

Fertility, Pregnancy, Breastfeeding, and the COVID-19 Vaccine

The safest, most effective path to a more normal life is through a COVID-19 vaccine. To help you make the best decision for you and your family, we want to make sure you know the facts. We encourage you to talk to a trusted medical source, such as your doctor or midwife, about your concerns, personal risk and individual medical needs.

Key Facts You Should Know:

- COVID-19 infections are more dangerous during pregnancy for the birthing person and the unborn baby.
- Getting vaccinated will prevent the majority of infections and is the safest choice for most people.
- Pregnant people were not included in the original clinical trials, but have been included in new trials. Based on new trial data, none of the vaccines have been shown to have negative effects on pregnancy, fertility, or breastfed infants whose mothers were vaccinated.
- Experts agree that everyone, including those trying to conceive, pregnant or breastfeeding, should receive the COVID-19 vaccine, if eligible.

Frequently Asked Questions

PREGNANCY

What do we know about COVID-19 infections during pregnancy?

- COVID-19 infections are more dangerous during pregnancy. Pregnancy increases your risk of being admitted to the hospital, needing ICU care, needing a machine (ventilator) to help you breathe, needing a machine to help oxygenate your blood (extracorporeal membrane oxygenation or ECMO), and death.
- If you become severely sick during pregnancy, risks for the baby also go up. These risks include preterm birth, poor fetal growth, and stillbirth.
- We don't have a lot of information about transmitting the infection to your baby during pregnancy. If it happens, it happens very rarely.
- There is not very much information about the risk of birth defects for children born to parents infected with COVID-19.

Are the COVID-19 vaccines safe to receive during pregnancy?

- The COVID-19 mRNA vaccine is a new type of vaccine that has never been used before during pregnancy, because pregnant people were not allowed to participate in the vaccine trials, which is typical of a vaccine trial.
- Since the COVID-19 vaccines became available, there have been more than 120,000 pregnant people vaccinated. Studies so far have demonstrated no harm. There may also be benefit: antibodies against COVID-19 cross the placenta, and may offer protection for the baby after delivery.

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Frequently Asked Questions

PREGNANCY (cont.)

- The vaccine's overall risk is low. Facts about COVID-19 mRNA vaccines include:
 - **Not** live virus vaccines. Live vaccines are not recommended during pregnancy because of a possible risk of true infection.
 - **Do not** cause infection
 - **Do not** enter the cell's nucleus
 - **Do not** change your DNA
 - Degraded quickly in the body - *it's usually gone within 5 hours.*
- While the vaccine was developed quickly, no "corners were cut" in any step. Much of the work was already done in the last 10-20 years on other coronaviruses (like SARS).

Should I get the COVID-19 vaccine while pregnant?

Experts agree that pregnant people should receive the COVID-19 vaccine, if eligible. The vaccine works really well to prevent COVID-19 infections, which can lower the risks of complications to you and your baby.

You may be at higher risk of getting a COVID-19 infection if any of the following apply:

- You, or someone you live with, are at high risk for exposure to COVID-19
- Healthcare worker
- Resident of long-term care facility
- Unable to physically distance or mask regularly
- Your community rates of COVID-19 are high.
- You have one or more health condition that makes COVID-19 more dangerous for you, such as: pregnancy, diabetes, BMI >30, a heart condition, lung disease, kidney disease, immunocompromise, sickle cell disease, or cancer.

Is there a good time during pregnancy to receive the vaccine?

The American College of Obstetricians and Gynecologists recommends vaccination to all eligible pregnant persons, regardless of how far along you are in your pregnancy.

I had COVID-19 before I got pregnant. Now that I am pregnant, do I get the vaccine?

The vaccine should be offered to anyone who is eligible, no matter if they've had COVID-19 before or not. Testing to see if you've had the infection before is not recommended to decide whether to get the vaccine or not.

Do I need to get a pregnancy test before getting the COVID-19 vaccine?

No. Testing for pregnancy prior to a vaccination dose is not recommended.

What should I do if I have a fever after vaccination?

Fever can occur in people after COVID-19 vaccination, usually after the second dose. Older research suggested that fever in pregnancy (especially the first trimester) can be associated with increased risk of birth defects. However, newer research does not show this increased risk.

