

## COVID-19 Vaccines & Infertility

There is no evidence that any of the COVID-19 vaccines can cause infertility. The American College of Obstetricians and Gynecologists (ACOG), the American Society for Reproductive Medicine (ASRM), and the Society for Maternal-Fetal Medicine (SMFM) have issued a [joint statement](#) to address this claim:

*"While fertility was not specifically studied in clinical trials of the vaccine, no loss of fertility has been reported among trial participants or among the millions who have received the vaccines since they were authorized, and no signs of infertility appeared in animal studies."*

### Can you tell me more about the COVID-19 vaccine and infertility claim?

#### **The Claim:**

The Pfizer and Moderna mRNA COVID-19 vaccines work by providing our cells with temporary instructions for how to make a protein found on the surface of the virus that causes COVID-19, which is called the spike protein. Our cells then present these spike proteins to our immune system, which will teach the body how to recognize and destroy the virus that causes COVID-19 if you are ever exposed in the future.

Syncytin-1, also known as enverin, is a protein that is found in the brain and is also needed for placental formation. It is fundamental for successful pregnancies in humans and other mammals.

The claim spread widely on social media suggests that mRNA COVID-19 vaccines may cause the body's own immune system to target and attack syncytin-1 because it has some similarities to the spike protein, and this could theoretically lead to infertility.

#### **Addressing the Misinformation:**

In reality, the coronavirus spike protein and syncytin-1 share only a few similarities (just a few amino acid sequences). Luckily, our immune system responds to proteins, not to the very short amino acid sequences that comprise them. The amino acid sequence shared among the spike protein and syncytin-1 is too short and does not make up a complete protein, so it is not plausible that our immune system would cross react and attack the placental protein following vaccination. Additionally, given that there are only 20 different types of amino acid that make up proteins, it is not surprising that many proteins share some similarities. Syncytin-1 shares short amino acid sequences with many proteins, not just the SARS-CoV-2 spike protein.

Dr. Stephanie Langel, an immunologist and expert in maternal and neonatal immunity at Duke University, has [stated](#): "The two proteins share only a minuscule stretch of material; mixing them up would be akin to mistaking a rhinoceros for a jaguar because they are wearing the same collar."

## Where did this claim come from?

The claim that COVID-19 vaccine cause infertility appears to originate from a blog called Health and Money News in December of 2020. The blog's unfounded claims and the misinformation it presented has been shared thousands of times on social media and continues to circulate even though the claim has been [widely debunked](#).

The original post includes comments attributed to Michael Yeadon. The original blog post states that Yeadon is the "Head of Pfizer Research". *This is not true*. Michael Yeadon is *not nor has he ever been the head of Pfizer Research*. He is actually a retired British doctor and former Pfizer employee who has been repeatedly criticized for his [misleading views on coronavirus](#). Additionally, according to his [LinkedIn profile](#), Yeadon worked on allergy and respiratory research for Pfizer - NOT vaccine research and development. Further, he left the company in 2011, eight years before the start of the COVID-19 pandemic.

## Do we have any data on the use of COVID-19 vaccine and infertility?

COVID-19 vaccines are both safe and effective. Over 391 million doses of vaccine have been administered in the U.S. under the most intensive safety monitoring in our [history](#). Results from these monitoring efforts are reassuring that COVID-19 vaccine is [not associated](#) with infertility, as [thousands of women](#) have become pregnant following vaccination. Additionally, the CDC is monitoring over 160,000 pregnant women who have received a COVID-19 vaccine. No unexpected pregnancy or infant outcomes have been [observed](#), including miscarriages, related to COVID-19 vaccination during pregnancy.

Development and reproductive toxicity (DART) studies, which use animal models, were conducted to ensure safety of vaccines prior to use in pregnant women. [Results](#) from DART studies for the Pfizer, Moderna, and Johnson & Johnson COVID-19 vaccines have shown no safety concerns in pregnancy.

It is also important to consider that compared to non-pregnant women with COVID-19 who are the same age, pregnant COVID-19 patients are at [higher risk](#) for ICU admission, use of mechanical ventilation, preterm birth, and death. The [CDC](#), [ACOG](#), and [SMFM](#) have stated that pregnant women should receive COVID-19 vaccine and have strongly refuted the claim that the vaccine may cause infertility.

## Where can I find more information?

There are a number of reputable resources which have addressed the topic of COVID-19 vaccine and infertility. For more information, check out the following links:

- [COVID-19: No evidence that vaccines can affect fertility, says new guidance | The BMJ](#)
- [Medical Experts Continue to Assert that COVID Vaccines Do Not Impact Fertility | ACOG](#)
- [Information about COVID-19 Vaccine for People who Are Pregnant or Breastfeeding | CDC](#)