Information about COVID-19 AstraZeneca and Pfizer vaccines

Information for COVID-19 vaccine providers

5 March 2021

OFFICIAL

Contents

COVID-19 vaccines

Millions of people around the world have already been vaccinated against COVID-19. Vaccinations and approvals in place in other countries include:

- **AstraZeneca vaccine** in the UK, India, Argentina, Dominican Republic, El Salvador, Mexico and Morocco
- **Pfizer vaccine** in the UK, Bahrain, Canada, Mexico, the USA, Singapore, Chile, Oman, Saudi Arabia and European Union
- **Gamaleya Institute vaccine** in Russia
- **Sinopharms vaccine** in Bahrain and the United Arab Emirates
- **Sinovac/BioNTech vaccine** and **CanSino vaccine** in China.

The Australian Government is responsible for the delivery of vaccines to states and territories. The Victorian Government is working closely with the Australian Government to ensure we implement the vaccination program rapidly, safely, and equitably using evidence-based research.

Approved COVID-19 vaccines

The Therapeutic Goods Administration (TGA) has approved two vaccines for use in Australia:

- Pfizer/BioNTech vaccine <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/learn-about-covid-19-vaccines/about-the-pfizerbiontech-covid-19-vaccine>
- Oxford/Astrazeneca vaccine <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/learn-about-covid-19-vaccines/about-the-oxfordastrazeneca-covid-19-vaccine>.

This means these vaccines have met the TGA's rigorous standards <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/learn-about-covid-19-vaccines/how-covid-19-vaccines-are-tested-and-approved> for safety, quality and efficacy. Both vaccines will be free to all Australian residents.

Safety and efficacy of COVID-19 vaccines

Providing access to safe and effective COVID-19 vaccines for everyone in Australia is a priority for the Australian Government. The TGA assesses all COVID-19 vaccines before they can be used in Australia.

The World Health Organization and drug regulators consider a vaccine acceptable if it is found to be at least 50% effective. The effectiveness rates of the COVID-19 vaccines approved for use in Australia are much higher than 50%.

The TGA will only register a vaccine if its benefits are much greater than its risks. This means every vaccine available in Australia has been proven to protect against COVID-19.

Clinical trials for the Pfizer and AstraZeneca vaccines have shown that these two vaccines are effective in preventing:

- development of COVID-19 symptoms
- protecting against severe disease.

These trials involve tens of thousands of participants worldwide.

Both the Australian approved Pfizer and AstraZeneca vaccines have been shown to be highly effective at preventing serious illness and hospitalisation from COVID-19.

More information about their ability to stop the virus from spreading is being collected from countries already using them, such as the US, Israel, Canada and the United Kingdom, and early evidence is showing these vaccines can reduce transmission. Recent population data from the United Kingdom show both AstraZeneca and Pfizer vaccines are highly effective in preventing hospitalisation with COVID-19.

In summary – both the AstraZeneca and Pfizer vaccines are safe, both are very effective at preventing illness and the need for hospitalisation from COVID-19, and both are showing evidence of being able to prevent transmission of COVID-19.

These vaccines will be very important for protecting Australia from future impacts of COVID-19 and help keep the community healthy and keep Victoria open.

How AstraZeneca and Pfizer COVID-19 vaccines work

Both AstraZeneca and Pfizer vaccines help train the body in fighting against COVID-19 infection. AstraZeneca and Pfizer vaccines deliver blueprint (genetic code) instructions to make a COVID-19 spike protein – the difference is how the genetic code is delivered:

- AstraZeneca uses an inactivated viral vector
- Pfizer uses an oily bubble to package

Research is showing the currently available vaccines induce antibodies that respond to a variety of variants of COVID-19. New information is becoming available all the time and the Australian Government will provide more information as new evidence arises.

