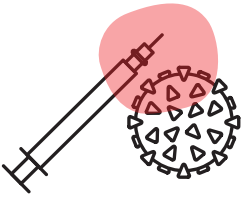


COVID FAQs: VACCINES

A compilation of some of the most common questions about COVID-19 vaccines



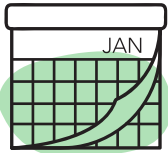
Can the mRNA vaccine cause COVID-19?

No. Both the Moderna and Pfizer/BioNTech vaccines use viral RNA to produce a small exterior protein of the virus. This protein does not contain any mechanism to introduce any part of the virus that can cause COVID-19.



What about the immediate side effects of the mRNA shot?

This is known as reactogenicity. This is the response your body has to foreign material being presented to the immune system. It quickly reacts to the viral RNA and ramps up production of specialized antibodies. Most vaccines have a certain reactogenic profile: soreness, fatigue, fever, etc. This just means it's doing what it is supposed to: creating an immune response in your body. Think about it like how mouthwash burns because of the alcohol and intense mint flavor and how rubbing alcohol stings on cuts. Some people may experience allergic reactions due to some components of the vaccine. Most can be alleviated with an over-the-counter antihistamine but some may require an epinephrine injection. Those with severe allergies are recommended to speak with their doctors about the vaccine.



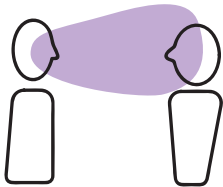
Are there any long term side effects to worry about?

No. This is true for vaccines in general. Due to the nature of vaccines, pathogenic subunits are efficiently broken down by the immune system and have no long lasting effects other than conferred immunity.



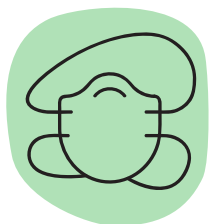
How was this mRNA vaccine developed so quickly?

To say that biomedical technology has advanced in the last few years is an understatement. mRNA is a new class of therapeutics that allow for fast production after we determine what the virus is made of. It's able to leverage natural processes in our body to quickly produce an immune response. The prevalence of COVID-19 is also to thank for the amount of data generated in clinical trials. Drug trials are measured by clinical endpoints, in the case of vaccine trials they are the amount of people who end up with the disease after a set amount of time or a certain amount of cases are recorded. These trials are split into two groups, a treatment group and a placebo group. Both vaccine trials showed that people in the treatment groups were diagnosed with COVID-19 at a much lower rate than the placebo group. There are also large amounts of vaccine trial units (VTUs) all over the country and world that are dedicated to clinical vaccine trials. This allows for the swift recruitment of a large amount of volunteers that represent different ages, genders, races, and health conditions.



If I take the vaccine can I still spread COVID-19 to others?

Yes, because infection can still occur even after vaccination but symptoms may not manifest due to the swift immune response. This means you can be infected and spreading it without knowing. The Pfizer/BioNTech and Moderna vaccines are up to 95% effective against COVID-19 and peak antibody levels are observed at least 7 days after the second dose. With these vaccines, there is still at least a 5% chance of getting infected.



If I get the vaccine, do I still need to wear a mask and physically distance?

Yes. As outlined above, it's still possible to spread the virus to others so wear a mask and physically distance to protect others and your community.

