



CÉCILE MEIER • SENIOR JOURNALIST

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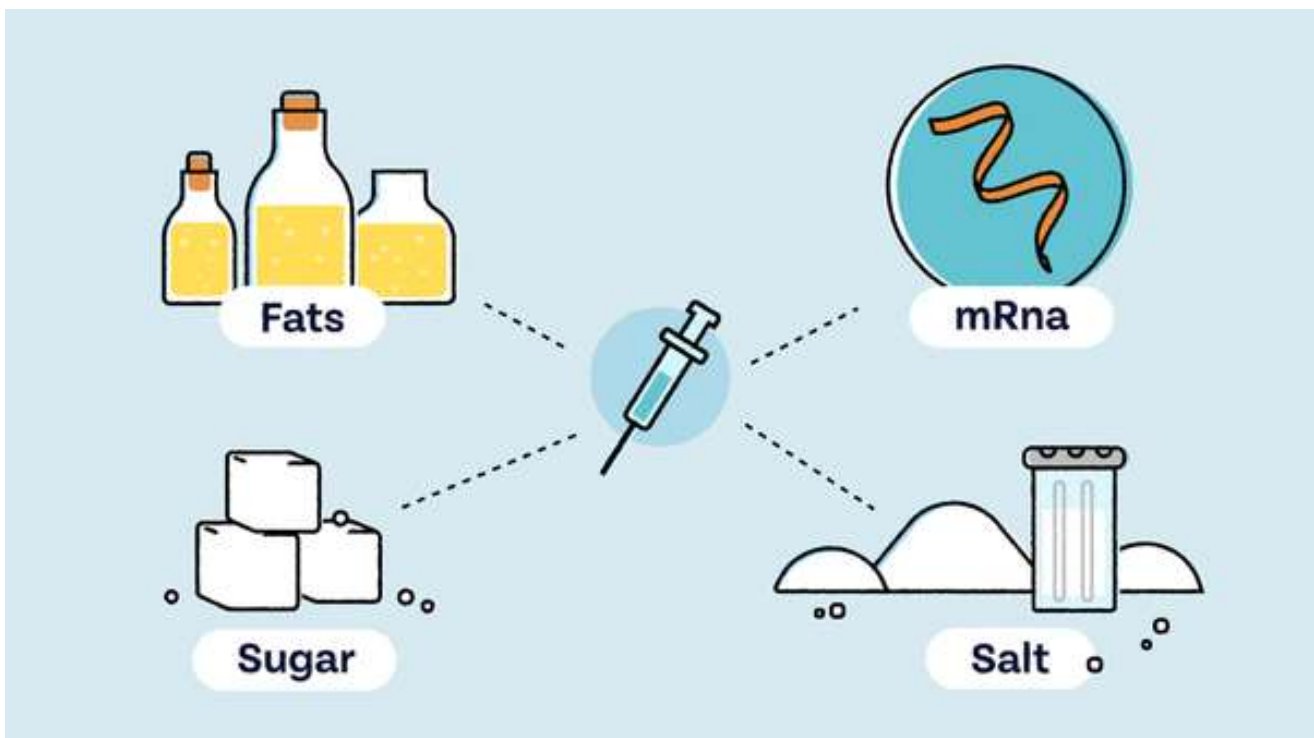
Fats, salts, sugar and the actual ingredient that protects you. These are the only ingredients in the Pfizer Covid-19 vaccine.

The list of what's in the Comirnaty (Pfizer) Covid-19 vaccine looks a little more complicated than a cake recipe, but did you know some vaccine ingredients are commonly found in your pantry?

The Pfizer vaccine is a [mRNA-based](#) vaccine. These vaccines use a chemical messenger (the mRNA, or messenger ribonucleic acid) to teach our immune system to [recognise and attack the virus](#).

The mRNA never enters the nucleus of cells, where our genetic material is kept. Our cells destroy the mRNA soon after they have finished reading the instructions it delivers.

