



# What doctors wish patients knew about COVID-19 vaccines and fertility

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While COVID-19 vaccines are effective in preventing severe illness, hospitalization and death from SARS-CoV-2 infection, many people who are eligible have elected to not get vaccinated. This is often due to concerns about possible side effects. One concern emerged when a false report surfaced on social media claiming that getting vaccinated against COVID-19 can cause infertility in women. The truth is COVID-19 vaccines don't affect fertility.

COVID-19 vaccination is recommended by the Centers for Disease Control and Prevention (CDC) for people who are trying to become pregnant now or might become pregnant in the future, as well as their partners. This includes getting a COVID-19 vaccine booster shot when it's time to get one.

The AMA's What Doctors Wish Patients Knew™ series gives physicians a platform to share what they want patients to understand about today's health care headlines, especially throughout the COVID-19 pandemic.

For this installment, three physicians took time to discuss what patients need to know about fertility and COVID-19 vaccination. These AMA members are:

- Nariman Heshmati, MD, an ob-gyn and senior medical director at the Everett Clinic in Washington.
- Theodore B. Jones MD, a maternal-fetal medicine specialist and director of maternal fetal medicine at Beaumont Hospital in Dearborn, Michigan.
- Lanny F. Wilson, MD, chair of the Physician Well-Being Program at Amita Health in Hinsdale, Illinois and chair of obstetrics and gynecology at Avalon University School of Medicine in Youngstown, Ohio.

### COVID-19 vaccines don't alter fertility

"There is absolutely no reason to be worried about fertility with the COVID-19 vaccine," said Dr. Wilson, emphasizing that vaccines "do not cause infertility and they do not affect fertility one way or

the other.”

While a National Institutes of Health-funded study has found that COVID-19 vaccination is linked to a small, temporary rise in the menstrual cycle, “no scientific evidence supports that COVID-19 vaccines will cause fertility problems,” said Dr. Jones. She that “both of the primary vaccine types—the mRNA and the adenovirus vaccine—don’t have mechanisms that would seem to relate to reproductive function.”

“We now have studies that have looked at groups of patients who are being evaluated for fertility or infertility, and vaccination status does not appear to alter fertility based on whether they receive the vaccination or not.”

“We are also getting more data from ongoing trials that are increasing our confidence in the COVID-19 vaccine’s safety profile,” said Dr. Heshmati. “In a study from the Icahn School of Medicine at Mount Sinai that looked at fertility outcomes after COVID-19 vaccination—including egg quality, embryo quality and development, pregnancy rates, and early miscarriage—there was no difference between those who received COVID-19 vaccination and those who did not.”

## **Get a COVID-19 vaccine booster**

“Once you have completed the initial COVID vaccination series, a booster dose is recommended,” said Dr. Heshmati, noting that “the booster doesn’t have to be the same brand of the covid vaccine you originally received.”

“However, of the different COVID-9 vaccinations that are available, mRNA COVID-19 vaccines are preferred over the Johnson & Johnson COVID-19 vaccine during pregnancy,” he said. “While we are talking about mRNA vaccines, it’s important to know that these aren’t live vaccines. They don’t alter DNA and they don’t have an adjuvant to enhance efficacy.”

## **Vaccination has benefits for the baby too**

When that time does come and a person gets pregnant, the COVID-19 vaccines can also benefit the baby.

“The antibodies start passing through while the baby’s still inside the womb,” said Dr. Wilson. “And if a person chooses to breastfeed, then those same antibodies continue to be passed through the breast milk as well.”

“We know that antibodies cross the placenta and through the breast milk when breastfeeding, and we believe that has a protective effect,” said Dr. Heshmati, adding that in a recent “study from 20 pediatric hospitals, the CDC found that COVID-19 vaccination during pregnancy reduced the risk of infants being hospitalized with COVID-19 by 61%.”

