

Q & A: Should you get a second booster shot for COVID-19?

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David Lo. Credit: University of California - Riverside

The Biden administration is planning to give Americans age 50 or older the option of a second booster. But is a second booster necessary? Would it differ from the first booster? And who should receive the second booster first?

Vaccine expert Dr. David Lo, a distinguished professor of biomedical sciences in the School of Medicine at the University of California, Riverside, answers these and other questions:

Q: What are the chances of new and powerful variants of the virus appearing this year?

A: We've already seen how unpredictable the emergence of new variants has been. However, the longer it takes to get people around the world fully vaccinated, the more likely it is that new variants will continue to emerge.

Q: Is a second booster shot a good idea?

A: Because we do not have much more than a year or two of experience with the virus and the vaccines, the endurance of protection from vaccination is still being studied. We do know from related experience that annual flu shots and multi-dose vaccines, such as the shingles and hepatitis vaccines, have been very successful, and so each repeat dose or [booster](#) is very likely to be helpful. So, it is mainly a question of timing your next booster.

Q: How might the second booster differ from the first one?

A: The prime [vaccine](#) dose and boosters are identical for all the different versions in use, so the only practical difference is that booster shots are given to people who have had previous vaccination or immunity to COVID. That mainly means that the [immune response](#) will be kicked up by each booster shot so your [immune protection](#) doesn't wane.

Q: Can we say how long the protection from a second booster would be?

A: The duration of protection varies from one type of vaccine to the next

and so this is still under study for the COVID vaccines. So far, the boosters augment two types of protection: one kind is the levels of antibodies in your system that block the virus from infecting your body; and the second is the longer-term response of T lymphocytes in your body that protect you from serious disease if you do get infected. While the antibody response can last for months or years, it is the T lymphocyte response that is much longer lasting, and for some vaccines, the memory response can last nearly all your lifetime.

Q: Should a second booster be offered, who do you recommend should get them first and why?

A: Older people tend to have weaker immune systems, and so they generally need stronger vaccination or higher doses, and more frequent vaccination to generate strong protection. These older individuals should be first in line for booster shots. Some people have impaired immune systems, including [cancer patients](#) and those with central immune deficiencies, and often these individuals do not even have an adequately functioning [immune system](#) to respond to vaccination. In those cases, vaccination and boosting won't help, so they need other kinds of protection, including more rigorous isolation from potential infection, as well as frequent testing and ready access to anti-viral drugs.

Provided by University of California - Riverside

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