Pfizer vaccine

- Two doses required, spaced by at least 3 weeks
- mRNA vaccine
- Current evidence indicates reduces risk of symptomatic infection by over 90% reduction

- Needs to be frozen at -70 °C for storage and transport, which introduces logistical difficulties. Once thawed it can be stored in a refrigerator for 3-5 days.
- Pfizer vaccine currently available for priority groups in phase 1a of the Australian Government's vaccine rollout

AstraZeneca vaccine

- Two doses required, spaced by at least 4 weeks – but preferably spaced by 12 weeks to maximise efficacy.
- Viral vector vaccine
- Current evidence indicates when the two doses are given 12 weeks apart, it reduces risk of symptomatic infection by over 80%.
- Unlike the Pfizer vaccine, the AstraZeneca vaccine is refrigerated at conventional cold-chain temperatures and will be available to the Victorian community through a far greater range of vaccination sites.
- One UK study shows that the AstraZeneca vaccine also reduced transmission by 67% after a single dose.
- AstraZeneca is expected to be available to priority groups in phase1a of the Australian Government's vaccine rollout in late March.
- The first doses of AstraZeneca will be imported but ultimately, this vaccine will be produced in Australia by local company CSL <https://www.csl.com/news/2021/20210212-local-manufacturing-of-covid-19-vaccine-reaches-final-stages>.

Both COVID-19 vaccines are safe for people with immunodeficiencies

Both the Pfizer and AstraZeneca vaccines are safe for people with immunodeficiencies and autoimmune conditions.

Some people with immune deficiencies, or people who are on medicines that affect the immune system, may not have as effective a response to the vaccine in terms of protecting them against COVID-19.

COVID-19 vaccines cannot give people COVID-19

COVID-19 vaccines do not contain the COVID-19 virus. It is impossible to get COVID-19 from these vaccines.

Getting vaccinated

Australia's COVID-19 vaccines will become available in phases. The prioritisation process for access to COVID-19 vaccines is led by the Australian Government. Priority groups have been identified using the best public health, medical and epidemiological evidence from Australia and internationally. This ensures those at greatest risk are vaccinated first.

The priority groups do not determine which COVID-19 vaccine people will receive. Many individuals in phase 1a will receive AstraZeneca vaccine, as will most Australians in the coming months. All Australians will be able to receive a free, safe and effective vaccine.

Use the COVID-19 vaccine eligibility checker <https://covid-vaccine.healthdirect.gov.au/eligibility> to see in which phase you will be eligible to receive a COVID-19 vaccine. You may need to provide evidence of eligibility to your vaccination provider before you can receive a COVID-19 vaccine. Learn more about receiving a vaccine on the Australian Government's website < https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/getting-vaccinated-for-covid-19/when-will-i-get-a-covid-19-vaccine>.

Preparing for a COVID-19 vaccine

There are some things people can do now, while waiting to be vaccinated. Learn more from the Australian Government website on what to do to be ready for a COVID-19 vaccine.

Vaccine testing

Vaccine testing, like testing for other medicines, begins in the laboratory, followed by animal studies and finally human clinical trials. For COVID-19 vaccines, these phases have been run at the same time so that proven vaccines can be made available more quickly.

The COVID-19 vaccines approved for use in Australia (currently Pfizer and AstraZeneca vaccines) have been tested in clinical trials involving tens of thousands of volunteers and have been used in many millions of people following approval overseas. They are having a very big impact on controlling COVID-19 in those countries where vaccination levels are high.

In Australia, medicines and vaccines must then be tested by the TGA. The TGA looks at the effectiveness and safety of medicines and approves or disproves them for use.

Monitoring by the TGA, other vaccine safety monitoring systems, and researchers continues after the vaccine has been registered and vaccination of the population has commenced, including by reviewing information about adverse reactions. This information is reported to the TGA by vaccination sites, health care providers and health services.

To receive this document in another format, phone 1300 651 160, using the National Relay Service 13 36 77 if required, or email COVIDvaccination@dhhs.vic.gov.au <COVIDvaccination@dhhs.vic.gov.au>.

Authorised and published by the Victorian Government, 1 Treasury Place, Melbourne.