

Information for children and young people

How do mRNA vaccines combat the coronavirus in my body?

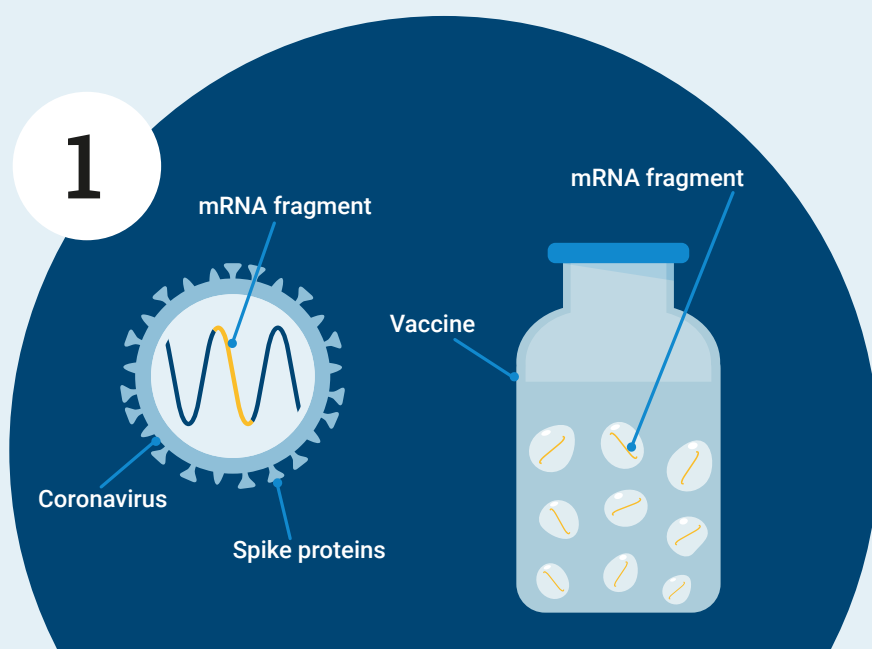
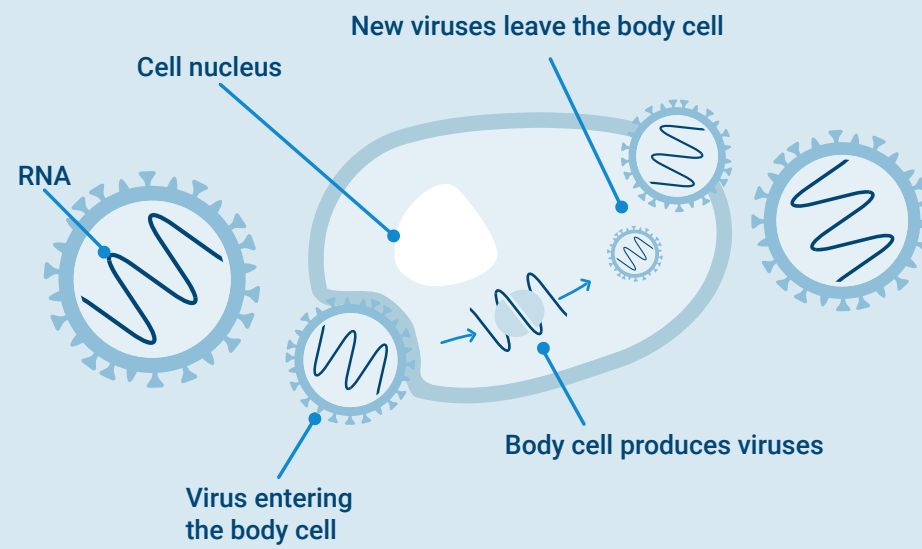
Vaccinations help our immune system to specifically fight off certain pathogens. Anyone aged 5 years or older can be vaccinated against the SARS-CoV-2 coronavirus with an mRNA vaccine.

Clever: coronaviruses use RNA

Coronaviruses store their 'building instructions' in the form of ribonucleic acid (RNA).

