I am pregnant
Should I get a COVID-19 vaccine or COVID-19 booster vaccine?

UPDATED DEC 2021

The best way to protect you and your baby from COVID-19 is to get the vaccine

COVID-19 vaccines are recommended in pregnancy.
You can get the COVID-19 vaccine* at any stage in pregnancy.

Pregnant women with COVID-19 are at a significantly higher risk of adverse maternal and neonatal outcomes. Vaccination is the best way to protect mother and baby from serious harm related to COVID-19.

There is now significant experience with the use of COVID-19 vaccines in pregnancy and no safety concerns have been raised. Unvaccinated pregnant women are strongly encouraged to get the COVID-19 vaccine. Pregnant women can get the COVID-19 booster vaccine at any stage of pregnancy when offered to them.

What are my options?

Get the mRNA COVID-19 vaccine* when you are pregnant

or

Do not get the COVID-19 vaccine* when you are pregnant

Summary

- If you are pregnant it is strongly recommended that you get the COVID-19 vaccine.
- Pregnant women with COVID-19 are at significantly higher risk of severe illness compared with non-pregnant women.
- COVID-19 infection during pregnancy may have implications for the health of the mother and her baby.
- Vaccination is currently the most effective way to reduce the risks associated with COVID-19.
- COVID-19 vaccines have been given to hundreds of thousands of women worldwide. Current safety data on the use of mRNA COVID-19 vaccines in pregnancy is reassuring and no safety concerns have been raised.
- International experts have advised the benefit of getting the COVID-19 vaccine in pregnancy is currently greater than the known risk of the vaccine.
- If you have not received a COVID-19 vaccine before, it is recommended to get two doses of mRNA vaccine 21-28 days apart. You can get these vaccines at any stage of pregnancy.
- Pregnant women are now being offered mRNA COVID-19 booster vaccines to reduce breakthrough infections. You can get the booster at least three months after completing your primary vaccination course. You can get a COVID-19 booster vaccine at any stage of pregnancy.
- There is no evidence to suggest that COVID-19 vaccines will affect your fertility. If you are trying to become pregnant, you should get the COVID-19 vaccine. You do not need to avoid pregnancy after vaccination.
- It is your choice whether or not you get a COVID-19 vaccine or COVID-19 booster vaccine during pregnancy. You may wish to discuss the benefits and risks of having the vaccine with your doctor, midwife or pharmacist.

* COVID-19 vaccine or COVID-19 booster vaccine (when offered)

Are you getting the COVID-19 booster vaccine in pregnancy?

Register now to take part in the European Medicines Agency (EMA) COVID-19 Vaccine Monitoring study and contribute information on the safety of COVID-19 vaccines in pregnancy

https://www.COVIDVaccineMonitor.eu/ie-booster

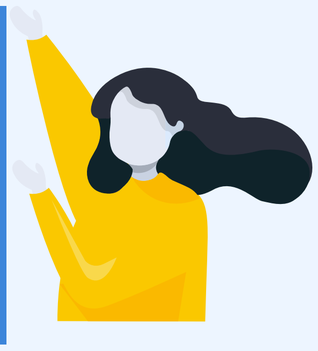
Irish Medicines in Pregnancy Service
ROTUNDA HOSPITAL DUBLIN

National Women & Infants Health Programme

National Immunisation Advisory Committee (NIAC)

INSTITUTE OF OBSTETRICIANS & GYNAECOLOGISTS

I am pregnant
Should I get a COVID-19 vaccine or COVID-19 booster vaccine?



What are the risks to a pregnant woman and her infant from COVID-19 infection?

- Pregnant women with COVID-19 are at significantly higher risk of severe illness compared with non-pregnant women. This is especially true for women in the third trimester.
- If you get COVID-19 when you are pregnant **you** may be more likely to:
  - be admitted to hospital, to need care in an intensive care unit (ICU), and to die from COVID-19
  - have pregnancy complications, such as preterm labour, stillbirth, postpartum haemorrhage or high blood pressure.
- If you get COVID-19 when you are pregnant **your baby** may be more likely to:
  - be born prematurely
  - need admission to a neonatal intensive care unit (NICU)
  - be affected by the life-saving care provided to you or medications administered to you if admitted to ICU.

