

# COVID-19 Vaccines in Pregnancy and Breastfeeding

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 health care provider. With every pregnancy there is a 3 to 5% risk of having a baby with a birth defect.*

*Breast milk 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 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) and Vaxrexia (Astra-Zeneca).<sup>4</sup>

Comirnaty (Pfizer) and Spikevax (Moderna) are mRNA vaccines and are the preferred vaccines for women who are pregnant.<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 when planning, to complete a dosing schedule when pregnant or while breastfeeding (see Planning a pregnancy and Breastfeeding sections).<sup>4</sup>

All the vaccines require two doses to provide good protection against COVID-19, including against the Delta strain.<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>5</sup> If you have just the one dose of vaccine this will only give you limited protection against COVID-19 so it is important that you have both doses.<sup>1,3</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) or Vaxrexia (Astra-Zeneca) vaccines and do not need to delay vaccination or avoid pregnancy before or after vaccination.<sup>3,4,6</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>6</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) vaccine may receive either the Comirnaty (Pfizer), Spikevax (Moderna) or Vaxrexia (Astra-Zeneca) vaccine for their second dose.<sup>3,4</sup>

### **If you are pregnant**

Pregnant women are a priority group for COVID-19 vaccination. 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.<sup>3,4</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 (although it is not anticipated to be harmful to the unborn baby).<sup>3</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>

### **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 applies to both doses of the COVID-19 vaccine.<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 the virus 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) or Vaxrexia (Astra-Zeneca) is recommended; you do not need to stop breastfeeding before or after vaccination.<sup>4,5</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> Therefore Comirnaty (Pfizer), Spikevax (Moderna) or Vaxrexia (Astra-Zeneca) vaccine may be given while breastfeeding and are recommended due to the benefits of preventing COVID infection in settings of community risk.<sup>4</sup>

### References

1. Centers for Disease Control and Prevention. 2020. Coronavirus (COVID-19). Available at URL: <https://www.cdc.gov/coronavirus/2019-nCoV/index.html> Accessed August 18 2021
2. Coronavirus (COVID-19)- A message for pregnant women and their families from the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG), available at <https://ranzcof.edu.au/statements-guidelines/covid-19-statement/information-for-pregnant-women> Accessed August 18 2021
3. Australian Government Department of Health. COVID-19 vaccination decision guide for women who are pregnant, breastfeeding or planning pregnancy. 15 September 2021; Version 6. 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 September 30 2021
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 August 19 2021
5. Australian Government Department of Health. About the Astra-Zeneca COVID-19 vaccine. Last updated: 14 July 2021. Available from: <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/learn-about-covid-19-vaccines/about-the-astrazeneca-covid-19-vaccine> Accessed 17th August 2021.
6. 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 30<sup>th</sup> September 2021

### Other resources

The Organization of Teratology Information Specialists / MotherToBaby (OTIS/MTB). **COVID-19 Vaccines**. August 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)