





### Frequently Asked Questions COVID-19 Vaccines

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ASPHER is deeply concerned about the misleading content circulating on social media platforms on the topic of COVID-19 Vaccines. It is our responsibility to take a step forward and cross verify COVID-19 vaccine myths with facts and answer the public's frequently asked questions.

1. Given their rapid development, can we say that COVID-19 vaccines are unsafe?<sup>1</sup>

Despite their rapid development, COVID-19 vaccines are certified as effective and safe.<sup>1</sup> Vaccines have undergone the equivalent rigorous Food and Drug Administration processes as other vaccines, with clinical trials taking a similar amount of time.<sup>1</sup> "*No steps were skipped*".<sup>1</sup>



#### 2. Will the COVID-19 vaccine alter my DNA?<sup>2</sup>

Both viral vector (AstraZeneca and Johnson & Johnson) and mRNA (Pfizer and Moderna) COVID-19 vaccines "*deliver instructions (genetic material) to our cells to start building protection against the virus that causes COVID-19. However, the material never enters the nucleus of the cell, which is where our DNA is kept*".<sup>2</sup> Therefore, COVID-19 vaccines do not interact with or alter the recipients DNA.<sup>2</sup>

### **3.** During clinical trials, COVID-19 vaccines were not tested against a placebo.<sup>3</sup>

As of the 24th of May 2021, 27 COVID-19 vaccines reached phase 3.<sup>4</sup> Among these, the Pfizer/BioNTech, Moderna, Oxford-AstraZeneca, and Johnson & Johnson vaccines.<sup>4</sup> During phase 3, researchers compare the COVID-19 infection rate between two groups of patients; that is, patients who have received the COVID-19 vaccine candidate and patients who have received a placebo.<sup>3</sup>

# 4. The COVID-19 vaccines violate the Nuremberg Code, which bans medical experiments from being performed on humans without their consent.<sup>3</sup>

The COVID-19 vaccination rollout is in agreement with the Nuremberg Code.<sup>3</sup> Such a code resulted from the medical experiments conducted by the Nazis on concentration camp prisoners without their consent.<sup>3</sup> No medical experiments are being carried out on humans with the COVID-19 vaccines; clinical trials have involved thousands and thousands of participants ascertaining the safety and efficacy of vaccines (question 17).<sup>3</sup> Moreover, regulators have approved their utilisation.<sup>3</sup>

### **5.** Does the COVID-19 vaccine carry a microchip/tracking device or provoke magnetic reactions?<sup>5</sup>

COVID-19 vaccines do not contain microchips/tracking devices and do not provoke magnetic reactions.<sup>5</sup>

Misleading content has been shared on social media platforms claiming that Bill Gates will employ microchips in COVID-19 vaccines to track individuals.<sup>3</sup> Previous research investigated the use of technologies injected in patients' skin to keep a vaccination record.<sup>4</sup> Nonetheless, such technology does not track individuals' movements and has no relation with the COVID-19 vaccine, as mentioned by Bill Gates.<sup>3</sup> Moreover, "a video shared thousands of times on Facebook makes false claims about the products of syringe maker Apiject Systems of America, which has a contract with the government to provide medical-grade injection devices for vaccines. The company has an optional version of its product that contains a microchip within the syringe label that helps providers confirm a vaccine dose's origin. The chip itself is not injected into the person getting the vaccine."



When discussing the use of "digital certificates", mentioned by Bill Gates, these "could be used as part of a larger vaccination effort, but there is no evidence that he or his foundation has created technology to track recipients of a COVID vaccine."<sup>3</sup> Ultimately, regarding magnetic reactions, a video has been diffused showing a woman who sticks a magnet on her vaccinated arm.<sup>5</sup> Nonetheless, there is no evidence that the woman was vaccinated, that the one employed was a magnet, and that no substances such as glue were used to stick the magnet on one arm.<sup>5</sup>