You might be at increased risk of getting COVID-19 if:

- ☐ Your community has a high or increasing rate of COVID-19 infections
- ☐ You or someone in your household is a health or social care worker or works in a care home
- ☐ You have frequent contact with people outside your home or if working from home is not an option for you
- ☐ You and the people you live with are not able to adhere to public health advice on social distancing, hand hygiene and wearing a face mask
- ☐ You live in a crowded household
- ☐ Members of your household are not vaccinated
- ☐ You are of Black or Asian ethnicity, or from another minority ethnicity background

If you get COVID-19 in pregnancy, you are at increased risk of getting severely unwell, especially if you get COVID-19 in the third trimester

You might also be at increased risk of getting severely unwell from COVID-19 if:

- ☐ You have underlying medical conditions such as immune problems, diabetes, high blood pressure, heart disease or asthma
- ☐ You are overweight (your BMI is 25 or over)
- ☐ You are over the age of 35

Pregnancy alone is a risk factor for severe COVID 19. In other words, healthy young pregnant women with none of the above risk factors have a significant increased risk of severe COVID-19.

I am pregnant
Should I get a COVID-19 vaccine or COVID-19 booster vaccine?

Option 1: Get the mRNA COVID-19 vaccine or COVID-19 booster vaccine when you are pregnant

About this option: This option includes getting a vaccine or booster vaccine at any stage in pregnancy

What are the positives of this option?

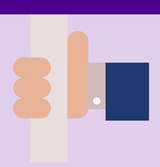
1. Vaccination is currently the most effective way to reduce the risks associated with COVID-19. Getting the vaccine may:

- Reduce your risk of getting infected with COVID-19.
- Reduce your risk of getting severely unwell from COVID-19 and needing admission to an ICU.
- Reduce your risk of pregnancy complications, such as preterm birth and stillbirth.
- Reduce the risk of your baby needing admission to the NICU.
- Reduce the risk of you transmitting COVID-19 to others around you.

2. Vaccination may protect your baby from COVID-19:

- Emerging data indicate that maternal COVID-19 antibodies can cross the placenta.

The best way to protect you and your baby from COVID-19 is to get the vaccine



3. Current safety data on the use of mRNA COVID-19 vaccines in pregnancy is reassuring:

- There is now significant experience with the use of COVID vaccines in pregnancy. To date, over 260,000 pregnant women have had an mRNA vaccine in the US and The UK. No safety concerns have been identified.
- Current evidence suggests the COVID-19 vaccine:
  - is NOT associated with an increased risk of miscarriage
  - is NOT associated with an increased risk of birth defects
  - is NOT associated with an increased risk of stillbirth
  - is NOT associated with an increased risk of preterm birth
  - is NOT associated with an increased risk of any other adverse pregnancy outcome.
- There is no evidence that COVID-19 vaccines affect a woman's fertility.
- International experts have advised the benefit of getting the COVID-19 vaccine in pregnancy is currently greater than the known risk of the vaccine.

4. Many organisations worldwide recommend the COVID-19 vaccine in pregnancy

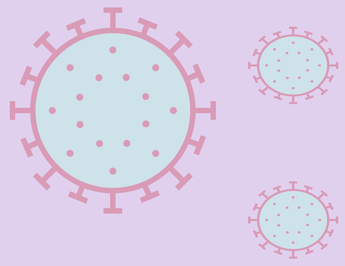
5. You can get the COVID-19 vaccine at any time during pregnancy:

- Pregnant women can now get vaccinated at any time during pregnancy. There is no need to wait until after 14 weeks' gestation.

6. Other vaccines are routinely recommended in pregnancy with good information on safety:

- For example, flu and pertussis (whooping cough) vaccines. These vaccines cannot cause infection in you or your unborn infant and do not contain ingredients which are known to be harmful.

What are the negatives of this option?



1. The results of COVID-19 vaccine trials including pregnant women are not available yet

- Trials of the COVID-19 vaccines are now taking place in pregnant women. The results are not available yet.
- However, there are now multiple studies with clear evidence showing that these vaccines are safe in pregnancy.

2. You may get some side-effects from getting the vaccine:

- Common side effects are reported in more than 1 in 10 people and include fatigue, headache, sore arm, fever and muscle or joint pains. These usually resolve within 2 days.

Are there any other things to think about if I choose this option?

