

# COVID-19 Vaccines in Pregnancy and Breastfeeding

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MotherSafe - Royal Hospital for Women

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*Information in this leaflet is general in nature and should not take the place of advice from your healthcare provider. With every pregnancy there is a 3 to 5% risk of having a baby with a birth defect. Breastmilk provides optimum nutrition for babies and conveys many additional health benefits to mother and baby. Information on COVID-19 vaccines is rapidly changing. For the most up to date information please call MotherSafe.*

## **What is COVID-19?**

COVID-19 is a respiratory illness caused by a coronavirus (called SARS-CoV-2).<sup>1</sup> This virus is spread by respiratory droplets from our mouths and noses, mostly by close person-to-person contact.<sup>1</sup> When an infected person coughs, talks, breathes or sneezes, the virus can easily spread to others who are close by.<sup>1</sup>

## **Issues for pregnancy**

There has been a large increase in our knowledge about COVID-19 and pregnancy.<sup>1</sup> It is expected that the majority of vaccinated pregnant women infected with COVID-19 will experience mild or moderate symptoms and most of these women are expected to make a full recovery.<sup>2</sup> However studies of COVID-19 infection have shown that pregnant women are at a significantly increased risk of severe illness and hospital admission (including ICU) compared to non-pregnant people.<sup>1,2,3</sup> This risk is more so for pregnant women in the third trimester, those with pre-existing medical problems (such as diabetes, high blood pressure) or who are overweight or older than 35 years of age.<sup>3</sup> Also, pregnant women with COVID-19 may be at an increased risk of other poor outcomes related to pregnancy such as preterm birth, compared to pregnant women without COVID-19.<sup>1,2,3</sup>

## **What are COVID-19 vaccines?**

COVID-19 vaccines work by switching on your body's defences against the virus that causes COVID-19.<sup>1</sup> These vaccines do not contain live virus that could cause COVID-19.<sup>3</sup> The vaccines currently approved in Australia are Comirnaty (Pfizer), Spikevax (Moderna), Vaxrexia (Astra-Zeneca) and Nuvaxovid (Novavax).<sup>4,5</sup>

All the vaccines require two doses initially (called the primary course).<sup>3,4</sup> The Comirnaty (Pfizer) vaccine doses are given between 3 to 6 weeks apart and the Spikevax (Moderna) vaccine doses are given between 4 to 6 weeks apart.<sup>3</sup> The Vaxrexia (Astra-Zeneca) vaccine doses are given with a 4 to 12 weeks separation.<sup>6</sup> Nuvaxovid (Novavax) is given in 2 doses, a minimum of 3 weeks apart.<sup>5</sup> It is important to follow official recommendations as an incomplete course of vaccination will only give you limited protection against COVID-19.<sup>1,3</sup> Booster doses are also recommended after the primary course in line with general recommendations.<sup>3</sup>

COVID-19 vaccines help to protect people who are vaccinated from getting sick or severely ill with COVID-19.<sup>1</sup> However, it is still not known how long the vaccines will protect people from the virus or how much they will stop a person from spreading the virus if they have it.<sup>1</sup> So it is important to continue to help protect yourself from infection by wearing a face covering, avoiding close contact with those that are sick, avoiding crowds and washing hands often.<sup>1</sup>

## **Planning a pregnancy**

Women who are planning pregnancy or undergoing fertility treatment may receive either Comirnaty (Pfizer), Spikevax (Moderna), Vaxrexia (Astra-Zeneca) or Nuvaxovid (Novavax) vaccines and do not need to delay vaccination or avoid pregnancy before or after vaccination.<sup>3,4,5,7</sup> There is no evidence that COVID-19 vaccination will affect your fertility or the outcomes of your treatment cycle or your reproductive health.<sup>7</sup> Comirnaty (Pfizer) and Spikevax (Moderna) are mRNA vaccines and are preferred as Vaxrexia (Astra-Zeneca) has been associated with rare cases of a blood clotting condition which appears to be more common in younger adults, including women of childbearing age.<sup>3,4</sup> However, Vaxrexia (Astra-Zeneca) is not anticipated to increase risks to baby and may be

used when planning if it is the vaccination of choice.<sup>4</sup> Nuvaxovid (Novavax) has recently been approved for use and can be administered in line with current guidelines.<sup>5</sup>

