

# COVID-19 mRNA Vaccines (Moderna | Spikevax® and Pfizer | Comirnaty®)

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This sheet is about exposure to COVID-19 mRNA vaccines in pregnancy and while breastfeeding. This information should not take the place of medical care and advice from your healthcare provider.

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

COVID-19 (short for Coronavirus Disease 2019) is an illness caused by a virus (called SARS-CoV-2). The virus easily spreads from person to person through respiratory droplets that come from our mouths and noses when we breathe, talk, cough, or sneeze. For more information on COVID-19, please see the MotherToBaby fact sheet at <https://mothertobaby.org/fact-sheets/covid-19/>.

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

COVID-19 messenger RNA (mRNA) vaccines help protect against the virus that causes COVID-19. The COVID-19 mRNA vaccines approved for use in the United States are known as Moderna/Spikevax® and Pfizer/Comirnaty®. These vaccines do not contain live virus that could cause COVID-19. The Centers for Disease Control and Prevention (CDC) have more information about mRNA vaccines here:

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mRNA.html>. The mRNA vaccines are not 100% effective at preventing COVID-19, but can greatly reduce the chance of getting very sick from the virus.

For most people who are pregnant, recently pregnant, or breastfeeding, COVID-19 mRNA vaccines are given as 2 initial doses (called a primary series), followed by recommended booster doses. People who have weakened immune systems have different dosing recommendations. Talk to your healthcare provider, contact a MotherToBaby specialist, or visit the CDC website to learn how to stay up to date with your COVID-19 vaccines:

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html>.

For more information on other types of COVID-19 vaccines that are available, please see the MotherToBaby fact sheets at <https://mothertobaby.org/fact-sheets/covid-19-viral-vector-vaccine/> and <https://mothertobaby.org/fact-sheets/covid-19-protein-subunit-vaccine/>.

## **Are COVID-19 mRNA vaccines recommended for people who are pregnant?**

Organizations including the CDC, the American Academy of Pediatrics, and the American College of Obstetricians and Gynecologists (ACOG) recommend that people who are pregnant, recently pregnant, planning a pregnancy, or could become pregnant in the future stay up to date on recommended doses of COVID-19 vaccines and boosters. COVID-19 mRNA vaccines can be given at any time in pregnancy.

Having a COVID-19 infection while pregnant increases the chance of severe illness and pregnancy complications. Studies have shown that people who are up to date on COVID-19 mRNA vaccines and boosters in pregnancy are less likely to get very sick or have pregnancy complications from a COVID-19 infection than people who are not up to date.

## **Does getting a COVID-19 mRNA vaccine make it harder to get pregnant or affect fertility treatments?**

There is no evidence that getting a COVID-19 mRNA vaccine makes it harder to get pregnant. Several studies of people undergoing in-vitro fertilization (IVF) found that getting a COVID-19 mRNA vaccine did not affect the function of the ovaries (the organ that releases the egg), number of oocytes (immature eggs), hormone levels, or success rates of embryo implantation. The American Society for Reproductive Medicine recommends that people undergoing fertility treatment stay up to date on recommended doses of COVID-19 vaccines and boosters. There is no recommendation to postpone fertility treatment after getting the vaccine or to avoid getting the vaccine after treatment.

Some people have reported changes in their menstrual cycle (period) after getting a COVID-19 mRNA vaccine, such as having a slightly longer or heavier period or starting their next period sooner than expected. Studies have found that if these changes happen, they are mild and temporary and do not affect the person's fertility.

## **I just got a COVID-19 mRNA vaccine. How long do I need to wait before I get pregnant?**

There is no recommendation to wait before trying to get pregnant after getting a COVID-19 mRNA vaccine.

***Does getting a COVID-19 mRNA vaccine increase the chance of miscarriage?***

Miscarriage is common and can occur in any pregnancy for many different reasons. Studies have found that getting a COVID-19 mRNA vaccine during pregnancy does not increase the chance of miscarriage.

