



# Moderna COVID-19 Vaccine (also known as Spikevax): Overview and Safety

Updated July 14, 2022

## Recommended for People Ages 6 Months and Older

Learn about the recommended timing between Moderna COVID-19 primary series vaccines and boosters for:

[Ages 18 and Older](#)

[Ages 12–17](#)

[Ages 11 and Under](#)

[Immunocompromised](#)

Use [CDC's COVID-19 booster tool](#) to learn if and when you can get boosters to stay up to date with your COVID-19 vaccines.

## General Information

**Manufacturer:** ModernaTX, Inc.

**Name:** mRNA-1273

**Type of Vaccine:** [mRNA](#)

**Brand name:** Spikevax

**How Given:** Shot in the muscle of the upper arm

**Does NOT Contain:** Eggs, preservatives, latex, metals

[View full list of ingredients below](#)

## Moderna (Spikevax) Name Change

Moderna (Spikevax) COVID-19 vaccine received U.S. Food and Drug Administration (FDA) approval on January 31, 2022, for individuals ages 18 years and older. Once vaccines are approved by the FDA, companies can market the vaccines under brand names. Spikevax is the brand name for the Moderna COVID-19 vaccine. The FDA-authorized Moderna COVID-19 vaccine for individuals ages 18 years and older will now be marketed as Spikevax. **No change has been made to the vaccine's formula** with the name change. The Moderna vaccine name remains for individuals ages 6 months to 17 years since the vaccine is authorized (but not yet approved) for this age group.

## Safety Data Summary

- COVID-19 vaccines have undergone—and will continue to undergo—the most intensive safety monitoring in U.S. history. Evidence from the hundreds of millions of COVID-19 vaccines already administered in the United States, and the billions of vaccines administered globally, demonstrates that they are [safe](#) and [effective](#).
- [Side effects](#) that happen within 7 days of getting vaccinated are common but are mostly mild. Some people have reactions that affect their ability to do daily activities.

- Side effects throughout the body (such as fever, chills, tiredness, and headache) are more common after the second dose of the vaccine.
- [Severe allergic reactions](#) to vaccines are rare but can happen.
- There is a rare risk of [myocarditis and pericarditis](#) associated with mRNA COVID-19 vaccination, mostly among males ages 12 through 39 years. The rare risk may be further reduced with a longer interval between the first and second dose. Learn more about [the timing for your second dose](#).

Learn more about [vaccine safety monitoring](#) after a vaccine is authorized or approved for use.

## How Well the Vaccine Works

- Vaccines reduce the risk of COVID-19, including the risk of severe illness and death among people who are fully vaccinated.
- [COVID-19 vaccines](#) are effective, but studies have shown vaccine protection declines over time — especially with the [Omicron variant](#). Learn more about getting a [booster shot](#) to enhance or restore protection against COVID-19.
- All FDA-approved or authorized COVID-19 vaccines provide substantial protection against COVID-19 hospitalization and death.
- CDC will continue to provide updates as we learn more.

Learn about Moderna’s COVID-19 vaccine [clinical trial information for children and teens 6 months through 17 years of age](#) [↗](#) and [clinical trial information for people 18+](#) [↗](#).

## Moderna COVID–19 Vaccine Ingredients

All COVID-19 vaccine ingredients are safe. Nearly all the ingredients in COVID-19 vaccines are ingredients found in many foods —fats, sugars, and salts. The Moderna COVID-19 vaccine also contains a harmless piece of messenger RNA (mRNA). The COVID-19 mRNA [teaches cells](#) in the body how to create an effective [immune response](#) to the virus that causes COVID-19. This response helps protect you from getting sick with COVID-19 in the future. After the body produces an immune response, it discards all the vaccine ingredients, just as it would discard any substance that cells no longer need. This process is a part of normal body functioning.

All [COVID-19 vaccines](#) are manufactured with as few ingredients as possible and with very small amounts of each ingredient. Each ingredient in the vaccine serves a specific purpose as seen in the table below.

To learn about Moderna COVID-19 vaccine dosing for different age groups, please visit the [Moderna clinical information](#) page.

## Full list of ingredients

The Moderna COVID-19 vaccine contains the following ingredients:

Type of Ingredient	Ingredient	Purpose
Messenger ribonucleic acid (mRNA)	<ul style="list-style-type: none"> <li>• Nucleoside-modified mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2</li> </ul>	<ul style="list-style-type: none"> <li>• Provides instructions the body uses to build a harmless piece of a protein from the virus that causes COVID-19. This protein causes an immune response that helps protect the body from getting sick with COVID-19 in the future.</li> </ul>

Lipids (fats)	<ul style="list-style-type: none"> <li>• PEG2000-DMG: 1,2-dimyristoyl-rac-glycerol, methoxypolyethylene glycol</li> <li>• 1,2-distearoyl-sn-glycero-3-phosphocholine</li> <li>• BotaniChol® (non-animal origin cholesterol)</li> <li>• SM-102: heptadecane-9-yl 8-((2-hydroxyethyl) (6-oxo-6-(undecyloxy) hexyl amino) octanoate</li> </ul>	<ul style="list-style-type: none"> <li>• Work together to help the mRNA enter cells.</li> </ul>
Salt, sugar, acid stabilizers, and acid	<ul style="list-style-type: none"> <li>• Sodium acetate</li> <li>• Sucrose (basic table sugar)</li> <li>• Tromethamine</li> <li>• Tromethamine hydrochloride</li> <li>• Acetic acid (the main ingredient in white household vinegar)</li> </ul>	<ul style="list-style-type: none"> <li>• Work together to help keep the vaccine molecules stable while the vaccine is manufactured, frozen, shipped, and stored until it is ready to be given to a vaccine recipient.</li> </ul>

## Ingredients that are NOT used in COVID-19 vaccines

The above table lists ALL ingredients in the Moderna COVID-19 vaccine. There are NO ingredients in this vaccine beyond what is listed in the table. The Moderna COVID-19 vaccine has:

- **No preservatives** such as thimerosal or mercury or any other preservatives.
- **No antibiotics** such as sulfonamide or any other antibiotics.
- **No medicines or therapeutics** such as ivermectin or any other medications.
- **No tissues** such as aborted fetal cells, gelatin, or any materials from any animal.
- **No food proteins** such as eggs or egg products, gluten, peanuts, tree nuts, nut products, or any nut byproducts (COVID-19 vaccines are not manufactured in facilities that produce food products).
- **No metals** such as iron, nickel, cobalt, titanium, rare earth alloys, or any manufactured products like microelectronics, electrodes, carbon nanotubes or other nanostructures, or nanowire semiconductors.
- **No latex.** The vial stoppers used to hold the vaccine also do not contain latex.

### Related Pages

- › [Possible Side Effects](#)
- › [Safety of COVID-19 Vaccines](#)
- › [Benefits of Getting Vaccinated](#)
- › [How Vaccines Work](#)
- › [mRNA Vaccines](#)



### For Healthcare Workers

[Moderna COVID-19 Vaccine](#): General information, schedule and administration overview.

### More Information

[Understanding mRNA COVID-19 Vaccines](#)

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[Ensuring COVID-19 Vaccine Safety in the US](#)

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[Vaccines and Related Biological Products Advisory Committee Meeting \[701 KB, 54 Pages\] !\[\]\(2bdfe261b986065ee0ac76460d6528c9\_img.jpg\)](#)

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