# 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?



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.



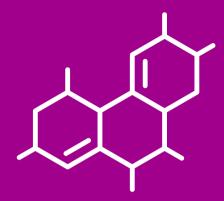
## What is the active ingredient?

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?



**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 glycol-2000 (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-vaccineinformation-consumers-and-healthprofessionals#ingredients

### **Queensland Health**

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



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