



mRNA SARS-CoV-2 Vaccine in Pregnancy

What do we know about the mRNA (Pfizer and Moderna) COVID vaccines in pregnancy?

Pregnant women were not allowed in the studies about the vaccine, so we don't have a lot of information. It turned out that 36 patients who were very early in pregnancy got in the studies anyway. Some of these pregnant patients got the vaccine, and some patients got a shot without the vaccine (placebo). The patients who got the vaccine did not have major problems. However, since the vaccine study is still new and ongoing, we don't have any long-term follow-up information about the impact of the vaccine in the pregnant women or their babies.

Studies using the vaccine in animals during pregnancy did not show any problems. Also, from our understanding of how the vaccine works it is likely that the risk of any harm to the baby is very low.

What do we know about other similar types of vaccines?

The Pfizer and Moderna vaccines are a new kind of vaccine called an "mRNA vaccine". The new COVID vaccine is the first time the mRNA vaccine type has been studied in humans.

Will this vaccine make changes to my genes?

This vaccine cannot make any changes to your genes.

Will this vaccine cause me to get COVID?

This vaccine is not made from a "live" virus and so cannot cause a COVID infection.

What are the side effects of the vaccine for pregnancy?

The most common side effects were pain and bruising at the shot site, being tired, headache, chills, vomiting, diarrhea, muscle pain, and joint pain. These also happen with the flu shot that is very safe for pregnant women and that we recommend all pregnant women get. You can also get worse side effects from getting COVID.

In the study, a fever of more than 100.4 happened more often with people who got the vaccine than got the placebo. This was especially common after the second shot in the two-shot series. Women with a fever in the first 3 months of pregnancy can have a very small increased risk of birth defects. It is good not to have a fever in pregnancy, and it's safe to use acetaminophen (Tylenol) to treat any fever in pregnancy. We would recommend that you have some acetaminophen available to take when you get the vaccine. You can take 650mg (usually two tablets but check your medication bottle) every 4 hours to reduce fever.

How do I decide if I should get the vaccine?

Though there is a lot we don't know about COVID and the vaccine, we do think that being pregnant increases the risk of being sick enough to have to be admitted to the hospital and to have to be in the intensive care unit (ICU). COVID may also increase the risk of preterm birth and possibly stillbirth. Outside of pregnancy, COVID-19 disease can lead to severe symptoms, very bad illness, blood clots, death, and long-term breathing problems. It is important to discuss your risks of COVID with your doctor or midwife.

What do the experts say?

The American College of Obstetrics and Gynecology (ACOG) and the Society for Maternal and Fetal Medicine (SMFM) are groups of specialists in pregnancy. They recommend that pregnant women get the COVID vaccine if they want it after talking about it with their doctor or midwife. It is important to talk about what we know, what the risks from the vaccine are and what the risks from COVID are. Every patient is different and should be able to make the decision for herself. As we know more, doctors and midwives should keep talking to patients about new information.

Should pregnant healthcare workers get the vaccine?

The Society for Maternal and Fetal Medicine recommends that pregnant healthcare workers, who are at high risk for infection, be offered the vaccine. A report by the National Academies of Sciences, Engineering, and Medicine entitled *Framework for Equitable Allocation of COVID-19 Vaccine* recommends that high-risk workers in health facilities or first responders should be among the first to receive the vaccine.

Should I be vaccinated if I am breastfeeding?

Women who are breastfeeding should be offered the vaccine according to the same criteria as everyone else. Breastfeeding women were not included in the trials. However, because this is not a live vaccine the benefits of getting the vaccine are probably higher than the possible risks.

Where can I look for more information?

The American College of Obstetrics and Gynecology (ACOG) which is the professional group for OBGYNs has prepared some additional information on their website.

<https://www.acog.org/en/clinical/clinical-guidance/practice-advisory/articles/2020/12/vaccinating-Pregnant-and-Lactating-Patients-Against-COVID-19>



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<https://www.npr.org/2020/12/11/945196602/pregnant-people-havent-been-part-of-vaccine-trials-should-they-get-the-vaccine>