

Adjuvanted vaccine boosts flu protection for elderly

16 October 2013, by Camilo Mejia Giraldo



Researchers analysed a demographic that has increasing issues with their immune system's response to vaccines. Credit: BromfordGroup

A recent study has strengthened the current knowledge of the increased effectiveness of adjuvanted flu vaccines in the elderly—a population highly affected by seasonal influenza.

Adjuvants are substances that can be added to vaccines to aid the body's immune response to the [vaccine](#).

The 'real world' study, based in Canada, assessed less than 300 elderly [participants](#) for adjuvanted [vaccine effectiveness](#).

It found an MF59 adjuvanted vaccine provided more protection (60 per cent effectiveness) against [influenza](#) compared with the unadjuvanted trivalent influenza vaccine.

"We've seen data before that said if you just measure [the patient's] blood anti-body levels, it shows that they do better with the adjuvanted [vaccines]," says Dr Paul Van Buynder, a UWA appointee and co-author of the study.

"What we weren't sure of was whether that would turn into better protection against actual flu, and

that is what we were looking at," he says.

Researchers contacted people over 65 years-old who had been routinely lab tested after they had exhibited influenza-like symptoms.

"We have different polices in different parts of British Columbia, some clinics give the adjuvanted vaccines and some do not, so the study was a natural experiment," he says.

After the participants were interviewed, their vaccination status, date and type were confirmed through healthcare records.

Dr Van Buynder says even though adjuvanted vaccines are known to have superior effects, researchers of the study were pleased at the positive results showed by MF59—which is a oil-in-water adjuvant containing a shark oil derivative and two surfactants.

With participants of the study at a median age of 83 years, researchers analysed a demographic that has increasing issues with their immune system's response to vaccines.

"It's a thing called immunosenescence, the older you get, the worse your white cells produce antibodies," he says.

"This is a new generation of adjuvants ... it actually has an impact on stimulating the antigen production cells, particularly the dendritic cells in the skin area, so they bring a lot more antibodies across to where the vaccine has been administered."

Dr Van Buynder says adjuvanted vaccines are widely used throughout Canada and the EU, but not in the United States or Australia—although some adjuvanted vaccines are licensed in Australia.

"We were looking at what whether in the real world it actually made a difference," he says.

"Because it's one thing to look at the blood levels in a lab and what we wanted to say is that this actually produces a difference."

More information:

[www.sciencedirect.com/science/ ...
ii/S0264410X13010451](https://www.sciencedirect.com/science/article/pii/S0264410X13010451)

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