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Covid-19: Booster vaccine gives “significant increased protection” in over 50s

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A third Pfizer BioNTech covid-19 vaccine dose—known as a booster dose—provides “significant increased protection” against symptomatic disease in those aged 50 and over, irrespective of which vaccine they initially received.¹

A study by the UK Health Security Agency (UKHSA) found that at least 20 weeks after being fully vaccinated with two doses of the AstraZeneca vaccine effectiveness against symptomatic disease was 44.1%, while for Pfizer it was 62.5%.

But two weeks after receiving the booster dose, protection against symptomatic infection increased to 93.1% (95% confidence interval, 91.7 to 94.3) in those who initially had two doses of the Oxford AstraZeneca vaccine, and 94.0% (95% CI, 93.4 to 94.6) for those who had Pfizer.

UKHSA head of immunisation Mary Ramsay said, “We know that in older age groups, protection from the first two vaccines is beginning to wear off, leaving millions that need extra protection as we head into winter. That is why it is critical that you come forward for your booster as soon as you become eligible so we can drive down hospital admissions and deaths over the winter.”

Commenting on the findings, professor of medicine at the University of East Anglia Paul Hunter said, “This is the first real evidence of the effectiveness of the booster in the UK setting. It confirms what has been reported from Israel about the impressive effectiveness of the booster dose. This is perhaps even more impressive when considering that a significant proportion of people who have not yet had their booster will have had an infection and so had some additional protection now. This report also gives reassurance that whether someone had AstraZeneca or Pfizer as their first course, the booster provides similar excellent protection.

“It is too early to know how effective the booster will be in the UK at reducing the risk of hospital admissions. But from the Israeli experience we can expect the booster to be even more effective at preventing severe disease than at preventing symptomatic infection.”

Roll out of booster doses in the UK started in September, with those aged 50 and over, health and social care staff, at risk under 50s, over 16s living with immunosuppressed people, and those in long stay care settings being eligible.

The programme offers the Pfizer vaccine six months after the second vaccine dose, regardless of which vaccine brand the person initially received. The decision to recommend mixing doses followed data from the Cov-boost trial that indicated the Pfizer vaccine is well tolerated as a third dose and provides a strong booster response.²

The booster will now also be offered to all those aged 40-50, the government announced on 15 November.

1 Effectiveness of BNT162b2 (Comirnaty, PfizerBioNTech) covid-19 booster vaccine against covid-19 related symptoms in England: test negative case-control study. <https://khub.net/documents/135939561/390853656/Effectiveness+of+BNT162b2+%28Comirnaty%2C+Pfizer-BioNTech%29+COVID-19+booster+vac-cine+against+covid-19+related+symptoms+in+England.docx/a366af4e-9c7f-ce86-bc58-1cb3b88e3378>.

2 Wise J. Covid-19: Booster doses to be offered to 30 million people in UK. *BMJ* 2021;374:n2261. doi: 10.1136/bmj.n2261 pmid: 34521637

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