If you become pregnant after your first dose, it is recommended that you have the second dose while pregnant.<sup>3,4</sup> Pregnant women who have already received a first dose of Vaxrexia (Astra Zeneca) or Nuvaxovid (Novavax) vaccine may receive either the Comirnaty (Pfizer), Spikevax (Moderna), Vaxrexia (Astra-Zeneca) or Nuvaxovid (Novavax) vaccine for their second dose.<sup>3,4,5</sup>

### **If you are pregnant**

Pregnant women are a priority group for COVID-19 vaccination.<sup>3</sup> The current recommendation for pregnant women is that they should be routinely offered the Comirnaty (Pfizer) or Spikevax (Moderna) vaccine at any stage of pregnancy if they are unvaccinated.<sup>3,4</sup> This is because research has shown that Comirnaty (Pfizer) and Spikevax (Moderna) are considered safe for pregnant women at any stage of pregnancy and Vaxrexia (Astra-Zeneca) has been associated with rare cases of a blood clotting condition which appears to be more common in younger adults, including women of childbearing age.<sup>3,4</sup> However, Vaxrexia (Astra-Zeneca) is not anticipated to increase risks to baby and may be used to complete a dosing schedule when pregnant if it is the vaccination of choice.<sup>4</sup> Unlike Comirnaty (Pfizer) and Spikevax (Moderna), there is no data about the safety of Nuvovaxid (Novavax) in pregnancy<sup>5</sup>. However, Nuvovaxid (Novavax) is not anticipated to increase risks to baby since this vaccine, similar to other COVID-19 vaccines, is not a live vaccine.<sup>5</sup>

Vaccination is the best way to reduce the chance of severe illness from COVID-19 in pregnant women.<sup>3</sup> It is unknown if there is an optimal time during pregnancy to have a Comirnaty (Pfizer) vaccine or Spikevax (Moderna) vaccine, either for the benefit of the mother or to protect her newborn, therefore it is recommended to have a Comirnaty (Pfizer) or Spikevax (Moderna) vaccine as soon as you are offered one.<sup>3,4</sup> To ensure adequate protection, pregnant women are recommended to complete the routine schedule of Comirnaty (Pfizer) or Spikevax (Moderna).<sup>3,4</sup>

This recommendation has been changed recently because world-wide information has now been collected and reports have shown that mRNA COVID-19 vaccines, such as Comirnaty (Pfizer) and Spikevax (Moderna) are safe to use in pregnant women.<sup>3,4</sup> There has not yet been as much follow up for the Vaxrexia (Astra-Zeneca) vaccine or Nuvovaxid (Novavax) vaccine (although they are not anticipated to be harmful to the unborn baby).<sup>3,5</sup>

Research has also shown that the antibodies produced by vaccination cross the placenta and may provide some protection to newborn infants.<sup>3</sup>

**Pregnant women are advised to have their booster vaccine when they are eligible to receive it, in line with general recommendations.<sup>8</sup>**

### **COVID-19 vaccine side effects**

Common side effects reported following COVID-19 vaccination include soreness at the injection site, headache, muscle pain, fever, chills and tiredness.<sup>3</sup> If you experience these symptoms, you can take paracetamol.<sup>3</sup> It is not suggested that you need to take paracetamol before having a COVID-19 vaccine.<sup>3</sup>

### **COVID-19 vaccine timing in relation to other vaccines**

An interval of at least seven days between a dose of a COVID-19 vaccine and any other vaccine is suggested.<sup>3</sup>

This may affect the timing of the two vaccines usually recommended during pregnancy:

- Influenza vaccine which may be given at any time during pregnancy
- Whooping cough vaccine which is usually given between 20 and 32 weeks of pregnancy<sup>3</sup>

However this time interval may be shortened (including same day administration) in special circumstances, such as a tetanus prone wound or outbreak of influenza or COVID-19.<sup>3</sup> You can talk to your immunisation provider about making a schedule for each vaccine dose.<sup>3</sup>

### **Breastfeeding**

There is no evidence that women who are breastfeeding while sick with COVID-19 have an increased risk of severe illness compared to women who are not breastfeeding.<sup>1,3</sup> The virus that causes COVID-19 is unlikely to pass through breastmilk and the benefits of breastfeeding are greater than the risk of passing COVID-19 through the breastmilk.<sup>2</sup> Women who are breastfeeding while sick with COVID-19 can help prevent the virus passing to

their babies by washing their hands frequently and wearing a mask while breastfeeding.<sup>2</sup>

