



Here's why we know COVID-19 vaccine ingredients are safe: Suggested talking points

- **DNA fragments are present in all vaccines, but they cannot change our bodies' DNA.**
 - Scientists use cells to produce vaccines, and those cells contain DNA. When our bodies are exposed to DNA fragments in vaccines, [our bodies destroy them](#).
 - It is biologically impossible for DNA fragments in vaccines to change our own DNA because they lack the mechanism required [to enter the cell nuclei](#), where our DNA lives.
 - Regulators around the world agree that the level of DNA fragments in COVID-19 vaccines is well below the acceptable limit.
- **Lipid (fat) nanoparticles in mRNA COVID-19 vaccines are safe.**
 - mRNA is fragile, so it needs to be surrounded by fat bubbles called lipid nanoparticles in order to travel throughout the body and [teach our cells how to protect against COVID-19](#).
 - Lipid-based drug delivery systems have been studied for [more than 40 years](#) and have been determined to be safe. Without them, COVID-19 vaccines [would not exist](#).
 - Lipid nanoparticles in COVID-19 vaccine are cleared from the body within days.
- **There is strong evidence that COVID-19 vaccines do not cause cancer.**
 - Florida's surgeon general and others have falsely claimed that mRNA COVID-19 vaccines contain SV40, a virus that has been suspected of causing cancer.
 - The SV40 virus is not present in COVID-19 vaccines, but a piece of SV40's DNA sequence was [used as "starting material"](#) to develop COVID-19 vaccines.
 - This sequence has been used to develop other vaccines, such as the flu vaccine, which has been safely administered for decades.



Florida surgeon general's false claims about COVID-19 vaccines: A timeline

The CDC and FDA responded to Florida Surgeon General Joseph Ladapo's previous [claims](#) in March 2023 by calling them "incorrect, misleading, and ... harmful to the American public." The latest conversation between Ladapo and federal officials can be confusing to follow. Below, we've provided an outline of what has occurred in December 2023 and January 2024 with links and documentation to how the CDC and FDA have responded.

- **December 6, 2023:** Ladapo sends a letter to FDA falsely claiming that COVID-19 vaccines can [change our bodies' DNA](#) and raising unfounded concerns about the presence of lipid nanoparticles and SV40 sequences.
- **December 14, 2023:** The FDA responds to Ladapo's letter by saying: "We would like to make clear that based on a thorough assessment of the entire manufacturing process, FDA is confident in the quality, safety, and effectiveness of the COVID-19 vaccines. The agency's benefit-risk assessment and ongoing safety surveillance demonstrate that the benefits of their use outweigh their risks. Additionally, with over a billion doses of the mRNA vaccines administered, no safety concerns related to residual DNA have been identified." [Read the full statement here.](#)
- **January 3, 2024:** In an official [bulletin](#), Ladapo calls for a halt in the use of mRNA COVID-19 vaccines, continuing to cite false claims that COVID-19 vaccines can change our bodies' DNA and that COVID-19 vaccine ingredients are dangerous to our health.
 - In response, an FDA spokesperson issued the following statement to the press: "With over a billion doses of the mRNA vaccines administered and following very careful review of all the available scientific evidence, the FDA has not identified safety concerns related to the sequence of, or amount of, residual DNA. In general, while concerns have been raised previously as theoretical issues, the available scientific evidence regarding the mRNA vaccines strongly supports the conclusion that the vaccines are safe and effective and have a highly favorable profile of benefit to risk. Additionally, it is simply a fact that millions of lives have been saved because of the COVID-19 mRNA vaccines, which most Americans undergoing vaccination have received."