The trick:

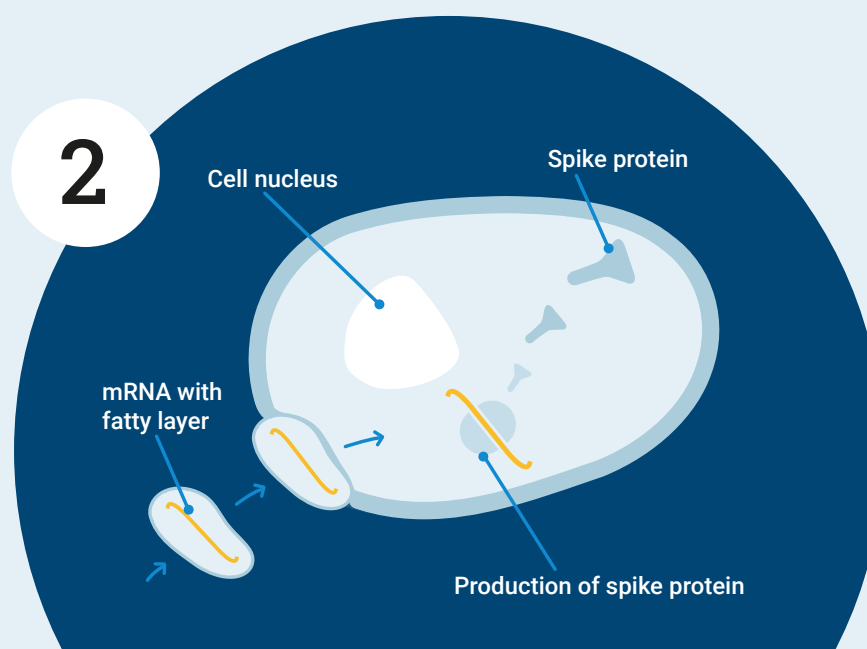
If they infect the cells of our body, our cells recreate the viruses with the help of the 'building instructions'. This is how the viruses multiply.



Turning the tables on the virus: mRNA against coronavirus

When you are vaccinated, A SMALL SECTION of the virus building instructions enters our body in the form of mRNA.

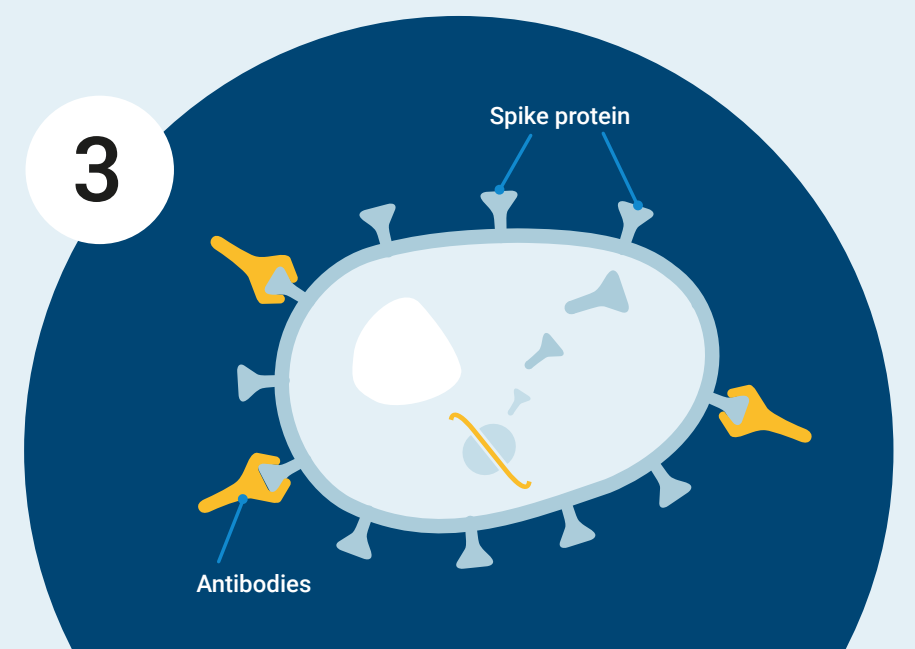
This fragment contains the instructions for building the spike protein. The spike protein is located on the surface of the coronavirus.



Harmless: recreated spike proteins

The mRNA is safely transported into some cells in the body with the help of a protective layer of fat.

These building instructions enable the cells of the body to produce harmless spike proteins.



Shadow boxing: training against harmless opponents

The cells of the body show the spike proteins to the immune system. The immune system fights the spike proteins and, among other things, forms antibodies to ward them off.