Synthetic mRNA, which is the Pfizer vaccine's active ingredient, is very fragile on its own. This is why the vaccine needs to be stored long term at very cold temperatures, such as -90 degrees Celsius to -60C.



Tiny bubbles of fat surround the mRNA like a protective wall, helping to transport and protect it. These are known as lipid nanoparticles. There are four different lipids in the Pfizer vaccine. One is cholesterol.

Salts ensure the vaccine pH is close to that of human cells, preventing it from damaging our cells when the vaccine is administered. There are four salts in the Pfizer vaccine; one of them is table salt.

Sugar - yes, bog-standard sugar - protects the bubbles of fat from sticking together or to the sides of the vaccine vial.

There you have it: synthetic messenger RNA, fats, salts and sugar. These are the only ingredients in the Pfizer Covid-19 vaccine.

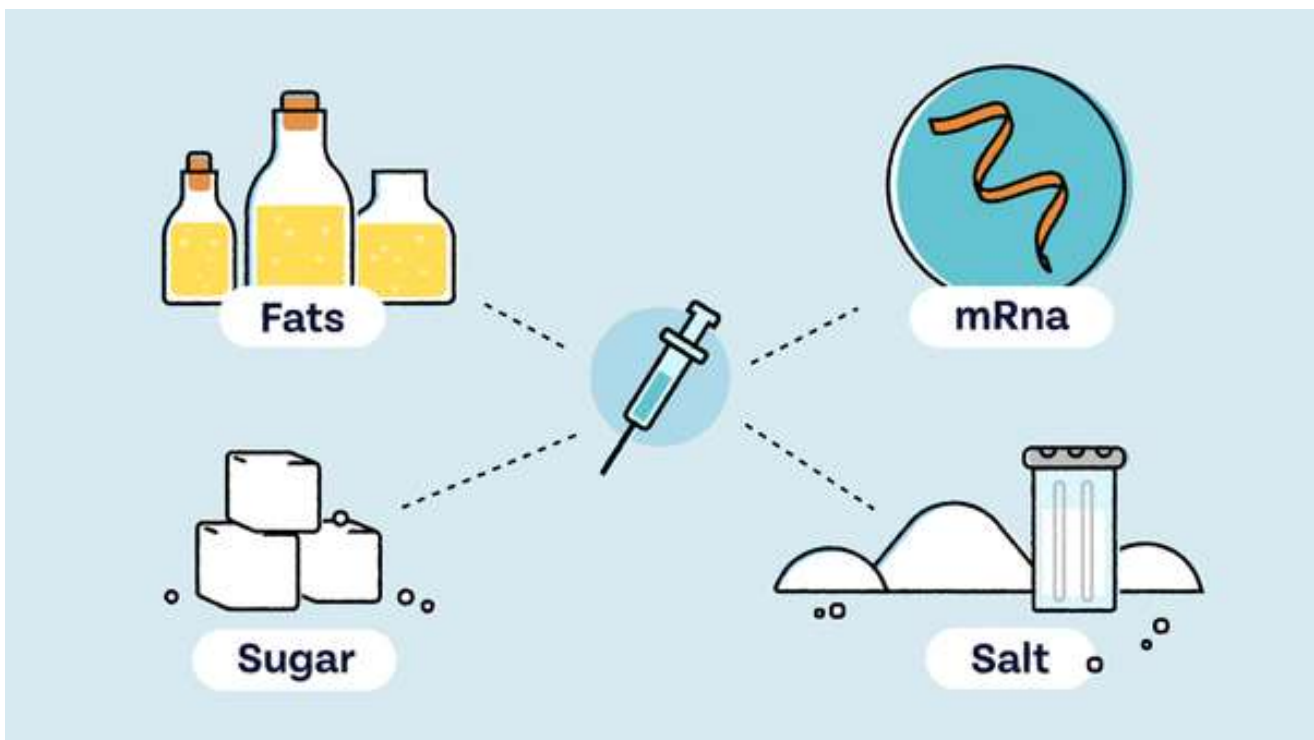
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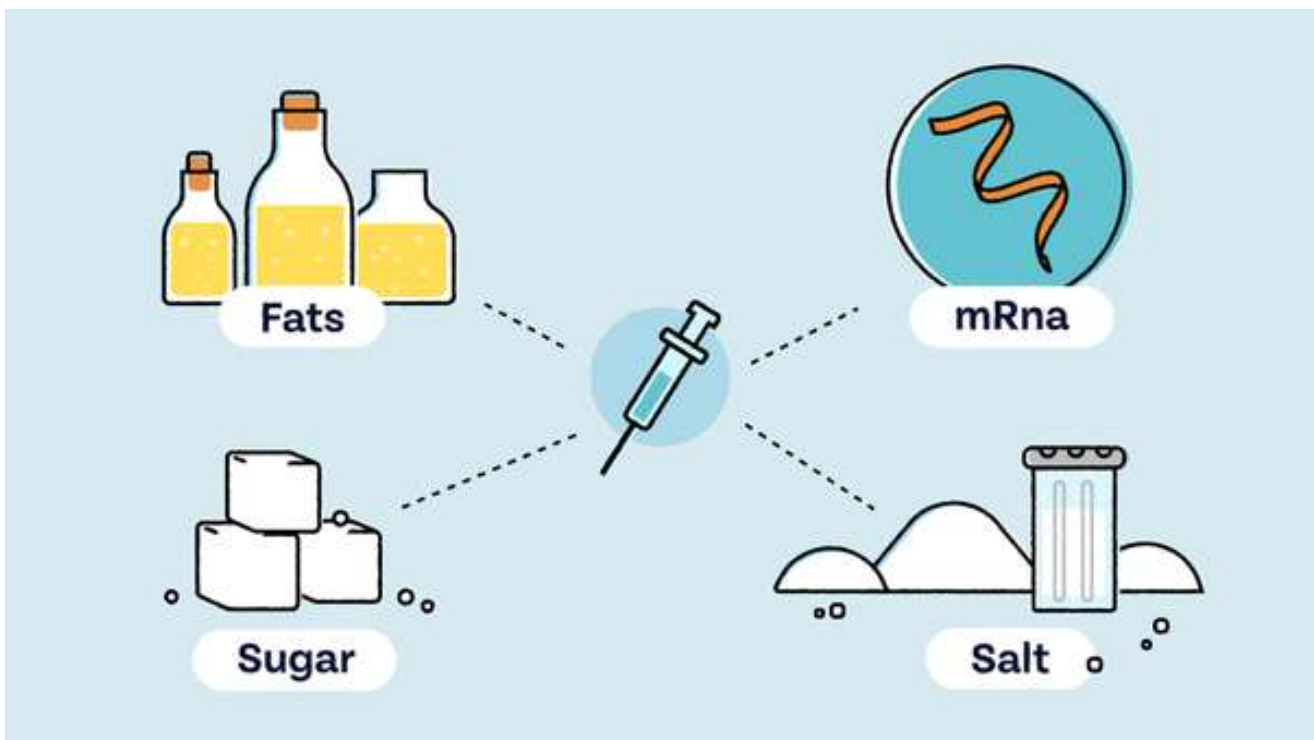
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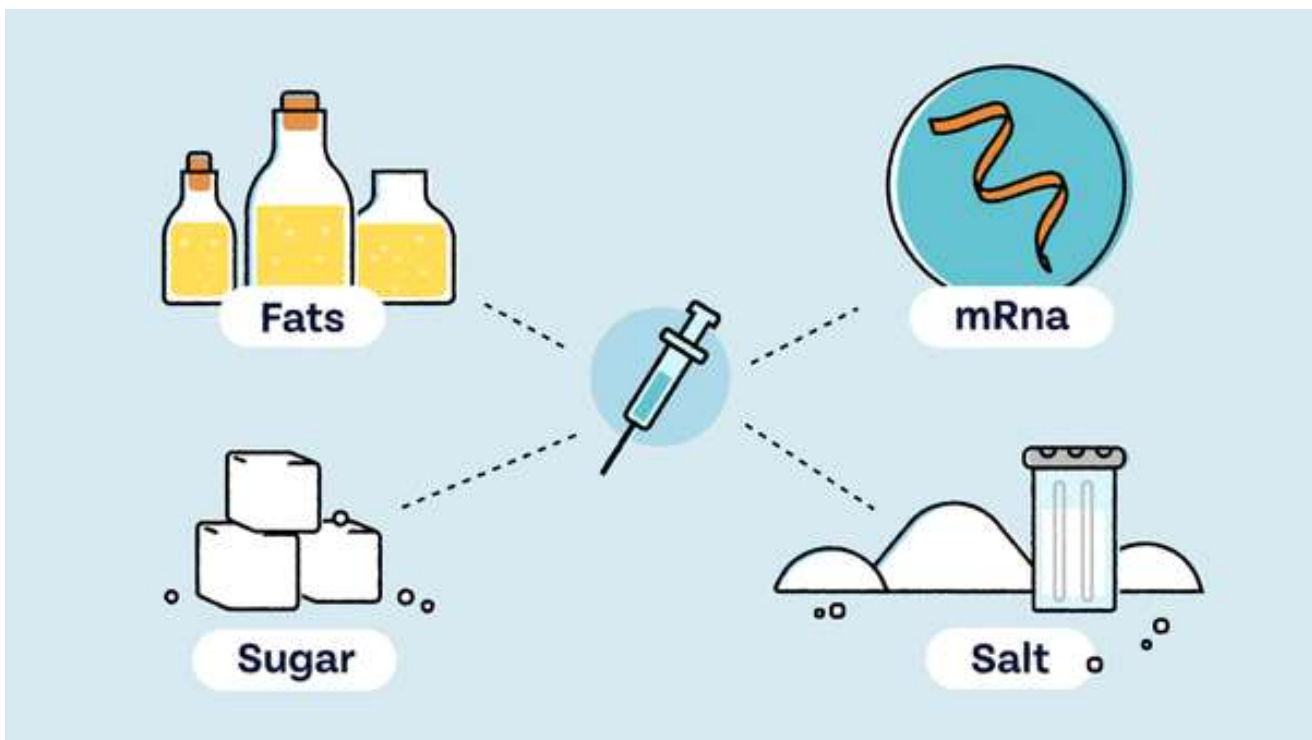
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