“That’s always a bonus element of vaccinations—we can use it as a mechanism to pass the protection of the pregnant patient over to the baby,” said Dr. Jones “That gives that baby some measure of protection for, we hope, a period of time long enough for it to be able to receive its own vaccination at some point.”

## The real concern is COVID-19

“The main point here is that getting COVID-19 can be dangerous—more so if you are pregnant,” said Dr. Heshmati. “With each passing day, we get more and more information and data that says the COVID-19 vaccination is safe and effective in pregnancy.”

“I would encourage everyone who is pregnant or considering a pregnancy to get their COVID vaccination not only for their safety but for the safety of their future child,” he said.

“We are still probably at far less than 50% of pregnant patients getting vaccinated, which is up from the one in three that we were at about six months ago, but not by a whole lot,” said Dr. Jones. “We still have a lot of work to do to help the pregnant patients feel comfortable about receiving vaccinations.”

## Get evaluated for infertility

“There can be lots of things that affect fertility and that’s why there’s an evaluation that looks at different causes,” said Dr. Jones. “It’s looking at issues related to things like sperm function and whether the egg is normal in terms of its consistency and appearance.”

It’s also about “looking at hormonal issues that could impact fertility. You could also look at issues related to inflammation and related to immunological factors that could affect it,” he said. “It’s a whole specialty dedicated to working with individuals who are having difficulty conceiving on their own.”

“A good examination with an obstetrician-gynecologist or your trusted primary care physician allows for a conversation about your future fertility,” said Dr. Wilson. These examinations are good to “make sure that your blood pressure is OK before you become pregnant or to make sure that you don’t have diabetes.”

This also requires everyone “to be up to date on their vaccinations,” he said. “We’re talking of course about the COVID-19 vaccine, but the other vaccines should be up to date too as they prepare for pregnancy because we know that during pregnancy, people’s immune response is decreased.”

## **Bring your concerns to your doctor**

Like what many teachers have taught their students, there are no stupid questions, so please ask if concerned.

“It is really important that patients bring up their concerns. Sometimes we hesitate to ask questions as if we’re not trying to be contrary, but that is what physicians and other health professionals are there for,” said Dr. Jones. “They’re there to try to help answer those questions and point that person in the right direction to be able to find additional information.

“And, of course, our professional organizations are doing a good job of getting information to patients as quickly as possible to really allow them to be able to have something in that patient’s hands that they can read and it’s not confusing,” he added.

## **Allow doctors time to gather information**

“For the entirety of this pandemic, the physician community has been really challenged by the difficulty to keep pace with rumors, innuendos and just plain incorrect information that gets to our patients and their families and makes it very challenging to be able to counteract it after it’s out there,” said Dr. Jones. “It creates vaccine hesitancy and it’s primarily caused by someone hearing about a person who had a particular problem after vaccination.”

“What we always do is we have to allow ourselves some time to gather enough information to be able to factually and critically look at a particular problem,” he explained. “When we did gather information, that’s when we found these claims of COVID-19 vaccines causing infertility just do not appear to be credible.”

## **Vaccination’s important to starting a family**

As mask requirements are rolled back, “there will be individuals who we will encounter who have not been vaccinated and are not wearing masks,” said Dr. Jones. “They will potentially be at risk for passing the virus from themselves to another person, even as an asymptomatic carrier of the virus.”

“The good news is that if that individual is vaccinated, even if they develop a COVID-19 infection, they’ll be far less likely to have symptomatic disease that becomes significant enough that they need to come into the hospital and they will have a lower risk of ending up in the intensive care unit and an even lower risk of dying from the infection.”

That is why “people should have confidence in moving forward with their families,” said Dr. Jones. They “should feel as if vaccination should be a part of creating a start to a family as opposed to a harmful start to the family.”

The AMA has developed frequently-asked-questions documents on COVID-19 vaccination covering safety, allocation and distribution, administration and more. There are two FAQs, one designed to answer patients’ questions (PDF), and another to address physicians’ COVID-19 vaccine questions (PDF).