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## Covid-19: Stronger warnings are needed to curb socialising after vaccination, say doctors and behavioural scientists

Michael Day

Experts have called for stronger health warnings for people being vaccinated against covid-19 after observing a rise in infections shortly after vaccination, suggesting that many people are letting their guard down before the vaccine has taken effect.

Earlier this month a study led by Public Health England of vaccination in the over 70s found a “notable” rise in covid-19 infections in people immediately after they received the Pfizer-BioNTech or AstraZeneca vaccine.<sup>1</sup> Similarly, a study of Israel’s vaccination programme, reported in February, found a similar spike in cases among people who had just been jabbed.<sup>2</sup> It found that daily incidence approximately doubled after vaccination until about day 8.

A survey by the UK’s Office for National Statistics, looking at coronavirus and vaccine attitudes and behaviours in England in February,<sup>3</sup> shows why these spikes may be happening. Among over 80s who had received their first dose of a vaccine in the previous three weeks, 41% reported having met up with someone other than a household member, care worker, or member of their support bubble indoors since vaccination, thereby breaking lockdown regulations.

A group of health psychologists from King’s College, London, University College London, and the University of East Anglia have written in *The BMJ* that the studies, taken together, indicate the need to ramp up health warnings.<sup>4</sup>

“Looking at both strands of research—from Israel and the UK—it’s reasonable to suggest people are letting their guard down after they have their first dose,” said James Rubin, professor of psychology of emerging health risks at King’s. “The research has shown that immediately after a first jab people are more likely to be flouting social distancing, meeting people outside their household or bubble—and meeting them indoors.”

### Risky behaviour

A YouGov survey in December suggested that 29% of people would follow pandemic related rules and restrictions less strictly once they were vaccinated.<sup>5</sup>

Paul Hunter, professor of health protection at the University of East Anglia, who reviewed the Israeli data, drew similar conclusions. “While it is not possible to know for certain why this [the spike in cases soon after vaccination] may be the case, there have been concerns that people may believe they are protected as soon as they have had . . . their first injection and so start engaging in risky behaviour more than previously,” he said.

Rubin said that authorities needed to ram home the message that people have little or no immunity to the coronavirus immediately after their first jab. Full immunity can take as long as three weeks to develop.

The team noted that the warning about the delayed effect of immunisation does appear not until page 7—the penultimate page—of the information leaflet handed out during vaccination. It states: “It may take a week or two for your body to build up some protection from the first dose of vaccine. Like all medicines, no vaccine is completely effective.”<sup>6</sup> But Rubin said that this was not prominent enough.

*The BMJ* asked Public Health England to comment on the suggestion that health leaflets should give greater emphasis to the fact that vaccines do not provide immediate immunity. A spokesman simply referred *The BMJ* to the existing information.

Rubin said that the NHS should also consider hammering home the message verbally. He said, “I do think that this one-to-one situation, when the person is getting jabbed, is a perfect opportunity for the person giving the vaccine to say that the recipient won’t be protected for a few weeks—and to remind them that they need to continue sticking to the rules on social distancing and not meeting people outside their household or bubbles.”

**Correction:** This article was updated on 22 March 2021 to show that the commentators referred to were from a number of universities and specialties, as the original article mentioned only King’s College, London. We also corrected it on 8 April to show that the rise in infections was seen after vaccination with both the Pfizer-BioNTech and the AstraZeneca vaccines.

- 1 Lopez Bernal J, Andrews N, Gower C, et al. Early effectiveness of COVID-19 vaccination with BNT162b2 mRNA vaccine and ChAdOx1 adenovirus vector vaccine on symptomatic disease, hospitalisations and mortality in older adults in England. *MedRxiv* 2021 (preprint). doi: 10.1101/2021.03.01.21252652.
- 2 Hunter PR, Brainard J. Estimating the effectiveness of the Pfizer COVID-19 BNT162b2 vaccine after a single dose. A reanalysis of a study of “real-world” vaccination outcomes from Israel. *MedRxiv* 2021 (preprint). doi: 10.1101/2021.02.01.21250957.
- 3 Office for National Statistics. Coronavirus and vaccine attitudes and behaviours in England: over 80s population, 15 February to 20 February 2021. 4 Mar 2021. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronavirusandvaccineattitudesandbehavioursinengland/over80spopulation15february-to20february2021>.
- 4 Rubin GJ, Brainard J, Hunter P, Michie S. Are people letting down their guard too soon after covid-19 vaccination? *BMJ Opinion* 2021 Mar 18. <https://blogs.bmj.com/bmj/2021/03/18/are-people-letting-down-their-guard-too-soon-after-covid-19-vaccination/>.
- 5 YouGov/Sky survey results. 2020. [https://docs.cdn.yougov.com/8jj48ajo8c/SKY\\_Vaccine\\_201203.pdf](https://docs.cdn.yougov.com/8jj48ajo8c/SKY_Vaccine_201203.pdf).
- 6 Public Health England. Covid-19 vaccination: what to expect. 2020. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/951769/PHE\\_COVID-19\\_vaccination\\_guide\\_what\\_to\\_expect\\_after\\_your\\_vaccination\\_English\\_v2.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/951769/PHE_COVID-19_vaccination_guide_what_to_expect_after_your_vaccination_English_v2.pdf).

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