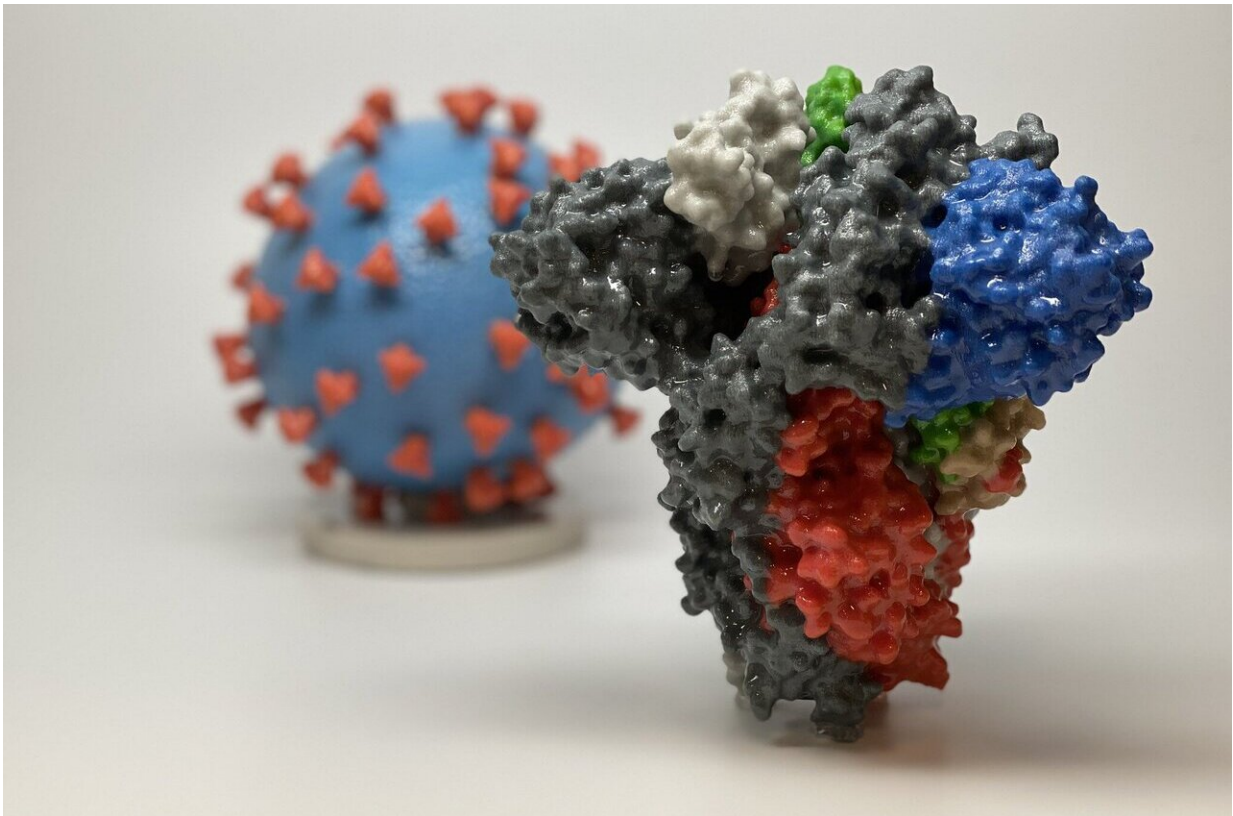


# Pfizer/BioNTech say vaccine effective against UK, SAfrica virus mutations

January 28 2021

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3D print of a spike protein of SARS-CoV-2, the virus that causes COVID-19—in front of a 3D print of a SARS-CoV-2 virus particle. The spike protein (foreground) enables the virus to enter and infect human cells. On the virus model, the virus surface (blue) is covered with spike proteins (red) that enable the virus to enter and infect human cells. Credit: NIH

The vaccine made by Pfizer and BioNTech appears to retain its effectiveness against coronavirus mutations in worrying new variants that have emerged recently in Britain and South Africa, the firms said Thursday.

Several new variants—each with a cluster of genetic mutations—have sparked fears over an increase in infectiousness as well as suggestions that the virus could begin to elude immune response, whether from prior infection or a vaccine.

Pfizer/BioNTech, which had previously said it was unlikely that the strain originally found in Britain could escape vaccine protection, said Thursday that early tests suggest their immunisation would be similarly protective against the variant in South Africa.

In a statement, the two companies said these preliminary findings "do not indicate the need for a new vaccine to address the emerging variants".

They said they are "prepared to respond" if a new strain is shown to be able to evade the immunity of the vaccine, adding that they can produce updates to their jab if needed.

The statement comes after US biotech firm Moderna this week announced that lab studies suggest its vaccine should protect against the variants first found in the United Kingdom and South Africa.

The latest Pfizer/BioNTech research, which has not yet been peer reviewed, was carried out by researchers from Pfizer and the University of Texas.

The authors compared the antibodies of 20 people who had received two doses of the Pfizer/BioNTech vaccine during clinical trials with lab-

engineered sets of mutations present in the variants that emerged in Britain and South Africa.

## 'Escape' fears

The new variants—along with another linked to Brazil—have mutations to the virus' spike protein, which enables the virus to latch onto human cells and therefore plays a key role in driving infections.

One mutation in particular—known as E484K and found in the South Africa and Brazil strains but not the one in Britain—has experts particularly worried about immunity "escape".

The study found that the antibodies were able to neutralise all the sets of mutations tested.

It noted that the effect was "slightly lower" against three mutations in the variant found in South Africa, including E484K.

But the firms said that it was "unlikely to lead to a significant reduction in the effectiveness of the vaccine".

They said they were looking to test against the full set of mutations in the spike protein of the variant that emerged in South Africa.

A study released last week by researchers in South Africa, which has also not yet been peer reviewed, tested the variant found there against blood plasma from recovered COVID-19 patients.

They found that it was resistant to neutralising antibodies built up from prior infection, but said more research was needed into the effectiveness of other parts of the immune response.

Daily global deaths from COVID-19 topped 18,000 for the first time Wednesday, with vaccines seen as the only real chance of returning to some form of normality.

The German firm BioNTech had already said the messenger RNA technology means it could update the vaccine against new variants within weeks.

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