

# COVID vaccine boosters: Who will receive them and why are they being given?

September 16 2021, by Sarah Pitt

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Credit: AI-generated image ([disclaimer](#))

After consulting its vaccine advisers, the UK government is [launching](#) its much-discussed COVID-19 vaccine booster program. From the [week beginning](#) September 20 2021, a third dose will be offered to all people who were prioritized in the first wave of the UK's vaccine rollout.

This includes all residents and staff of care homes, all frontline health and social care workers, everyone over 50, all those over 16 who have underlying health conditions that put them at higher risk of severe COVID-19 (together with their carers) and all adults who live with an immunosuppressed person.

Anyone taking a [third dose](#) will need to have had their second at least six months previously, and people will be prioritized [as in the first wave](#) of the [vaccine](#) rollout, with care home residents and staff to be vaccinated first. If you or someone you know is going to be included in the [booster](#) program, here are the key things you need to know.

## Why are boosters being given?

Because there are worries that some of the effects of the first two doses may have worn off for those that received their vaccines a while ago. Boosters can solve this problem by reminding the [immune system](#) to be ready to deal with an infection—they top up immunity.

Whether people who had the vaccine over six months ago actually need their immunity topping up isn't clear cut. There's some evidence that COVID-19 vaccine protection fades over time, but the vaccines are too new to be sure of whether this will continue in such a way as to leave people at risk. Therefore, the British government is offering boosters as a precaution.

Its [fear](#) is that if the immunity of those who were vaccinated earliest has waned and continues to do so, many could get sick over the winter when indoor mixing (and so the risk of transmission) increases. Remember that those vaccinated longest ago are also those most vulnerable to COVID-19.

As well as costing lives, if there was a spike of disease in this group, this

could combine with other seasonal pressures (such as influenza and other viral diseases) to overwhelm the NHS.

## **What vaccine will people get?**

Probably Pfizer/BioNTech.

The Joint Committee on Vaccination and Immunisation has recommended that this should be given to everyone. It made this recommendation after reviewing unpublished data from the [Cov-Boost Study](#), which has been investigating the effects of using different vaccines as boosters.

According to the committee, the Cov-Boost Study has shown that the Pfizer jab produces a good boost regardless of which vaccine was used previously. Indeed, previous research has suggested that boosting an Oxford/AstraZeneca dose with a Pfizer one may lead to a stronger immune response than following it with another AstraZeneca. Mixing manufacturers like this is safe and possibly even advantageous.

The Cov-Boost Study revealed that a half dose of the Moderna vaccine also performs well as a booster and so can be offered too. If necessary, the committee says that AstraZeneca can also be used as a booster, but only in those who received it previously.

There may be an interesting knock-on effect of these decisions. The Pfizer and Moderna vaccines need to be stored in freezers, and so the logistics of distributing them are more difficult than for the AstraZeneca jab, which only needs refrigerating.

Prioritizing using these more difficult-to-distribute vaccines for the UK's booster program could free up the more easy-to-store AstraZeneca doses to be sent overseas to places where maintaining freezing temperatures is

difficult. The UK is planning to donate [close to 20 million vaccine doses](#) to other countries between now and the end of 2021.

## **Is launching a booster program the right thing to do?**

While it isn't wholly clear to what extent vaccine protection wanes, we do know that immunity to other coronaviruses tends to be lost after a while. In some people it may only last a [few months](#). Waning protection is definitely plausible.

Plus, some people in the first wave of vaccinations will have had underperforming immune systems due to illness or medical treatment, which may have lowered the amount of protection that COVID-19 vaccines offered them. The immune response also declines as you get older, rendering vaccines less protective. So it makes sense to give a booster to those currently being prioritized.

However, there's [good evidence](#) that the body can make a strong and lasting response to the COVID-19 vaccines. In normal healthy adults, a full course of the vaccine (usually two doses) should be enough.

Younger, generally healthy people who have been fully vaccinated can get ill with COVID-19 but are unlikely to [need an emergency trip to hospital](#). There's little to support widening Britain's booster program any further.

The coronavirus will not be under control until everyone in the world is protected. This raises the question of [whether it's right](#) to give any boosters to people who have already been double vaccinated, when healthcare workers in many countries have not even had a first COVID-19 vaccine dose. Certainly, boosters should not be given where they aren't really needed.

At this point in the pandemic, at the very least we should be offering

boosters and increasing the pace of [vaccine rollout](#) across the world. It ought to be possible to do both. But if it isn't, we should be prioritizing those who are most vulnerable.

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