- If you are offered a COVID-19 booster vaccine, you can get it at any time of pregnancy. You should get the booster vaccine at least three months after completing your primary vaccination course.
- If you develop a fever (>38°) after your vaccination, paracetamol can be used safely during pregnancy. If you cannot take paracetamol speak to your doctor or midwife about other options.
- You should inform your maternity unit when you get the COVID-19 vaccine or booster vaccine so it can be recorded in your maternity record.
- You should still get your flu and whooping cough (pertussis) vaccine when recommended. You do not need to leave a gap between your COVID-19 vaccine and another vaccine.
- If you do get the COVID-19 vaccine or booster vaccine and later discover you are pregnant there is no need to be overly concerned. There is no evidence of an increased risk for early pregnancy loss or miscarriage after COVID-19 vaccination.
- If you have already had COVID-19 you should still consider getting the mRNA COVID-19 vaccine. Although previous COVID-19 infection does provide some protection, vaccination is still recommended. If you have had laboratory-confirmed COVID-19 in the previous 6 months you will only need one dose of vaccine. If you are offered a booster vaccine and you had a laboratory-confirmed breakthrough infection since your last COVID-19 vaccine, the booster dose should be delayed by at least 3 months since the date of infection.

If you get the COVID-19 vaccine or booster vaccine, you should continue to follow current public health advice, including advice on social distancing, wearing a mask and hand hygiene.

Option 2: Do not get the COVID-19 vaccine or COVID-19 booster vaccine when you are pregnant

About this option: You may choose not to get the COVID-19 vaccine or booster vaccine, or you may choose to wait to get the vaccine after you have had your baby.

What are the positives of this option?

1. Not getting a vaccine means you will not have any side effects from COVID-19 vaccination

What are the negatives of this option?

1. Not getting a vaccine or booster vaccine (when offered) means you will still be at risk of getting COVID-19
2. If you get COVID-19 you may be more likely to be admitted to hospital, to need care in an intensive care unit (ICU), and to die from COVID-19.
3. If you get COVID-19 you may be more likely to experience pregnancy complications such as stillbirth, postpartum haemorrhage and high blood pressure.
4. If you get COVID-19 this may have implications for your baby:
   - Your baby may be more likely to be born prematurely
   - Your baby may need to be admitted to a neonatal intensive care unit (NICU)
   - Your baby be affected by the life-saving care provided to you or the medications used
3. You won't be able to enjoy the benefits afforded to fully vaccinated people when meeting with others

Are there any other things to think about if I choose this option?

You should only choose this option if:

- ✓ You can always wear a mask according to public health advice.
- ✓ You and the people you live with can socially distance from others for your whole pregnancy.
- ✓ Working from home is an option for you.
- ✓ Your community does not have a high or increasing rate of COVID-19.

What do the experts recommend?

The HSE and the National Immunisation Advisory Committee (NIAC), a group of independent experts in Ireland, recommend that pregnant women should be offered mRNA COVID-19 vaccination at any time during pregnancy. mRNA vaccination is now recommended (or is available) for all pregnant women in other countries, including France, the UK, Austria, Israel, the US and Canada.

NIAC recommend that, where booster vaccination is offered, pregnant women can receive the booster vaccine at any stage of pregnancy, following a discussion with their obstetric caregiver about their individual risks and benefits of vaccination.

The European Network of Teratology Information Specialists (ENTIS), a European group of experts in the use of medicines in pregnancy, have stated that current safety data are reassuring, leading to a favourable benefit/risk ratio for COVID-19 vaccination in pregnancy and that vaccination is currently the most effective measure to reduce the risks associated with COVID-19 in pregnant women.

What do the other women say?

"I decided to get the Covid 19 vaccine as I considered the information and wanted to protect myself and my baby. I had no ill effects, in fact, my arm wasn't even sore"

"I was delighted to be offered and accept a Covid 19 vaccine during my pregnancy. It gave me peace of mind that my baby and I were protected during pregnancy and may also offer protection to my baby after birth"

COVID-19 vaccines and breastfeeding?

Breastfeeding offers substantial health benefits to women and their breastfed children. Antibodies to COVID-19 are secreted in breastmilk of vaccinated mothers, potentially offering protection to breastfed babies. Available evidence suggests that, very minimal, if any mRNA vaccine components are excreted into breastmilk. If COVID-19 mRNA vaccine remnants pass into breastmilk, they would be digested in the baby's stomach.

Many international organisations, including the HSE and World Health Organisation recommends that breastfeeding women should receive the COVID-19 vaccine. Women who receive the COVID-19 vaccine can continue to breastfeed after vaccination.

