

*With the facts, we can all make informed decisions about our health.*

## **A Discussion Guide About Rumors that the COVID-19 Vaccines Can Change Your DNA:**

- From the moment the COVID-19 vaccines were authorized by the FDA for emergency use by in the United States, many people have worried that the mRNA COVID-19 vaccines are unsafe and can do things like change an individual's DNA.
- While mRNA vaccines may have just become a household name, researchers have been studying and developing them for years.
- The COVID-19 mRNA vaccines, which currently include the Pfizer-BioNTech and Moderna vaccines, are safe, effective and certainly do NOT change your DNA.
- mRNA stands for “messenger RNA” – and it gives instructions to your body to fight off the virus.
- Vaccines are like a set of instructions for your body and your body's cells. The instructions never enter the nucleus of the cell, where DNA is located.
- The vaccines tell your body to make an immune response to the virus – this is how they protect you.
- The COVID-19 vaccine itself breaks down and falls apart in the body right away. As soon as this information is delivered to your cells, it gets removed, or clears, from your body.
- This means the vaccine breaks down and falls apart in your body right away – it does not linger!
- COVID-19 was not the first “coronavirus” that scientists have extensively studied.
- Research began in 1989, and the first mRNA vaccines were developed in the 1990s.
- This type of vaccine has been studied before for the flu, Zika, rabies and more.
- As soon as information about COVID-19 was available, scientists began designing the mRNA vaccine to combat the virus in the United States.
- Identifying the virus' “code” was a final, important factor that allowed COVID-19 vaccines to be developed in January 2020. This was *before* COVID-19 was even declared to be a global pandemic in the United States.
- It's important to know that all COVID-19 vaccines authorized for emergency use in the United States have proven extremely effective at preventing serious illness, hospitalization and death from COVID-19.
- The effectiveness of all of the COVID-19 vaccines available in the United States, including the two mRNA vaccines, Pfizer-BioNTech and Moderna, remain strong even against newer strains, including the Delta variant.

It's OK to have questions, and that's why we want to make sure you have the information you need to get good answers.

## Frequently Asked Questions:

**Question: Can the COVID-19 vaccine give you COVID?**

**Answer: The COVID-19 vaccine cannot give you COVID.**

None of the vaccines are made up of material that can cause the disease. In fact, the vaccine is your **greatest protection against COVID-19**. You may experience minor symptoms following your COVID-19 vaccine, including a sore arm, fever or chills. Vaccines safely increase your body's natural ability to fight the virus before the virus attacks you. And remember, millions of New Yorkers, Americans and people all over the world have received the vaccine already.

**Question: What about my personal information?**

**Answer: Your privacy and personal information are protected at all times.**

- Nothing in the vaccine can be tracked – the protein your body makes cannot be tracked and it disappears after it finishes making you stronger.
- Personal information about your vaccination and health is protected at all times.
- We do not send any personal information to the CDC or ICE when vaccinations are given.

**Question: How can I be sure that the COVID-19 vaccines do not change my DNA?**

**Answer: The COVID-19 vaccines do not change or interact with your DNA in any way.**

Both mRNA (Pfizer-BioNTech and Moderna) and viral vector (Janssen/Johnson & Johnson) COVID-19 vaccines deliver instructions to our cells. However, the instructions never enter the *nucleus* of the cell, where DNA is located.

They tell our cells to start building protection against the virus that causes COVID-19. The vaccine itself breaks down and falls apart in the body right away. As soon as this information is delivered to your cells, it gets removed, or clears. This means the vaccine breaks down and falls apart in your body right away – it will not linger.

**Question: What happens inside my body when I get a vaccine, such as a COVID-19 vaccine?**

**Answer: Vaccines teach our cells how to make a protein. This protein, or piece of the protein, will trigger an immune response in your body.**

The process is sometimes called either a blueprint or instructions. The body uses this information to create a protection response to keep you safe from the virus. The vaccine itself then breaks down and falls apart in the body right away.

**Question: I don't understand how vaccines work. How do I know they aren't harming my body?**

**Answer: Vaccines are instructions for your body's cells that teach your body to make an immune response.**

Vaccines cannot interact with -- or do anything to -- the DNA of your cells. Human cells break down and get rid of the vaccine ingredients soon after they use the instructions. The vaccine itself breaks down and falls apart in the body right away.

As soon as the information is delivered to your cells, the parts of the vaccine are excreted from your body and don't linger. This is what makes vaccines safe.

**Question: Do COVID-19 vaccines contain animal-based ingredients?**

**Answer: No, there are no animal-based ingredients in any of the COVID-19 vaccines available in the United States.**

The Moderna, Pfizer-BioNTech and Janssen/Johnson & Johnson COVID-19 vaccines contain no human or animal products, preservatives or adjuvants and utilize no ingredients of human or animal origin.