe COVID-19 illness and death. This has been seen both in the clinical trials and in many countries where it has been widely used. Recent UK data show effectiveness of 75–85% against infections, 80–90% effectiveness against symptoms and 95–99% effectiveness at preventing hospitalisation. The vaccine is proving to be highly effective in New Zealand too: COVID-19 cases are four times less likely to be hospitalised if vaccinated than unvaccinated cases (as of 06 December 2021).

See Ministry of Health website for case demographics available at https://tinyurl.com/COVID-19-cases-NZ

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. People with HIV were included in clinical trials though efficacy and safety data specific to this group are not yet available. With some vaccines, people living with HIV can produce a weaker response however data from small series of people living with HIV on treatment shows antibody responses and cellular responses similar to those observed in HIV negative people. Those with CD4 cell count over 350 cells/ml and a suppressed viral load can reasonably expect to have an appropriate response to the vaccine based on what we know about the responses of people living with HIV to other vaccines.

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 are more likely after the second dose and tend to 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 people 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.

For more information about what to expect after the vaccination see https://tinyurl.com/IMAC-after-your-immunisation.

Inflammation of the heart (myocarditis) can occur after the vaccine and is more likely in males younger than 30 and after the second dose. It is generally mild. In Israel the risk of myocarditis has been three additional cases per 100,000 doses of vaccine given compared with 11 cases of myocarditis per 100,000 people with COVID infection.

Vaccine recipients and their health care providers are encouraged to report possible side effects. People with concerning symptoms should see a health care provider.

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.

Am I protected after one dose of the vaccine?

Two doses given at least 21 days apart are recommended. There is some protection provided by the first dose, but people living with HIV may have a lower response. Full protection does not develop until more than one week after the second dose.

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 one?

Yes. Any routine vaccine can be given at the same time. The only exception is the shingles vaccine (Zostavax) for which you need to allow seven days between vaccinations.

Will I need a third primary dose and a booster dose?

People living with HIV who had their first two doses with a CD4 count below 200 cells/ml should have a third primary dose at least 8 weeks after their second dose. To access this dose, they will need to get a prescription from their doctor and sign a consent form.

Everyone aged over 18 years is recommended to have a booster dose, given at least 6 months after they completed their primary series (after second primary, or third primary dose if eligible).

Will the vaccine make me test positive on COVID-19 tests?

No, the test for COVID-19 detects particles of the virus. The vaccine stimulates your immune system to make antibodies against copies of the spike protein. The contents of the vaccine, especially the mRNA, are very short-lived, do not reach your nose and cannot be detected by the COVID-19 tests.

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References

- Lopez Bernal J, Andrews N, Gower C, et al. Effectiveness of Covid-19 Vaccines against the B.1.617.2 (Delta) Variant. N Engl J Med. 2021;385(7):585-94. doi: 10.1056/NEJMoa2108891
- Jedicke N, Stankov MV, Cossmann A, et al. Humoral immune response following prime and boost BNT162b2 vaccination in people living with HIV on antiretroviral therapy. HIV Med. 2021. doi: 10.1111/hiv.13202
- Woldemeskel BA, Karaba AH, Garliss CC, et al. The BNT162b2 mRNA Vaccine Elicits Robust Humoral and Cellular Immune Responses in People Living with HIV. Clin Infect Dis. 2021. doi: 10.1093/cid/ciab648
- Tang P, Hasan MR, Chemaitelly H, et al. BNT162b2 and mRNA-1273 COVID-19 vaccine effectiveness against the SARS-CoV-2 Delta variant in Qatar. Nat Med. 2021. doi: 10.1038/s41591-021-01583-4
- Tuan JJ, Zapata H, Critch-Gilfillan T, et al. Qualitative assessment of anti-SARS-CoV-2 spike protein immunogenicity (QUASI) after COVID-19 vaccination in older people living with HIV. HIV Med. 2021. doi: 10.1111/hiv.13188