COVID-19 vaccines and fertility

There is no reason to believe the COVID-19 vaccine will affect your chances of getting pregnant, now or in the future. People of reproductive age are advised to have the vaccine as soon as possible. This includes those who are trying to have a baby and those who are thinking about having a baby in future.

There is no need to delay getting the vaccine if you are planning or are undergoing fertility treatment. Fertility studies have also shown that COVID-19 vaccination does not affect ovarian function, egg quality, fertilisation or the number of women who become pregnant.

What is an mRNA vaccine?

Currently available mRNA vaccines include Comirnaty®- Pfizer/BioNTech and Spikevax® - COVID-19 Vaccine- Moderna. mRNA vaccines do not contain the live COVID-19 virus. These vaccines include the genetic instructions for your body to make viral proteins that will prompt an immune response. The body then produces antibodies against the virus. These antibodies block the virus from entering cells and can prevent disease. The risk of getting mRNA vaccines in pregnancy is thought to be very low due to the rapid breakdown of mRNA in the body. To date, over 250,000 pregnant women have received mRNA vaccinations in the US and UK. Current safety data on the use of mRNA COVID-19 vaccines in pregnancy is reassuring.

Where can I find out more information?

A Q&A document produced by the Institute of Obstetricians and Gynaecologists and NIAC is available on the RCPI website. This includes additional information for those planning a pregnancy or undergoing fertility treatment. If you require further information or support, please speak with a health care professional.

About this decision aid

This decision aid is for people who are pregnant and who are eligible to receive the COVID-19 vaccine in line with the national COVID-19 vaccination programme. This decision aid is intended to help you make an informed choice about whether or not to get the COVID-19 vaccine before, during or after pregnancy. This decision aid was produced by the Irish Medicines in Pregnancy Service (IMPS) at the Rotunda Hospital and The Institute of Obstetrics and Gynaecology (IOG), and was endorsed by the National Immunisation Advisory Committee (NIAC) and the National Women and Infants Health Programme (NWIHP). This decision aid has been modified from the decision aid produced by the Massachusetts Shared Decision Making: COVID Vaccination in Pregnancy working group at the University of Massachusetts Medical School – Baystate. This decision aid (Version 4.5) was updated on 21/12/2021.

Selected references:

