

Flu vaccine could cut COVID risk

Health-care workers who got the influenza vaccine were also protected from COVID-19 – but the effect might not last long.

Ewen Callaway



People in Santiago are vaccinated against influenza. Credit: Ivan Alvarado/Reuters/Alamy

Influenza vaccines have a surprising health benefit: they might also prevent COVID-19, particularly in its most severe forms¹.

A study of more than 30,000 health-care workers in Qatar found that those who got a flu jab were nearly 90% less likely to develop [severe COVID-19](#) over the next few months, compared with those who hadn't been recently vaccinated against flu.

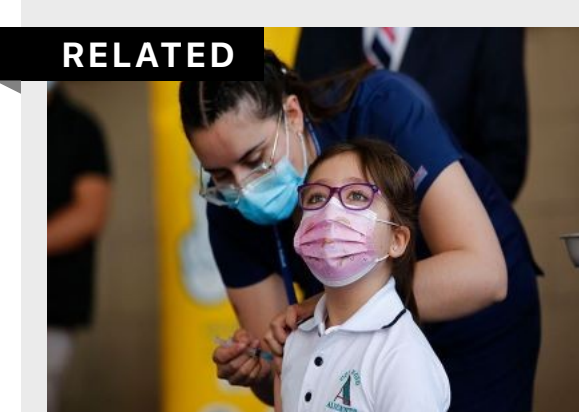
The study, which was conducted in late 2020, before [the roll-out of COVID-19 vaccines](#), is in line with previous work suggesting that ramping up the immune system using influenza vaccines and other jabs could help the body to fend off the coronavirus SARS-CoV-2.

Collateral benefit

In the early months of the pandemic – while COVID-19 vaccines were still in development – researchers were intensely interested in the possibility that existing vaccines might provide some protection against SARS-CoV-2. But collecting strong evidence for such an effect is difficult, because people who seek vaccination for diseases other than COVID-19 might also make other choices that reduce their risk of being infected with SARS-CoV-2.

To minimize the impact of this 'healthy-user effect', a team led by Laith Jamal Abu-Raddad, an infectious-disease epidemiologist at Weill Cornell Medicine–Qatar in Doha, analysed the health records of 30,774 medical workers in the country. There is probably less variation in health-related behaviour among such workers than in the general population, reducing – but probably not eliminating – bias, Abu-Raddad says.

The researchers tracked 518 workers who tested positive for SARS-CoV-2 and matched them to more than 2,000 study participants who had tested negative for the virus. Those who had received an influenza vaccine that season were 30% less likely to test positive for SARS-CoV-2, and 89% less likely to develop severe COVID-19, compared with workers who had not (although the number of severe cases was small in both groups). The study was posted on the medRxiv preprint server on 10 May.



Kids get limited COVID protection from world's most popular vaccines

Günther Fink, an epidemiologist at the University of Basel in Switzerland, says the Qatar analysis reduces the odds that other studies that uncovered the same link were a fluke. His team reported that flu vaccines were associated with a reduced risk of death in people hospitalized with COVID-19 in Brazil².

"This is an important piece of evidence," says Mihai Netea, an infectious-disease specialist at Radboud University Medical Center in Nijmegen, the Netherlands. The observation that influenza vaccines are linked to a reduction in not just SARS-

CoV-2 infections, but also disease severity, strongly suggests that the protection is genuine, he adds.

Time limit

How long this protection lasts is unclear. Among those in the Qatar study who had the flu jab and later contracted COVID-19, Abu-Raddad's team recorded SARS-CoV-2 infections occurring, on average, about six weeks after vaccination. "I don't expect to see this effect lasting long at all," he says. Netea guesses that the benefits last for between six months and two years.

It's not fully clear why flu vaccines – which are composed of killed influenza viruses – would also protect against COVID-19. Vaccines train the immune system to recognize specific pathogens, but they also rev up broad-acting antiviral defences, says Netea, who has found signs of such responses in flu-vaccine recipients³.

Netea's team is also working to better quantify the benefits of vaccines targeting influenza and other diseases against COVID-19. To fully rule out healthy-user effects, his team has launched a randomized, placebo-controlled trial in Brazil that will test whether influenza and measles–mumps–rubella vaccines can protect against COVID-19.

Knowing that vaccines for flu and other diseases can offer protection against COVID-19, even if only partial and for a limited period, could limit the damage caused by a future pandemic before a vaccine for that disease is developed, Netea argues. "If you have something in the beginning, you could save millions of lives."

doi: <https://doi.org/10.1038/d41586-022-01315-9>

References

1. Tayar, E. *et al.* Preprint at medRxiv <https://doi.org/10.1101/2022.05.09.22274802> (2022).

2. Fink, G. *et al.* *BMJ Evid. Based Med.* **26**, 192–193 (2020).

[Article](#) [Google Scholar](#)

3. Debisarun, P. A. *et al.* *PLOS Pathog.* **17**, e1009928 (2021).

[PubMed](#) [Article](#) [Google Scholar](#)

[Download references](#) ↓

Latest on:

[SARS-CoV-2](#) Vaccines Medical research

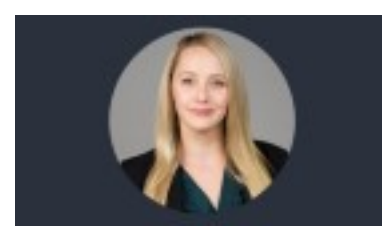


The pandemic's true health cost: how much of our lives has COVID stolen?

NEWS FEATURE | 18 MAY 22

Limited cross-variant immunity from SARS-CoV-2 Omicron without vaccination

ARTICLE | 18 MAY 22



How climate law can help to prevent the next pandemic

WORLD VIEW | 17 MAY 22

nature careers

Jobs >

Research Group Leaders - Computational Biology

Human Technopole
Milan, Italy

Associate Publisher - Open Access Journals (42167)

Springer Nature
London, United Kingdom

Research Assistant Professor in Chemistry (Polymer / Material Science)

The Hong Kong Polytechnic University (PolyU)
Hong Kong, China

Zhejiang University RNA Medical Center Recruits Talent Globally

The First Affiliated Hospital, Zhejiang University School of Medicine (FAHZU)
Yiwu, Zhejiang, China

Nature (Nature) | ISSN 1476-4687 (online) | ISSN 0028-0836 (print)

nature portfolio

[About us](#) [Press releases](#) [Press office](#) [Contact us](#)



Discover content

Journals A–Z
Articles by subject
Nano
Protocol Exchange
Nature Index

Publishing policies

Nature portfolio policies
Open access

Author & Researcher services

Reprints & permissions
Research data
Language editing
Scientific editing
Nature Masterclasses
Nature Research Academies
Research Solutions

Libraries & institutions

Librarian service & tools
Librarian portal
Open research
Recommend to library

Advertising & partnerships

Advertising
Partnerships & Services
Media kits
Branded content

Career development

Nature Careers
Nature Conferences
Nature events

Regional websites

Nature Africa
Nature China
Nature India
Nature Italy
Nature Japan
Nature Korea

Legal & Privacy

Privacy Policy
Use of cookies
Manage cookies/Do not sell my data
Legal notice
Accessibility statement
Terms & Conditions

nature briefing

Sign up for the *Nature Briefing* newsletter – what matters in science, free to your inbox daily.

Email address

e.g. jo.smith@university.ac.uk

Sign up

I agree my information will be processed in accordance with the *Nature* and Springer Nature Limited Privacy Policy.

