

Flu vaccine elicits robust immune responses in Aboriginal and Torres Strait Islander populations

October 5 2021



Credit: Doherty Institute for Infection and Immunity

For the first time, researchers have found the influenza vaccine to be just as effective in Aboriginal and Torres Strait Islander people as it is non-Indigenous people.

Published today in *PNAS*, the research team, led by University of Melbourne Professor Katherine Kedzierska, a laboratory head at the Peter Doherty Institute for Infection and Immunity (Doherty Institute), studied the in-depth immune responses elicited by the [influenza vaccine](#) in 78 Aboriginal and Torres Strait Islander people and 84 non-Indigenous people.

Dr. Luca Hensen, Doherty Institute research officer and co-author of the paper, said that while it's always been recommended that Aboriginal and Torres Strait Islanders be vaccinated for the flu, it wasn't actually based on any [scientific evidence](#) until now.

"Our group's previous work has identified the parameters of a good response to the influenza vaccine that includes antibody responses and the activation and increase in frequency of T-cells and B-cells. Both are crucial for memory responses so that if you were to encounter the virus, your [immune system](#) would be ready to respond rapidly," said Dr. Hensen.

"We found robust antibody responses to influenza vaccination induced in Aboriginal and Torres Strait Islander people within four weeks after vaccination, together with strong activation profiles of key immune populations elicited as early as one week post immunization."

Professor Kedzierska said this study provides the first in-depth evidence that supports current recommendations that Indigenous populations globally should get vaccinated to protect them from severe seasonal influenza virus infections and its subsequent complications.

"Current recommendations for Aboriginal and Torres Strait Islander people to get vaccinated are based on data of the immune responses of non-Indigenous people, and may not be representative for Indigenous populations," Professor Kedzierska said.

"We know from our research that Indigenous populations can be more susceptible to experiencing severe influenza disease, particularly when new viruses emerge. To now have evidence to back up the official recommendations is incredibly important."

Menzies School of Health Research's Associate Professor Jane Davies said it was important to have a robust evidence base to support the use of the influenza vaccine in Aboriginal and Torres Strait Islander people.

"It has been a pleasure working with Aboriginal people in the Northern Territory and the Doherty Institute to conduct this extremely important work." she said.

More information: Luca Hensen et al, Robust and prototypical immune responses toward influenza vaccines in the high-risk group of Indigenous Australians, *Proceedings of the National Academy of Sciences* (2021). [DOI: 10.1073/pnas.2109388118](https://doi.org/10.1073/pnas.2109388118)

Provided by Doherty Institute for Infection and Immunity

Citation: Flu vaccine elicits robust immune responses in Aboriginal and Torres Strait Islander populations (2021, October 5) retrieved 2 May 2024 from <https://medicalxpress.com/news/2021-10-flu-vaccine-elicits-robust-immune.html>

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