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## Covid-19: UK approves Moderna vaccine to be given as two doses 28 days apart

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The UK has approved the Moderna covid-19 vaccine and ordered an additional 10 million doses—bringing the total up to 17 million doses to be delivered from spring.

Interim analysis of the Moderna phase III trial reported that the vaccine was 94.5% effective 14 days after the second dose.<sup>1</sup> The Medicines and Healthcare Products Regulatory Agency (MHRA) has approved the vaccine as a two dose regime, with the second dose given 28 days after the first.<sup>2</sup>

This comes after the UK announced that previously approved vaccines—Oxford AstraZeneca and Pfizer BioNTech—would be given up to 12 weeks apart.<sup>3</sup>

Nearly 1.5m people in the UK have so far received at least one dose of either the Pfizer BioNTech or Oxford University AstraZeneca vaccine.

Deputy chief medical officer for England Jonathan Van-Tam said, “The highly effective Moderna vaccine is another impressive success for science and is another testament to the hard work of researchers and selfless clinical trial volunteers. This vaccine will save lives once doses become available, but it is crucial we all continue to follow the rules to protect each other until enough people have been protected.”

The Moderna vaccine is an mRNA vaccine like the Pfizer BioNTech vaccine, although the Moderna vaccine can be stored at  $-20^{\circ}\text{C}$  rather than the  $-75^{\circ}\text{C}$  needed for the Pfizer BioNTech vaccine, which makes handling it much easier.

President of the British Society for Immunology Arne Akbar said, “As always, safety in vaccines is paramount and the MHRA will have carefully scrutinised the evidence on this vaccine to ensure that it is both safe and effective. Although development has occurred quickly, all the same rigorous safety standards and checks have been carried out. Although the full dataset has yet to be made public, the previously reported efficacy of around 95% gives us great optimism that this vaccine will be an important tool in stopping the spread of covid within our communities.”

The most frequently reported adverse reactions to the Moderna vaccine were injection site pain, fatigue, and headache. Adverse reactions were usually mild or moderate and resolved within a few days after vaccination.

In the decision documents, the MHRA tackled potential anaphylactic reactions. It said that “close observation for at least 15 minutes is recommended following vaccination” and advised healthcare professionals to ensure that “appropriate medical treatment and supervision to manage immediate allergic reactions” are readily available.

The US Centres for Disease Control have reported that 29 people have so far developed anaphylaxis in response to being vaccinated with the Pfizer BioNTech and Moderna vaccines. It said the rate of anaphylaxis cases currently around 5.5 per million vaccine doses given.

1 Mahase E. Covid-19: Moderna vaccine is nearly 95% effective, trial involving high risk and elderly people shows. *BMJ* 2020;371:m4471doi: 10.1136/bmj.m4471.

2 Medicines and Healthcare Products Regulatory Agency. Decision: regulatory approval of covid-19 vaccine Moderna. 8 January 2021. [www.gov.uk/government/publications/regulatory-approval-of-covid-19-vaccine-moderna](http://www.gov.uk/government/publications/regulatory-approval-of-covid-19-vaccine-moderna).

3 Iacobucci G, Mahase E. Covid-19 vaccination: What's the evidence for extending the dosing interval? *BMJ* 2021;372:n18. doi: 10.1136/bmj.n18 pmid: 33408068