## What ingredients are in the Moderna vaccine?

# Moderna (Spikevax) vaccine is made up of active ingredient, lipids, amino acids, salts, acetic acids, sugars and waters. 

## What is the active ingredient?

## 这 mRNA

mRNA (messenger ribonucleic acid) is
where a code for part of the genetic material for the virus is stored.

The mRNA will assist in teaching your own body how to develop an immune response to the COVID-19 virus.

## What is the active ingredient?

mRNA vaccines are quite new
compared to other types of vaccines, but have been in development for decades.

## Examples include flu (influenza), rabies and HIV (human immunodeficiency virus).

## What do the lipids \& amino acids do?



Lipids: are used to help the active ingredient to move into cells. They don't dissolve in water like fats, waxes and oils.


Amino Acids: are used to stabilise the vaccine and make sure it stays good when transported and stored.

## What do salts and acetic acid do?

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Salts: help balance out acidity so it is better stored and similar with the body tissue it is injected into.


Acetic acid: is what makes vinegar sour.

What do the sugars \& water do?


Sugars: stop the molecules from losing their shape during the intense freezing process.


Water: most of the vaccines are made from water to make it easier to inject.

## List of ingredients for the Moderna vaccine:

Active ingredients
One dose ( 0.5 mL ) contains 100 micrograms of messenger RNA (mRNA) (embedded in SM-102 lipid nanoparticles).

Other ingredients (Excipients)

- Heptadecan-9-yl 8-[2-hydroxyethyl-(6-oxo-6undecoxyhexyl)amino]octanoate
- Cholesterol (Lipids)
- Distearoylphosphatidylcholine (Lipids)
- 1,2-dimyristoyl-rac-glycero-3-methoxypolyethylene glycol2000 (Lipids)
- Trometamol (Amino Acids)
- Trometamol hydrochloride (Amino Acids)
- Acetic acid (Acetic acids)
- Sodium acetate trihydrate (Salts)
- Sucrose (Sugars)
- Water for injections (Waters)


## For more information:

Theraputic Goods Association (TGA)

- https://www.tga.gov.au/covid-19-vaccine-information-consumers-and-healthprofessionals\#ingredients

Queensland Health

- https://www.health.qld.gov.au/news-events/news/whats-really-in-a-covid-19vaccine

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