1. National Immunisation Guidelines. Chapter 5a. COVID-19 Severe Acute Respiratory Syndrome Coronavirus 2, SARS-COV-2. Updated 29/04/21. Accessed at: https://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/covid19.pdf
2. Clinical Guidance for COVID-19 Vaccination. Version 13.0. 23/04/21. Accessed 28/04/21. Accessed at: https://www.hse.ie/eng/health/immunisation/hcpinfo/covid19vaccineinfo4hps/clinicalguidance.pdf
3. European Medicines Agency. Human Medicine European Public report (EPAR): Comirnaty. Accessed 05/01/21. Accessed at: https://www.ema.europa.eu/en/medicines/human/EPAR/comirnaty
4.European Medicines Agency. Human Medicine European Public report (EPAR): COVID-19 Vaccine Moderna. Accessed 15/02/21. Accessed at: https://www.ema.europa.eu/en/medicines/human/EPAR/covid-19-vaccine-moderna
5. Allotey J, Stallings E, Bonet M, Yap M, Chatterjee S, Kew T, et al. Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis. BMJ. 2020 Sep 1;370:m3320. doi: https://doi.org/10.1136/bmj.m3320
6. Di Guardo F, Di Grazia FM, Di Gregorio LM, Zambrotta E, Carrara G, Gulino FA, et al. Poor maternal-neonatal outcomes in pregnant patients with confirmed SARS-Cov-2 infection: analysis of 145 cases. Arch Gynecol Obstet. 2021 Jan 3; do: https://doi.org/10.1007/s00404-020-05909-4
7. Adhikari EH, et al. Pregnancy outcomes among women with and without severe acute respiratory syndrome coronavirus infection. JAMA Network Open 2020 Nov 3(11):e2029256. doi:10.1001/jamanetworkopen.2020.29256
8. Knight M, Rema Ramakrishnan, Kathryn Bunch, Nicola Vousden, Jennifer J K, Sarah Dunn, et al. UKOSS/ISARIC/CO-CIN: Females in Hospital with SARS-CoV-2 infection, the association with pregnancy and pregnancy outcomes, 25 March 2021 [Internet]. GOV.UK. [cited 2021 Apr 12]. Available from: https://www.gov.uk/government/publications/ukossisaricco-cin-females-in-hospital-with-sars-cov-2-infection-the-association-with-pregnancy-and-pregnancy-outcomes-25-march-2021
9. Knight M, Bunch K, Vousden N, Morris E, Simpson N, Gale C, O'Brien P, Quigley M, Brocklehurst P, Kurinczuk JJ. Characteristics and outcomes of pregnant women admitted to hospital with confirmed SARS-CoV-2 infection in UK: national population based cohort study. bmj. 2020 Jun 8;369. doi.org/10.1136/bmj.m2107
10. Gray KJ, Bordt EA, Atyeo C, Deriso E, Akinwunmi B, Young N, et al. COVID-19 vaccine response in pregnant and lactating women: a cohort study. Am J Obstet Gynecol. 2021. https://doi.org/10.1016/j.ajog.2021.03.023
11. Shimabukuro TT, Kim SY, Myers TR, Moro PL, Oduyebo T, Panagiotakopoulos L, Marquez PL, Olson CK, Liu R, Chang KT, Ellington SR. Preliminary Findings of mRNA Covid-19 Vaccine Safety in Pregnant Persons. New England Journal of Medicine. 2021 Apr 21. https://doi.org/10.1056/NEJMoa2104983
12. *Beharier O, Mayo RP, Raz T, Sacks KN, Schreiber L, Suissa-Cohen Y, Chen R, Gomez-Tolub R, Hadar E, Gabbay-Benziv R, Moshkovich YJ. Efficient maternal to neonatal transfer of antibodies against SARS-CoV-2 and BNT162b2 mRNA COVID-19 vaccine. The Journal of clinical investigation. 2021 May 20.* doi.org/10.1172/jci150319
13.· Goldshtein I, Nevo D, Steinberg DM, Rotem RS, Gorfine M, Chodick G, Segal Y. Association Between BNT162b2 Vaccination and Incidence of SARS-CoV-2 Infection in Pregnant Women. JAMA. 2021 Jul 12. doi.org/10.1001/jama.2021.11035
14. CDC. V-safe COVID-19 Vaccine Pregnancy Registry [Internet]. Centers for Disease Control and Prevention. 2020. Available from: https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/vsafepregnancyregistry.html
15. European Network of Teratology Information Services. ENTIS Position Statement; COVID-19 vaccines in pregnancy and lactation. Available from: https://www.entis-org.eu/entis-news/entis-position-statement-covid-19-vaccines-in-pregnancy-and-lactation
16. Kharbanda EO, Haapala J, DeSilva M, et al. Spontaneous Abortion Following COVID-19 Vaccination During Pregnancy. *JAMA*. 2021. doi:10.1001/jama.2021.15494
17. Blakeway H, Prasad S, Kalafat E, Heath PT, Ladhani SN, Le Doare K, Magee LA, O'brien P, Rezvani A, von Dadelszen P, Khalil A. COVID-19 vaccination during pregnancy: coverage and safety. American Journal of Obstetrics and Gynecology. 2021. https://doi.org/10.1016/j.ajog.2021.08.007
18. Theiler RN, Wick M, Weaver A, Mehta R, Virk A, Swift M. Pregnancy and birth outcomes after SARS-CoV-2 vaccination in pregnancy. medRxiv. 2021. https://doi.org/10.1101/2021.05.17.21257337
19. Bookstein Peretz S, Regev N, Novick L, Nachshol M, Goffer E, Ben-David A, Asraf K, Doolman R, Levin EG, Regev Yochay G, Yinon Y. Short-term outcome of pregnant women vaccinated with BNT162b2 mRNA COVID-19 vaccine. Ultrasound in Obstetrics & Gynecology. 2021. https://doi.org/10.1002/uog.23729
20. Zauche LH, Wallace B, Smoots AN, Olson CK, Oduyebo T, Kim SY, Peterson EE, Ju J, Beauregard J, Wilcox AJ, Rose CE. Receipt of mRNA COVID-19 vaccines preconception and during pregnancy and risk of self-reported spontaneous abortions, CDC v-safe COVID-19 Vaccine Pregnancy Registry 2020-21. https://doi.org/10.21203/rs.3.rs-798175/v1