

Results are looking promising for a combined COVID and flu vaccine—here's how it could benefit public health

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Earlier this week, [Moderna announced](#) positive results for its phase 3 clinical trial of a combined vaccine against COVID and influenza.

So what exactly did the trial find? And what sort of impact would a two-in-one COVID and [flu vaccine](#) have on public health? Let's take a look.

Combination vaccines are already used for other diseases

Combination vaccines have been successfully used for several decades in Australia and around the world.

For example, the DTP vaccine, a shot that combines protection against diphtheria, tetanus and pertussis (whooping cough), was first administered [in 1948](#).

The DTP vaccine has since been further combined to offer protection against other diseases. A [hexavalent vaccine](#), which protects against six diseases—diphtheria, tetanus, pertussis, polio, hepatitis B and Haemophilus influenzae type b (an infection that can cause brain swelling)—is today part of routine childhood immunization programs [in Australia](#) and elsewhere.

Another important combination vaccine is the [MMR vaccine](#), given to children to protect against measles, mumps and rubella.

So what did the trial find?

Moderna's phase 3 trial included roughly 8,000 participants across two age groups. Half were adults aged 50 to 64. The other half were aged 65

and up.

In both age groups, participants were [randomized](#) to either receive the combined vaccine (called mRNA-1083) or a control. The control groups received a COVID vaccine and a suitable flu vaccine delivered separately.

The [control group](#) in the 50-to-64 age category were given the Fluarix flu vaccine, as well as Moderna's mRNA COVID vaccine, Spikevax. The over-65 control group received Spikevax alongside Fluzone HD, an enhanced flu vaccine designed specifically for older adults.

The study evaluated safety, including any reactions after vaccination, and the protective immune response the vaccines produced.

Moderna reported that the combined vaccine elicited a higher immune response in both age groups against COVID and three influenza strains, compared to the co-administered shots.

From a safety perspective, the combined vaccine was well tolerated. Adverse reactions were similar across the experimental and control groups. The most common side effects included muscle aches, fatigue and pain at the injection site.

While the trial results are promising, they are yet to be published in a peer-reviewed journal, which means independent experts haven't yet verified them. And further research may be required to test how the combined vaccine works in younger age groups.

What are the advantages of combined vaccines?

We cannot overstate the [importance of vaccines](#). Each year they prevent up to [5 million deaths](#) around the world from a range of life-threatening

infections.

At the same time, we can always do more to boost vaccination uptake, especially in areas with fewer resources and among vulnerable populations.

Combination vaccines have [a variety of advantages](#). For example, the need for fewer injections reduces costs for health systems, decreases storage requirements and reduces the burden on parents. All of these things can be especially valuable in low-income countries.

Notably, research shows combination vaccines [make it more likely](#) that people will take up routine vaccinations.

Two important diseases

Every year, particularly during the winter months, millions of people contract respiratory infections. Indeed, parts of Australia are reported to be facing rapid increases in [flu cases](#) at the moment.

According to the World Health Organization, globally, roughly 3 million to 5 million people experience severe influenza annually, and around [650,000 people will die](#) from the disease.

COVID has resulted in more than [7 million deaths](#) around the world to date.

As the COVID pandemic has continued, we've seen pandemic fatigue setting in, as some people appear to have become complacent about their COVID shots. A [2023 study](#) in Australia found 30% of the surveyed population were hesitant about and 9% were resistant to taking COVID boosters.

Uptake of the flu vaccine, which many people are in the habit of getting annually, may be higher. That said, in Australia the current [flu vaccine rates](#) for 2024 are still fairly low: 53% for adults over 65 years, 26% for those aged 50 to 65, and lower for younger age groups.

A two-in-one COVID and flu vaccine could be an [important public health tool](#) to increase vaccine coverage against these two important diseases. Beyond protecting individuals' health, this would have flow-on benefits for the economy and our health system.

Moderna said it will present its trial data at an [upcoming medical conference](#) and submit it for publication. The company has also said it will soon apply for [regulatory approval](#), with the possibility of supplying the combined vaccine in 2025.

At the same time, [Pfizer and BioNTech](#) also have late-stage trials in progress for a combined COVID and flu vaccine. We will await further developments with interest.

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