

The Myths of Covid 19

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During the COVID-19 pandemic, misinformation spread as fast as the virus. Millions of people believed myths about the COVID-19 vaccine, including claims about how the vaccine causes infertility, the presence of microchips in the vaccine, and its unsafe because of its

rapid development (CDC, 2024). While concerns about the COVID-19 vaccine are understandable, the science shows that many of these fears are myths. Natural immunity is not necessarily better than vaccination; there are no tracking chips in the vaccines, the vaccines do not harm fertility, they do not give you COVID-19, and they were developed quickly but safely (CDC, 2024; UCLA Health, 2022; Franck, 2021; State of Delaware, n.d.; UNICEF, 2021).

One common myth is that the vaccine could give you the virus; this myth, like most of the myths that have been spread about the COVID-19 vaccine, was spread on social media like TikTok. According to the CDC (2024), the vaccine helps our bodies develop immunity to the virus without having to get the virus. Instead of a COVID strain in the vaccine, the vaccine uses mRNA, a weakened or inactivated germ created in a lab that triggers an immune response in the individual who got that vaccine. This myth caught traction because many vaccines put a weak strain of the virus in the vaccine to give our bodies the ability to create immunity. However, this has not been done because the COVID-19 virus is too dangerous. (CDC, 2024)

Another widespread myth claims that the vaccine contains microchips for government tracking. Conspiracy theories, viral videos on TikTok, and podcasts like the Joe Rogan Experience fueled this myth. CNBC reported that chips small enough to be put into a vaccine needle do not exist and that no evidence would even humor this myth (Franck, 2021). Along with chips in the vaccine, some people believed this made their arms magnetic, and this myth was a social media trend. (CDC, 2024). When this myth came out I saw things about it everywhere people on the podcasts I listen to were debating if it was true and news reporters were talking about how that it is a myth and giving evidence on why it wasn't true

A more dangerous myth is the claim that natural immunity is better than getting vaccinated; the reason why getting vaccinated is a better choice than natural immunity is that to

get natural immunity, you have to be first infected with the disease, which can lead to becoming severely ill and in some cases dying. However, with the vaccine, you get all the benefits of natural immunity without becoming infected. Another reason it is better to get vaccinated is that, according to UCLA Health (2022), natural immunity only lasts around 20 months. At the same time, some vaccines can protect you from disease for up to 10 years. Many of my coworkers would talk about how they just got Covid and because of that they didn't have to wear a mask because of their natural immunity, I would ask them why they believed that and they would say that they saw it on tiktok or heard about it in a podcast.

Another common myth is that the vaccine is dangerous because it was created too quickly; unlike regular vaccines that could take years to be approved, the COVID vaccine was available in less than 12 months; while this is relatively fast for a vaccine to be approved trackvaccines.org explains that the rapid development of the vaccine was made possible by the creation of other similar viruses like SARS and MERS. There was also massive funding and global collaboration. Billions of dollars from governments and private donors helped researchers move quickly without having to wait for grants as they would typically have to along with the funding; the leading technology in the vaccine is called mRNA, which was used in vaccines for decades, so instead of having to create a whole new vaccine they could adapt this technology and put in the genetic code of the covid 19 virus. (CDC, 2024). I personally have seen this myth in my own life several times, many of my family members believed what they saw on instagram and tiktok and believed that since the vaccine came out within a year of the virus's first infection.

Some people also believe that the vaccine contains unsafe ingredients. The truth is that everything in the vaccine is completely safe and FDA-regulated. The FDA, or the Food and Drug Administration, is a federal agency that oversees the safety and effectiveness of drugs, vaccines,

and other medical products. One of the main components of the vaccine is mRNA, the main active ingredient that tells your body how to recognize and fight diseases. Lipids are just fats that help carry the mRNA to your cells, where they can help fight disease. Salts and Buffers help keep the vaccine at a body's normal PH level and stabilize the vaccine. Sugars help protect the mRNA in the vaccine during storage. There are also some different types of preservatives, but all of them have been tested and regulated by the FDA and CDC (CDC, 2024).

Connected to this myth is that the vaccine can cause infertility. This myth started when someone on TikTok claimed that the protein in the covid 19 vaccine looked like a protein involved in creating the placenta; people were concerned about this because they believed that the antibodies from the vaccine might attack a woman's placenta. However, there is no study to show that this is true. According to research by Delaware's official COVID-19 site, a study was conducted with over 2,000 couples who had taken the vaccine, and the study showed no difference in fertility outcomes. On the flip side, men who got COVID-19 saw their sperm count decrease by 20%, according to the University of Minnesota (2023). So, for fertility, it is better to get vaccinated. I had cousins who were trying to have a children during 2020 and I would over hear them talking about how there may be some vilitdity to the statments that it's affecting fertility and being worried that they would not become pregnant. I would also hear it on a bunch of social media posts blaming not getting pregnant because of the vaccine

The final major myth is that the vaccine changes your DNA. According to UNICEF (2021), this myth started when people confused DNA with RNA and assumed the vaccine was altering their DNA. In reality, mRNA does not enter the nucleus of the cell, where DNA is stored, and it does not interact with your DNA in any way. It simply helps the immune system learn to recognize and fight the virus (CDC, 2024a).

Despite the spread of misinformation about the COVID-19 vaccine online, scientific evidence unequivocally demonstrates that the vaccine is safe and effective. It does not contain microchips, it does not affect fertility, it cannot cause COVID-19, and it was developed quickly but responsibly (CDC, 2024a; CDC, 2024b; Franck, 2021; State of Delaware, n.d.).

Social media played a significant role in spreading misinformation during the COVID-19 pandemic. Sites like Twitter, Facebook, and Instagram were flooded with false claims, conspiracy theories, and misleading content. Although these platforms made some efforts to limit the spread of misinformation, their actions often came too late. Many users believed what they saw online without verifying it, which put them—and others—in harm's way. This shows the need for more strict regulations on these platforms to prevent the sharing of harmful misinformation that can negatively affect public health. Researching this topic opened my eyes to how dangerous misinformation can be and how easily social media influences people. It also made me appreciate the scientific process and the work that goes into ensuring vaccines are safe and effective. Just as we protect our physical health with masks and vaccines, we must also protect our minds by seeking accurate information from trusted scientific sources. If we do this, we can defend ourselves against the flood of misinformation in the media.

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