#### 6. COVID-19 vaccines are injected with "disappearing needles".<sup>3</sup>

Such a claim resulted from videos showing the injection of COVID-19 vaccines to health workers during press events.<sup>3</sup> Such injections, which appear to be provided with a syringe with a "disappearing needle", are actually delivered using a retractable syringe.<sup>3</sup> Retractable syringes are typically used to reduce needlepoint injuries and "have been in use for years before the COVID-19 vaccine was introduced".<sup>3</sup>

### 7. Can I get COVID-19 from the vaccine?<sup>1</sup>

"You cannot get COVID-19 from the vaccine because it doesn't contain the live virus."<sup>1</sup>

#### 8. Will I test positive for COVID-19 once I have received the vaccine?<sup>1</sup>

"Viral tests used to diagnose COVID-19 check samples from the respiratory system for the presence of the virus that causes COVID-19".<sup>1</sup> The COVID-19 vaccine does not contain the live virus; therefore, it will not affect the test results.<sup>1</sup> However, it is possible to test positive for COVID-19 if the infection occurred before the vaccine had an adequate amount of time to protect the body.<sup>1</sup>

# **9.** More people will die from the adverse effects of COVID-19 vaccines than the number that would die from the virus.<sup>6</sup>

According to various social media platforms, COVID-19 has a mortality of 1-2% and is it hence unnecessary to vaccinate against COVID-19 given the high survival rates.<sup>6</sup> However, the mortality rate for COVID-19 is 10 times more lethal compared to seasonal flu.<sup>6</sup> Moreover, getting immunised against COVID-19 is not solely a matter of survival.<sup>6</sup> Vaccines prevent the diffusion of COVID-19 in the community and severe forms of COVID-19.<sup>6</sup> Among healthy individuals, the benefits of being immunised against COVID-19 certainly outweigh the risks.<sup>6</sup>



## **10.** Am I at a greater risk of being affected by other illnesses if I receive the COVID-19 vaccine?<sup>1</sup>

The vaccine is made up of mRNA, which boosts your immunity to the coronavirus. It does not heighten your risk to become sick from another infection such as the flu.<sup>11</sup>

### **11.** Do the COVID-19 vaccines contain aborted fetal cells?<sup>7</sup>

No fetal cells are contained in COVID-19 vaccines.<sup>7</sup> Confirmation procedures of the Moderna and Pfizer vaccines conducted to ensure that vaccines function properly, took place utilising fetal cell lines.<sup>7</sup> Nevertheless, "no fetal cell lines were used to manufacture the vaccine, and they are not inside the injection you receive from your doctor".<sup>7</sup>

### **12.** Does the COVID-19 vaccine cause infertility among women?<sup>1</sup>

Social media platforms insinuate that COVID-19 vaccines instruct the human body to attack a protein in the placenta (syncytin-1), potentially leading to infertility.<sup>1</sup> Such allegations are false. *"The truth is, there's an amino acid sequence shared between the spike protein and a placental protein; however, experts say it's too short to trigger an immune response and therefore doesn't affect fertility."* 

### **13.** Some Muslims are concerned over the Halal status and the presence of alcohol in COVID-19 vaccines.

According to the British Islamic Medical Association, the majority of scholars worldwide have ascertained the halal status of the majority of COVID-19 vaccines.<sup>8</sup> Specifically, no pork or animal products and derived cells are contained in the Pfizer and AstraZeneca vaccines.<sup>8</sup> The British Islamic Medical Association also concludes that the presence of ethanol in the AstraZeneca vaccine is negligible and as it is less than the level present in a slice of bread.<sup>8</sup>

### 14. I already had COVID-19, and I have recovered, so I don't need to get a COVID-19 vaccine when it is available.<sup>9</sup>

There is a lack of information concerning the amount of time one is protected from COVID-19 after infection.<sup>9</sup> Natural immunity, which results from infection, varies between individuals, with some studies suggesting it has a short duration and reports showing evidence of reinfection.<sup>1,9</sup> Individuals who had COVID-19 may hence benefit from the vaccine.<sup>1</sup>