If you are breastfeeding, vaccination with Comirnaty (Pfizer), Spikevax (Moderna), Vaxrexia (Astra-Zeneca) or Nuvovaxid (Novavax) is recommended if you are not already vaccinated due to the benefits of preventing COVID-19 infection in settings of community risk.<sup>4</sup> There is no evidence that any COVID-19 vaccine is harmful to the breastfed baby, nor are there any expected concerns about their safety specific to breastfeeding women or their babies.<sup>1,3</sup> This is because they contain no live virus and the ingredients of the COVID-19 vaccine are not expected to pass into the breast milk.<sup>4</sup> If they did, they would be quickly destroyed in the baby's gut.<sup>3</sup> Therefore it is extremely unlikely to have any effect on your baby.<sup>3</sup> In addition, research has shown that antibodies made by a mother's body after having COVID-19 vaccine pass to the breastfed infant via breastmilk.<sup>3,5</sup>

You do not need to stop breastfeeding before or after vaccination.<sup>4,5</sup>

Vaxrexia (Astra-Zeneca) has been associated with rare cases of a blood clotting condition which appears to be more common in younger adults, including women of childbearing age. As a result, Comirnaty (Pfizer) or Spikevax (Moderna) are preferred.<sup>3,4</sup> There is little safety data for Nuvovaxid (Novavax) while breastfeeding but it is not a live vaccine and is considered safe.<sup>5</sup>

## References

1. Centers for Disease Control and Prevention. COVID-19. Available from <https://www.cdc.gov/coronavirus/2019-nCoV/index.html> Accessed December 2021
2. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists ((RANZCOG). Coronavirus (COVID-19) - A message for pregnant women and their families from the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG). Updated 24 August 2021. Available from <https://ranzcof.edu.au/statements-guidelines/covid-19-statement/information-for-pregnant-women> Accessed December 2021
3. Australian Government Department of Health. COVID-19 vaccination decision guide for women who are pregnant, breastfeeding or planning pregnancy. 20 December 2021; Version 7.2. Available from <https://www.health.gov.au/resources/publications/covid-19-vaccination-shared-decision-making-guide-for-women-who-are-pregnant-breastfeeding-or-planning-pregnancy> Accessed February 2022
4. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists ((RANZCOG). COVID-19 Vaccination in Pregnant and Breastfeeding Women and those planning pregnancy. Updated 18 August 2021. Available from <https://ranzcof.edu.au/statements-guidelines/covid-19-statement/covid-19-vaccination-information> Accessed December 2021
5. Australian Government Department of Health. ATAGI statement on the use of Novavax COVID-19 vaccine (Nuvaxovid). 24 January 2022. Available from <https://www.health.gov.au/news/atagi-statement-on-the-use-of-novavax-covid-19-vaccine-nuvaxovid> Accessed February 2021
6. Australian Government Department of Health. Vaxzevria (AstraZeneca). November 2, 2021. Available from <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/approved-vaccines/astrazeneca> Accessed December 2021
7. Australian & New Zealand Society for Reproductive Endocrinology and Infertility. Advice for COVID Vaccine and Fertility Treatments. 12 February, 2021. Available from: <https://anzsrei.com/covid-vaccine-and-fertility/> Accessed December 2021
8. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists ((RANZCOG). RANZCOG reiterates advice on COVID-19 vaccination. 08 December 2021. Available from <https://ranzcof.edu.au/news/ranzcof-reiterates-advice-on-covid-19-vaccination> Accessed December 2021

## Other resources

The Organization of Teratology Information Specialists / MotherToBaby (OTIS/MTB). COVID-19 Vaccines. December 2021. Available at <https://mothertobaby.org/fact-sheets/covid-19-vaccines/>



## NSW Medications in Pregnancy & Breastfeeding Service

For more information call MotherSafe: NSW Medications in Pregnancy and Breastfeeding Service on 9382 6539 (Sydney Metropolitan Area) or 1800 647 848 (Non-Metropolitan Area) Monday -Friday 9am-5pm (excluding public holidays)