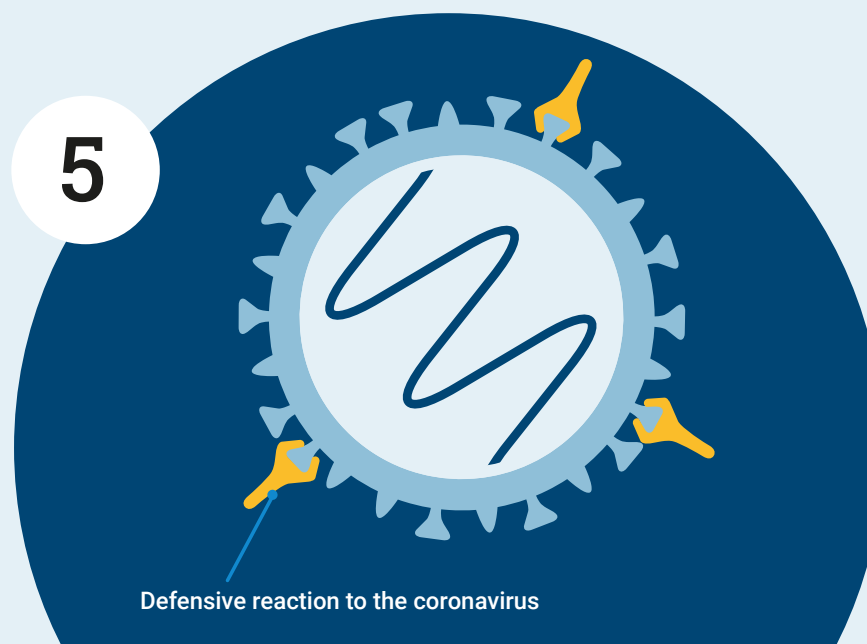
Vaccination is repeated after a short time for an even greater effect.



Immune system in action: normal vaccine reactions

After you have been vaccinated, you may feel a little pain at the injection site.

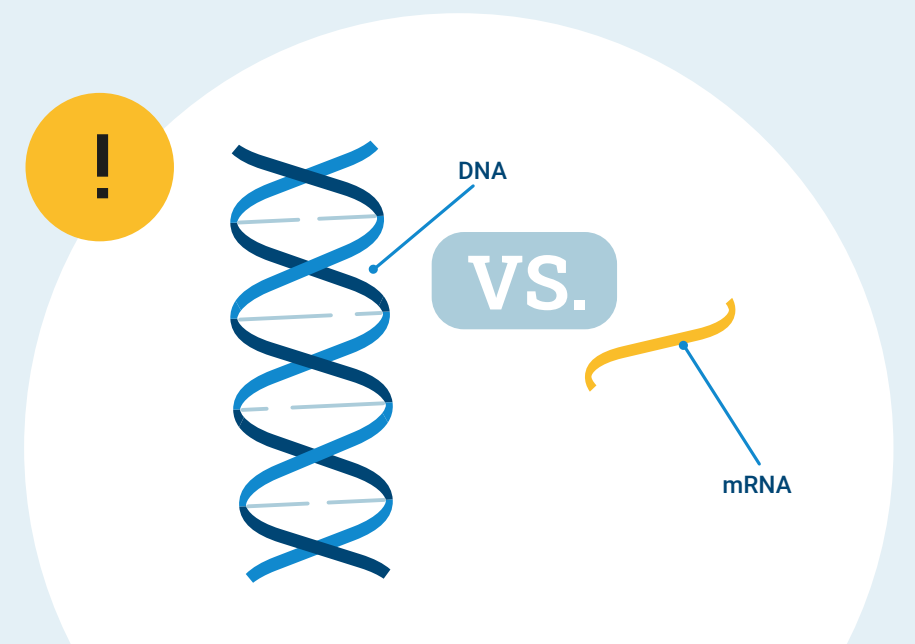
Fatigue, headaches and fever are also possible for a few days.



Well protected, fast targeted defence

When we are subsequently infected with the coronavirus, our immune system recognises the spike proteins on the viruses.

It can then selectively fight the viruses without making us seriously ill.



Safe: no change to our genetic material

Our genetic material is the major building plan for our body. It consists of DNA.

DNA is protected in the nucleus of cells. The mRNA from the vaccine cannot be easily incorporated into our DNA.