Mayo Clinic advises that individuals who "had COVID-19 should delay vaccination until about 90 days from diagnosis. People should not get vaccinated if in quarantine after exposure or if they have COVID-19 symptoms."<sup>9</sup>



### **15.** I'm not at risk for severe complications of COVID-19 so I don't need the vaccine.<sup>1</sup>

It is crucial to take the COVID-19 vaccine when available, independently of the risk of contracting COVID-19.<sup>1</sup> Vaccines not only provide personal protection but also protect your family, friends and community.<sup>1</sup>

### **16.** Is it safe for me to get the COVID-19 vaccine if I am pregnant or breastfeeding?

According to the CDC, "pregnant people are more likely to get severely ill with COVID-19 compared with non-pregnant people. If you are pregnant, you can receive a COVID-19 vaccine. Getting a COVID-19 vaccine during pregnancy can protect you from severe illness from COVID-19".<sup>10</sup> Furthermore, the CDC claims that "based on how these vaccines work in the body, experts believe they are unlikely to pose a risk for people who are pregnant".<sup>10</sup> Nonetheless, the CDC recognises the lack of research in the field.<sup>10</sup> The data emerged thanks to the surveillance system in place during the vaccination rollout which "did not identify any safety concerns for pregnant people who were vaccinated or for their babies".<sup>10</sup>

The CDC mentions that "lactating people can receive a COVID-19 vaccine".<sup>10</sup> Furthermore, "recent reports have shown that breastfeeding people who have received COVID-19 mRNA vaccines have antibodies in their breastmilk, which could help protect their babies".<sup>10</sup> However, more data is needed in the latter case.<sup>10</sup>

Getting vaccines is a personal choice.<sup>10</sup> Talk with your healthcare provider in case of major concerns.<sup>10</sup>

### **17.** How long should I wait from when I have been sick with COVID-19 to receive the vaccine?

"*Experts recommend that you wait until you are fully recovered from your infection and are no longer in isolation before you receive a COVID-19 vaccine.*"<sup>11</sup>

#### **18.** Can I get COVID-19 vaccine at the same time as another vaccine?<sup>12</sup>

It would be recommendable to wait 14 days between the injection of the COVID-19 and any other vaccine.<sup>12</sup>

#### **19.** What about the side effects of COVID-19 vaccines?

After vaccination, normal reactions include redness, pain, and swelling at the injection site, headache, fever, chills, fatigue, and aching limbs.<sup>13</sup> These reactions are short-lasting (usually a couple of days) and are similar to those that occur with other vaccines.<sup>13</sup> Such reactions occur as the body generates antibodies against COVID-19, showing that the vaccine is stimulating an immune response.<sup>13</sup>



#### **20.** Does the COVID-19 vaccine result in long-term adverse effects?<sup>14</sup>

Experience in the vaccination field *"tells us that severe side effects are extremely rare and if they if do occur, they usually happen within the first two months"*.<sup>14</sup> It is also essential to keep in mind that the technologies employed to develop COVID-19 vaccines have been utilised previously without problems.<sup>14</sup> Ultimately, to ascertain the presence of adverse reactions, clinical trials took place.<sup>14</sup> Additionally, mandatory continuous monitoring is being conducted during the vaccine rollout to detect if any more rare adverse effects occur.<sup>14</sup>

### **21.** Do COVID-19 vaccines have severe side effects such as allergic reactions?<sup>1</sup>

Individuals might have allergic reactions to the components present in COVID-19 vaccines.<sup>1</sup> However, this is very rare. Experts recommend that *"individuals with a history of severe allergic reactions — such as anaphylaxis — to the ingredients of the vaccine should not get the vaccination"*.<sup>1</sup>

It is pivotal to discuss with your GP all concerns regarding the vaccine and its safety based on your allergy history.