If you have a fever for any reasons during pregnancy, taking acetaminophen (Tylenol) is recommended to lower your temperature.

BREASTFEEDING

Are there any recommendations about this vaccine and breastfeeding?

Breastfeeding people were not included in the vaccine trials. The COVID-19 mRNA vaccine technology has never been used before, but the theoretical risk for breastfeeding is low.

There is possibly benefit of getting the vaccine during breastfeeding. Antibodies developed in response to the vaccine have been shown to transfer through breast milk to the infant and child, which may give protection against COVID-19.

In people with COVID-19 infection, the virus has not been found in their breastmilk.

Frequently Asked Questions

FERTILITY

Addressing misinformation about the COVID-19 vaccine and fertility

There is a lot of information about the vaccine right now that you may come across on social media or the internet. Some of this information may not be accurate. There was concern that the COVID-19 vaccine could cause infertility or trick the human body into attacking the placenta. These claims are **not** true. Talk to a trusted medical source, such as your doctor or midwife, if you have concerns about the vaccination.

What should I do if I am in the middle of fertility treatment, getting ready to start, or just trying to conceive?

Current recommendations say there is no reason to delay conception. Though data is limited, there is currently no evidence that any vaccine, including COVID-19 vaccine, cause female or male fertility problems.

- The American Society of Reproductive Medicine (ASRM) recommends the vaccination for women who are contemplating pregnancy to minimize risks to themselves and their pregnancy.
- A study looking at the Pfizer vaccine trial showed an equal number of women conceived with no issue after receiving the COVID-19 vaccine as did those who received the placebo.
- Two new studies released June 2021, one from ASRM and one from the University of Miami, showed the COVID-19 vaccines do not impact female or male fertility.

OTHER CONSIDERATIONS

Am I protected after the first shot?

Getting both doses is necessary for 95% protection.

What happens if I can't get the second shot 21 days later?

If more than 21 days have passed after the first dose, the second dose should be administered as early as possible. No doses will need to be repeated.

Who should NOT get this vaccine?

- If you are allergic to any component of the COVID-19 vaccine, like Polyethylene Glycol (PEG) or Polysorbate.
- If you have severe allergic reactions to any vaccine or injectable therapy.

Vaccine recipients will be observed for 15 minutes to make sure they are not developing an allergic response.

What if I have allergies and usually need to take allergy medications?

People who have had severe allergic reactions that needed to be hospitalized, or needed to receive injections to control an allergic reaction, should talk to their healthcare provider before getting vaccinated. Seasonal allergies should not prevent you from getting vaccinated.

Could all of this guidance change?

Yes. As more people get vaccinated, we will have more data regarding the vaccine, especially in pregnancy and breastfeeding.

What else can I do to decrease risk to myself and my family?

Frequent hand-washing, social distancing, and masking have all been shown to help decrease your risk of COVID-19, whether you are pregnant or breastfeeding.

We encourage you to talk to a trusted medical source, such as your doctor or midwife, or the CDC recommends calling 1.866.626.6847, if you have questions about the COVID-19 vaccine during pregnancy.

Other resources:

- Society for Maternal-Fetal Medicine (SMFM) Statement: SARS-CoV-2 Vaccination in Pregnancy
- The American College of Obstetricians and Gynecologists: Vaccinating Pregnant and Lactating Patients Against COVID-19
- CDC ACIP COVID-19 Vaccines Work Group
- Safety and Efficacy of the BNT162b2 mRNA COVID Vaccine (NEJM)
- FDA Fact Sheet for Vaccination Providers
- FDA Fact Sheet for Recipients and Caregivers
- American Society for Reproductive Medicine: SARS-CoV-2 spike protein seropositivity from vaccination or infection does not cause sterility
- Fertility and Sterility(R): COVID-19 vaccine and infertility: baseless claims and unfounded social media panic.