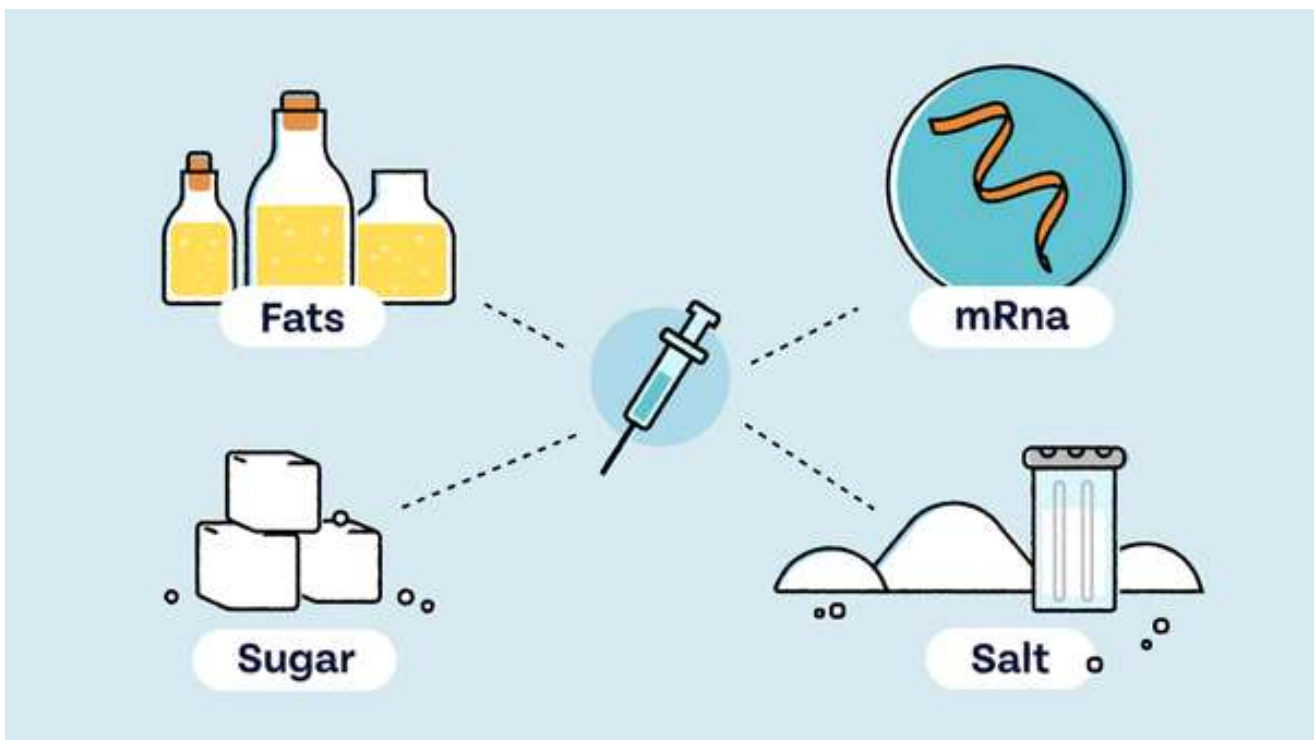
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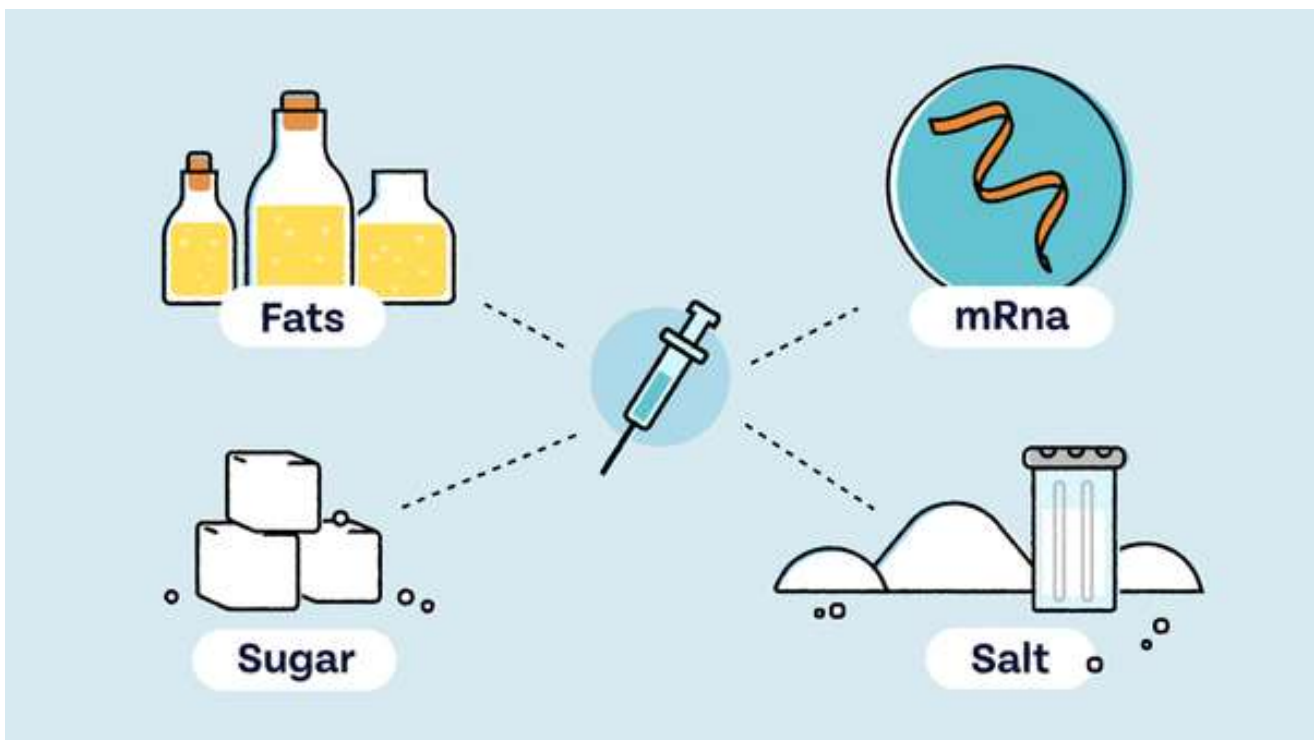
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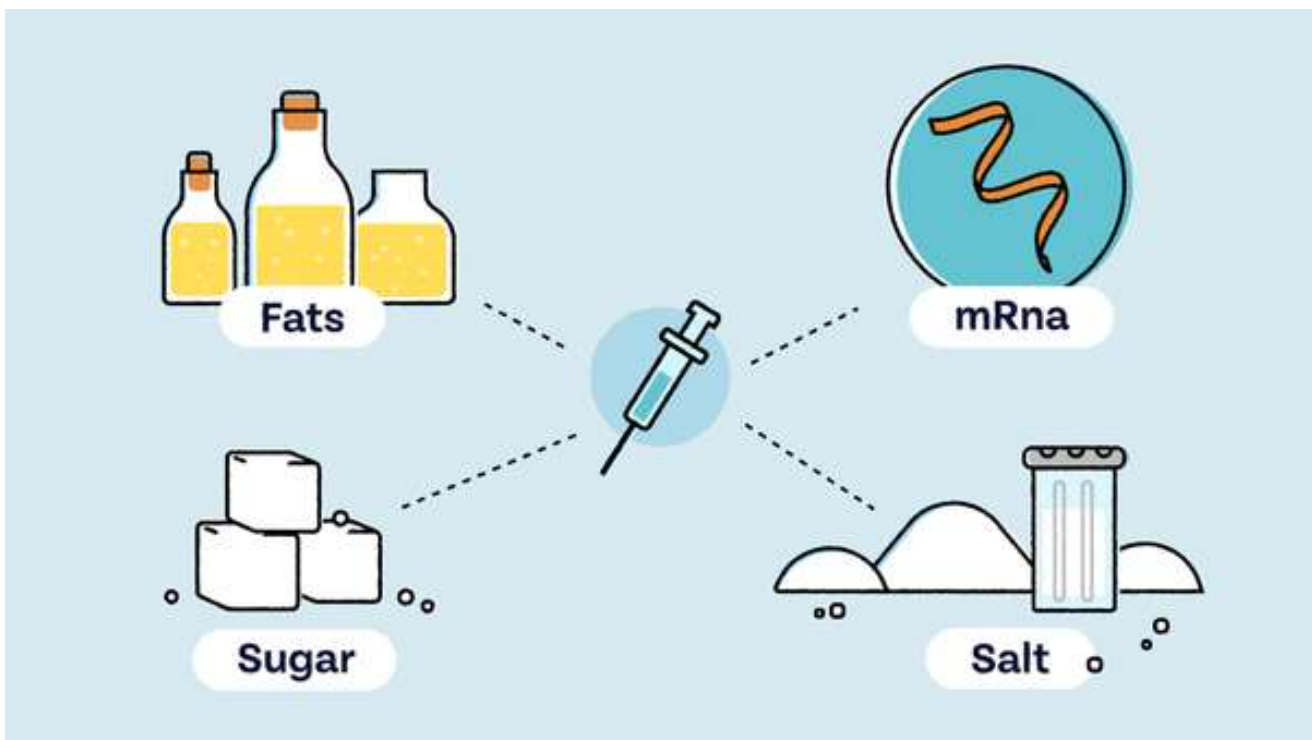
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