***Does getting a COVID-19 mRNA vaccine increase the chance of birth defects?***

Every pregnancy starts out with a 3-5% chance of having a birth defect. This is called the background risk. The available studies have not found an increased chance for birth defects when a person receives a COVID-19 mRNA vaccine during the first trimester.

Fever is a possible side effect of the COVID-19 mRNA vaccines. A high fever in the first trimester can increase the chance of certain birth defects. Acetaminophen is usually recommended to reduce fever during pregnancy. For more information about fever and pregnancy, see the MotherToBaby fact sheet about fever/hyperthermia at <https://mothertobaby.org/fact-sheets/hyperthermia-pregnancy/>.

***Does getting a COVID-19 mRNA vaccine in pregnancy increase the chance of other pregnancy-related problems?***

Studies have found no increased chance for pregnancy-related problems or newborn complications such as stillbirth, preterm delivery (before 37 weeks of pregnancy), babies born smaller than expected, low Apgar scores, NICU admission, or neonatal death when a COVID-19 mRNA vaccine is given anytime during pregnancy.

***Does getting a COVID-19 mRNA vaccine in pregnancy affect future behavior or learning for the child?***

It will take time to follow the children of people who were vaccinated in pregnancy in order to answer this question. However, based on what is known about how these vaccines work in the body, getting a COVID-19 mRNA vaccine is not expected to cause long-term problems for the child.

***Does getting a COVID-19 mRNA vaccine during pregnancy protect the baby from the virus after delivery?***

The antibodies that a person makes after getting a COVID-19 mRNA vaccine during pregnancy can pass to the developing baby. Research has shown that more antibodies pass to the baby after getting COVID-19 mRNA vaccines in pregnancy than after having a COVID-19 infection in pregnancy.

One study found that infants born to women who received a second dose or a booster dose of a COVID-19 mRNA vaccine during the second or third trimester of pregnancy were less likely to be diagnosed with COVID-19 during the first four months of life. Additionally, a study found that completing the initial 2-dose series of an mRNA vaccine during pregnancy significantly lowered the chance of the baby being hospitalized with COVID-19 in the first 6 months of life. The same study found that the majority of infants who **were** hospitalized with COVID-19 were born to people who were not vaccinated.

***Breastfeeding and COVID-19 mRNA vaccines:***

Small studies have found that mRNA from the Moderna/Spikevax® and Pfizer/Comirnaty® vaccines is unlikely to enter the breast milk. If any small amounts of vaccine ingredients did enter the breast milk, they would most likely be destroyed in the baby's stomach. Studies have not reported serious adverse reactions to the mRNA vaccines in people who are breastfeeding or their infants. Less than 10% of people have reported changes in milk supply (more or less milk) after getting a COVID-19 mRNA vaccine, but their supply returned to normal within a day or two.

Organizations including the Academy of Breastfeeding Medicine and the American Academy of Pediatrics agree that people who are breastfeeding can receive COVID-19 vaccines. There is no recommendation to postpone breastfeeding or discard breast milk after getting a COVID-19 mRNA vaccine.

Antibodies against the virus that causes COVID-19 have been found in the breast milk of people who have been vaccinated with mRNA vaccines. More research is needed to know if these antibodies might protect a breastfeeding child against the virus and how long that protection might last. Talk to your healthcare provider about all of your breastfeeding questions.

***If a male gets a COVID-19 mRNA vaccine, could it affect fertility (ability to get partner pregnant) or increase the chance of birth defects?***

Two studies found no differences in sperm production before and after getting a COVID-19 mRNA vaccine. In general, exposures that fathers or sperm donors have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

*MotherToBaby is currently conducting an observational study looking at COVID-19 vaccines in pregnancy. If you have never been vaccinated against COVID-19, or were vaccinated before your pregnancy, you may be eligible to participate. If you are interested in taking part in this study, please call 1-877-311-8972 or sign up at <https://mothertobaby.org/join-study/>.*

**Please click here for references.**

**Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://mothertobaby.org).**

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