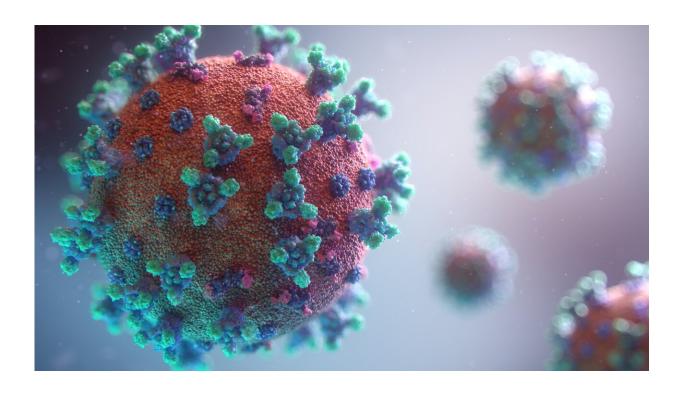


There are still good reasons to avoid catching COVID again—for one, your risk of long COVID goes up each time

December 9 2022, by Ashwin Swaminathan



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Like Canadian Prime Minister Justin Trudeau and Mexican President Andrés Obrador before him, Prime Minister Anthony Albanese has been infected with COVID for a second time.



In the middle of this year's fourth Omicron wave, Albanese's <u>reinfection</u> should not come as a surprise. Population antibody surveys have shown roughly half of Australian adults had COVID at least once <u>by mid-2022</u>.

With Christmas parties and much-needed holidays beckoning, how much effort should we be putting in to avoid COVID a second (or third) time?

Studies suggest we should care about this, as each reinfection can increase the risk of poorer health outcomes into the future.

What are the risk factors for reinfection?

The United Kingdom's <u>COVID Infection Survey</u> recently published an analysis of people testing positive for COVID again between June and October 2022, when the BA.4 and BA.5 Omicron subvariants were circulating widely.

They found reinfection rates were higher in those who had a very mild initial bout of illness and who'd had their second or third vaccine more than 90 days prior (suggesting waning immunity).

Interestingly, they also found reinfection rates were higher 14 days or more following a fourth vaccine dose than they were 14–89 days after a third dose. This is likely related to the qualification for the additional dose being an older and more chronically unwell population, compared with the three-dose regime recommended for a broader (healthier) population.

What are the health risks of reinfection?

For most <u>viral infections</u> (such as chickenpox or measles), when we get infected a second or further time, the symptoms and complications are



fewer (or absent altogether) compared with the initial illness. This is due to the body's long-lasting and protective immune system responses.

Whether this holds true for <u>infection</u> with SARS-CoV-2 (the virus that causes COVID) has been an open question due to its immune-evading ability, made possible by rapidly emerging mutations. The Australian government has just released its issues paper as part of its <u>inquiry</u> into long COVID and repeated COVID infections.

Research published last month in the peer-reviewed journal *Nature Medicine* offers the best evidence to date on the health risks of COVID reinfection.

These researchers used the enormous US Department of Veteran's Affairs <u>national database</u> to compare around 440,000 veterans who had one infection with around 40,000 who'd had two or more infections. They also compared them against an uninfected control group (around 5 million people).

They found the reinfected people had a higher risk of poor health—from death and hospitalization from any cause, through to fatigue and organ-specific issues (respiratory and heart health, neurological problems, mental health and digestive issues).

What's more, the risk increased with each new infection. So, those who'd had three infections had worse health outcomes compared with those who'd had COVID twice. And the latter group had worse health than those who'd only been infected once.

The link with worse outcomes was strongest in the first 30 days after their reinfection but was still evident six months later. Many of these persisting ailments, such as fatigue, poor concentration or breathlessness, are consistent with what we call long COVID syndrome.



It is important to note this <u>research</u>, though large and with important findings, is based on a US veteran population that is predominantly male, older (average age 60) and white. This means there will be differences in underlying health conditions and vaccination coverage compared with the wider population.

Bottom line

These studies don't mean that people feel sicker with the reinfection episode compared with their first—the severity of illness is related to the particular COVID variant, how much virus got into your <u>respiratory tract</u> ("the dose") and your vaccination status. In many cases, the subsequent infection is "milder" than the initial one.

However, the *Nature* study does suggest repeated COVID infection can trigger a wide range of health problems down the track through biological pathways that scientists are still trying to unravel. So, getting infected again is best avoided.

Get yourself up-to-date with COVID vaccinations. We know that vaccinations protect against severe COVID illness (needing to be in hospital for oxygen or dying from COVID pneumonia). They also provide some modest protection against reinfection.

With the current wave of infections, be sensible in crowds and public transport and wear a mask. Protect vulnerable contacts, such as the elderly or immunosuppressed, by staying away if you have symptoms.

The end-of-year party and holiday season will bring more invitations to social events and travel. Taking sensible precautions to prevent reinfection will protect our future health.

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