**mRNA vaccines do not change DNA**

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There has been considerable discussion of Covid-19 vaccination on social media, and some posts have led people to be concerned that the new messenger RNA (mRNA) vaccines will change their DNA. In an attempt to clarify the situation, the European Society of Human Genetics would like to reassure the public that there is no evidence to support such concerns and that, if there were, we would not hide it.

mRNA vaccines do not change DNA. Rather, they introduce molecules that lead to the production of harmless small fragments of the virus into cells. This causes the cells to make a part of the virus protein that strongly activates the immune system to produce a response against it. In this way the body will respond quickly when it comes into contact with the real, whole virus.

Vaccination prevents serious forms of Covid-19, including its potential complications. Individual genetic makeup (DNA) remains unchanged. All that happens is that the production of antibodies and defensive white blood cells is stimulated, in exactly the same way as happens when someone gets a viral infection naturally. The mRNA in cells is broken down very quickly and cannot reproduce itself. Thus the mRNA fragment cannot merge or directly integrate with the individual’s own natural DNA.