#### **22.** I am allergic to eggs. Should I get the COVID-19 vaccine?<sup>15</sup>

Eggs are not contained and were not employed in the production of the Pfizer, Moderna, and AstraZeneca vaccines.<sup>15</sup> *None of the vaccines are contraindicated in egg allergy*<sup>7,15</sup> Nonetheless, individuals with severe allergies should be observed for 30 minutes following immunisation.<sup>6</sup>

#### 23. Is it compulsory to get immunised against COVID-19?

Normally vaccine acceptance is voluntary. Any mandatory recommendation of COVID-19 vaccines depends on national policies, such as to protect healthcare workers and their patients.

### 24. How can I protect myself and others against COVID-19 until I receive a vaccine?

To protect yourself, follow the following recommendations:

- "Wear a mask that covers your nose and mouth to help protect yourself and others.
- *Stay 6 feet apart from others who don't live with you.*
- *Get a COVID-19 vaccine when it is available to you.*
- Avoid crowds and poorly ventilated indoor spaces.
- Wash your hands often with soap and water. Use hand sanitizer if soap and water aren't available<sup>".16</sup>



## **25.** Can I stop following COVID-19 guidance (i.e. mask-wearing, physical distancing, handwashing, etc.) once I receive the COVID-19 vaccine?<sup>1</sup>

All COVID-19 prevention measures remain pivotal given the lack of evidence on the number of people required to reach herd immunity, the duration of COVID-19 vaccines, and the effectiveness of COVID-19 vaccines against variants and in preventing transmission.<sup>17</sup> Additionally, individuals with weakened immune systems may not develop antibodies following vaccination.<sup>17</sup>

#### **26.** Why can a person vaccinated for COVID-19 still spread the virus?

The vaccine is very effective in protecting against the disease. It also protects against infection, although not as strongly, since there is a possibility that the vaccinated person could become infected and transmit the virus.

We must keep in mind that to infect is to transmit the virus, not the disease. When we become infected, we can potentially be asymptomatic carriers of SARS-Cov2 or COVID-19 patients, and in both cases, transmit the virus to people who may be carriers or become ill. But it is very important to know that, even if sterilizing immunity is not completely achieved, vaccines are effective because they reduce the risk of infection and, consequently, the probability of transmitting the virus to other people. This means less contagion, less disease, fewer sequelae and fewer deaths. This risk reduction is necessary as an essential measure to fight the pandemic.

When a person is vaccinated, the risk of infection and the probability of transmission is reduced by X percentage. The way to further reduce that probability is by increasing the number of people vaccinated. It is as simple as that.

Only herd immunity has the potential to fully protect us against the disease as well as the virus.

#### References

- 1. The COVID-19 Vaccine: Myths Versus Facts [Internet]. Missouri University Health Care. [cited 2021May23]. Available from: <u>https://www.muhealth.org/our-stories/covid-19-vaccine-myths-vs-facts#:~:text=Myth%3A%20The%20COVID%2D19%20vaccine,vaccines%2C%20</u> meeting%20all%20safety%20standards
- 2. CDC. Myths and Facts about COVID-19 Vaccines [Internet]. Centers for Disease Control and Prevention. Centers for Disease Control and Prevention; 2021 [cited 2021May23]. Available from: https://www.cdc.gov/coronavirus/2019-ncov/vaccines/facts.html
- 3. HealthGuard. The Top COVID-19 Vaccine Myths Spreading Online [Internet]. Encyclopædia Britannica. Encyclopædia Britannica, inc.; 2021 [cited 2021May23]. Available from: https://www.britannica.com/list/the-top-covid-19-vaccine-myths-spreading-online
- 4. Zimmer C, Corum J, Wee S-lee. Coronavirus Vaccine Tracker [Internet]. The New York Times. The New York Times; 2020 [cited 2021May24]. Available from: https://www.nytimes.com/interactive/2020/science/coronavirus-vaccine-tracker.html