References

1. Ellington S, Strid P, Tong VT, Woodworth K, Galang RR, Zambrano LD, et al. Characteristics of Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, January 22–June 7, 2020. *MMWR Morb Mortal Wkly Rep.* 2020;69(25):769–75.
2. Delahoy MJ, Whitaker M, O'Halloran A, et al. Characteristics and Maternal and Birth Outcomes of Hospitalized Pregnant Women with Laboratory-Confirmed COVID-19 - COVID-NET, 13 States, March 1–August 22, 2020. *MMWR Morb Mortal Wkly Rep.* 2020;69(38):1347–54.
3. Panagiotakopoulos L, Myers TR, Gee J, Lipkind HS, Kharbanda EO, Ryan DS. SARS-CoV-2 Infection Among Hospitalized Pregnant Women: Reasons for Admission and Pregnancy Characteristics — Eight U.S. Health Care Centers. *MMWR Morb Mortal Wkly Rep.* 2020;69(38):1355–9.
4. Zambrano LD, Ellington S, Strid P, Galang RR, Oduyebo T, Tong VT, et al. Update: Characteristics of Symptomatic Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, January 22–October 3, 2020. *MMWR Morb Mortal Wkly Rep.* 2020;69(44):1641–7.
5. SMFM Publications and Clinical Guidance: Coronavirus (COVID-19) and Pregnancy: What Maternal- Fetal Medicine Subspecialists Need to Know. Version November 23, 2020. Accessed December 12, 2020. https://s3.amazonaws.com/cdn.smfm.org/media/2589/COVID19-What MFMs_need_to_know_revision_11-23-20_final.pdf
6. Chambers C, Krogstad P, Bertrand K, et al. Evaluation for SARS-CoV-2 in Breast Milk From 18 Infected Women. *JAMA.* 2020;324(13):1347–1348. doi:10.1001/jama.2020.15580
7. Society for Maternal-Fetal Medicine (SMFM) Statement: SARS-CoV-2 Vaccination in Pregnancy 12-1-20. Accessed December 12, 2020. [https://s3.amazonaws.com/cdn.smfm.org/media/2591/SMFM_Vaccine_Statement_12-1-20_\(final\).pdf](https://s3.amazonaws.com/cdn.smfm.org/media/2591/SMFM_Vaccine_Statement_12-1-20_(final).pdf)
8. FDA Vaccines and Related Biological Products Advisory Committee Meeting December 10, 2020. FDA Briefing Document. Pfizer-BioNTech COVID-19 Vaccine. <https://www.fda.gov/media/144245/download>
9. Kerr SM, Parker SE, Mitchell AA, Tinker SC, Werler MM. Periconceptional maternal fever, folic acid intake, and the risk for neural tube defects. *Ann Epidemiol.* 2017 Dec;27(12):777–782.e1. doi: 10.1016/j.annepidem.2017.10.010. Epub 2017 Nov 2. PMID: 29133009; PMCID: PMC5824687.
10. Sass L, Urhoj SK, Kjærgaard J, Dreier JW, Strandberg-Larsen K, Nybo Andersen AM. Fever in pregnancy and the risk of congenital malformations: a cohort study. *BMC Pregnancy Childbirth.* 2017;17(1):413. Published 2017 Dec 8. doi:10.1186/s12884-017-1585-0
11. CDC ACIP COVID-19 Vaccines Working Group: Use of Pfizer-BioNTech COVID-19 Vaccine: Clinical Considerations. December 12, 2020. <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2020-12/slides-12-12/COVID-03-Mbaeyi.pdf>
12. Shimabukuro TT, Kim SY, Myers TR, et al. Preliminary Findings of mRNA Covid-19 Vaccine Safety in Pregnant Persons. *N Engl J Med.* 2021;384(24):2273–2282. doi:10.1056/NEJMoa2104983
13. Tom T. Shimabukuro, M.D., Shin Y. Kim, M.P.H., Tanya R. Myers, Ph.D., Pedro L. Moro, M.D., Titilope Oduyebo, M.D., Lakshmi Panagiotakopoulos, M.D., Paige L. Marquez, M.S.P.H., Christine K. Olson, M.D., Ruiling Liu, Ph.D., Karen T. Chang, Ph.D., Sascha R. Ellington, Ph.D., Veronica K. Burkel, M.P.H., et al., for the CDC v-safe COVID-19 Pregnancy Registry Team
14. Daniel C. Gonzalez, BS1; Daniel E. Nassau, MD1; Kajal Khodamoradi, PhD1; et al Sperm Parameters Before and After COVID-19 mRNA Vaccination. *JAMA.* 2021;326(3):273–274. doi:10.1001/jama.2021.9976

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