- Fauzia M. Fact check: COVID-19 vaccines don't cause magnetic reactions or contain tracking devices [Internet]. USA Today. Gannett Satellite Information Network; 2021 [cited 2021May23]. Available from: <u>https://eu.usatoday.com/story/news/factcheck/2021/05/12/factcheck-covid-19-vaccines-dont-contain-tracking-devices/5037132001/</u>
- 6. COVID-19 vaccine myths debunked [Internet]. Mayo Clinic Health System. 2020 [cited 2021May23]. Available from: <u>https://www.mayoclinichealthsystem.org/hometown-health/featured-topic/covid-19-vaccine-myths-debunked</u>
- Person. You asked, we answered: Do the COVID-19 vaccines contain aborted fetal cells? [Internet]. Nebraska Medicine. Nebraska Medicine; 2021 [cited 2021May25]. Available from: <u>https://www.nebraskamed.com/COVID/you-asked-we-answered-do-the-covid-19-vaccines-contain-aborted-fetal-cells</u>
- 8. Latest COVID19 Advice for British Muslims [Internet]. Muslim Council of Britain (MCB). 2021 [cited 2021May26]. Available from: <u>https://mcb.org.uk/resources/coronavirus/#vaccine</u>
- Weiss C. Mayo Clinic Q and A: COVID-19 vaccine myths [Internet]. Mayo Clinic. Mayo Foundation for Medical Education and Research; 2020 [cited 2021May23]. Available from: https://newsnetwork.mayoclinic.org/discussion/mayo-clinic-q-and-a-covid-19-vaccine-myths/
- 10. CDC. COVID-19 Vaccines While Pregnant or Breastfeeding [Internet]. Centers for Disease Control and Prevention. Centers for Disease Control and Prevention; 2021 [cited 2021May26]. Available from: <u>https://www.cdc.gov/coronavirus/2019-ncov/vaccines/</u> recommendations/pregnancy.html#:~:text=Based%20on%20how%20these%20vaccines%20 work%20in%20the%20body%2C%20COVID,receive%20a%20COVID%2D19%20vaccine
- Bader T. Recovered from COVID-19? Why You Still Need a Vaccine COVID-19, Health Topics [Internet]. Hackensack Meridian Health. 2021 [cited 2021May25]. Available from: <u>https://www.hackensackmeridianhealth.org/HealthU/2021/01/20/recovered-from-covid-19-</u> why-you-still-need-a-vaccine/
- 12. Can I get the COVID-19 vaccine at the same time as another vaccine? [Internet]. ICSI. 2021 [cited 2021May25]. Available from: <u>https://www.icsi.org/covid-19-vaccine-faq/can-i-get-the-covid-19-vaccine-at-the-same-time-as-another-vaccine/</u>
- Freund A. COVID-19: Risks and side effects of vaccination [Internet]. DW.COM. 2021 [cited 2021May25]. Available from: <u>https://www.dw.com/en/covid-19-risks-and-side-effects-of-vaccination/a-56136620</u>
- 14. How Do We Know the COVID-19 Vaccine Won't Have Long-Term Side Effects? [Internet]. Missouri University Health Care. [cited 2021May25]. Available from: <u>https://www.muhealth.org/our-stories/how-do-we-know-covid-19-vaccine-wont-have-long-term-side-effects</u>
- 15. Covid-19 Vaccines and Allergies [Internet]. Anaphylaxis Campaign. 2021 [cited 2021May23]. Available from: <u>https://www.anaphylaxis.org.uk/covid-19-advice/pfizer-covid-19-vaccine-and-allergies/#:~:text=Do%20the%20COVID%2D19%20vaccines,are%20contra indicated%20in%20egg%20allergy</u>
- 16. CDC. How to Protect Yourself & Others [Internet]. Centers for Disease Control and Prevention. Centers for Disease Control and Prevention; 2021 [cited 2021May25]. Available from: <u>https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html</u>
- 17. CDC. When You've Been Fully Vaccinated [Internet]. Centers for Disease Control and Prevention. Centers for Disease Control and Prevention; 2021 [cited 2021May20]. Available from: <u>https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated.html</u>