Some reasons to get off the fence about COVID booster

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Though many people remain on the fence about getting the latest COVID vaccine booster, new research suggests a strong argument for getting the shot this winter: It sharply reduces the risk for COVID.

Researchers found that getting vaccinated led to a 69% reduction in long-COVID risk among adults who received three vaccines before being infected. The risk reduction was 37% for those who received two doses. Experts say the research provides a strong argument for getting the vaccine, noting that about 10% of people infected with COVID go on to have long COVID, which can be debilitating for one quarter of those with long-lasting symptoms.

The data come from a systematic literature review and meta-analysis published in October in Antimicrobial Stewardship & Epidemiology. Researchers examined 32 studies published between December 2019 and June 2023, involving 775,931 adults. Twenty-four studies, encompassing 620,221 individuals, were included in the meta-analysis.

“The body of evidence from all these different studies converge on one single reality — that vaccines reduce the risk of long COVID, and people who keep up to date on their vaccinations also fared better than people who got it once or twice and didn’t follow up,” said Ziyad Al-Aly, MD, a clinical epidemiologist at Washington University in St Louis.

Researchers have reported similar results for children. The National Institutes of Health RECOVER Initiative team found that vaccines are up to 42% effective in preventing long COVID in children, said Dr. Carlos Oliveira, MD, a pediatric infectious diseases specialist and Yale researcher who contributed to the study, which is in preprint.

Vaccines also protect children from multisystem inflammatory syndrome, a condition that can happen after COVID, as well as protect against other COVID-related problems, such as missed school days, Oliveira said. “Even if the vaccine doesn’t completely stop long COVID, it’s still good for kids to get vaccinated for all these other reasons.”

However, uptake for the latest boosters has been slow: the Centers for Disease Control and Prevention reported that by mid-November, less than 16% of people aged 18 years or older had received a shot. For children, the number was closer to 6%. A recent Kaiser Family Foundation survey found that booster rates for adults are similar to what it was 1 year ago.

The survey results suggest that people are no longer as worried about COVID, which is why there is less concerned about keeping up with boosters. Though the current mutation of the virus is not as debilitating as its predecessors, long COVID continues to be a problem: as of January 2023, 28% of people who had contracted the virus had experienced long-COVID symptoms. And though the mechanisms are still not fully understood, and researchers have yet to agree on a definition of long COVID, they are certain about this much: The best way to avoid it is to avoid getting infected to begin with.

The lack of a diagnostic test for long COVID and the fact that the symptoms mimic those of other diseases lead to inconsistency that can make studies hard to replicate. In the papers reviewed for the Antimicrobial Stewardship & Epidemiology study, long COVID was

defined as having symptoms lasting from more than 4 weeks to more than 6 months. Alexandre Marra, MD, the lead author and a researcher at the Hospital Israelita Albert Einstein, in São Paulo, Brazil, and at the University of Iowa, said that a clear standard definition is needed to better understand the actual prevalence and evaluate vaccine effectiveness.

Al-Aly noted that there is a logical explanation for one finding in the paper: The percentage of individuals who had COVID and reported that long-COVID symptoms declined from 19% in June 2022 to 11% in January 2023.

Because a pandemic is a dynamic event, constantly producing different variants with different phenotypes, the prevalence of disease is naturally going to be affected. "People who got infected early in the pandemic may have a different long COVID profile and long COVID risk than people who got infected in the second or third year of the pandemic," Al-Aly said.

Most of the studies reported data from before the Omicron-variant era. Only eight reported data during that era. Omicron was not as lethal as previous variants, and consequently, fewer patients developed long COVID during that time.

One of those who did is Yeng Chang, age 40 years, a family doctor who lives in Sherwood Park, Alberta, Canada. Chang developed long COVID during fall 2022 after getting the virus in June. By then, she'd been vaccinated three times, but she isn't surprised that she got sick because each vaccine she had was developed before Omicron.

"When I had COVID I was really sick, but I was well enough to stay home," she said. "I think if I didn't have my immunizations, I might have been hospitalized, and I don't know what would have happened."

Long COVID has left Chang with brain fog, fatigue, and a lack of physical stamina that forced her to pause her medical practice. For the past year and a half, she's spent more time as a patient than a physician.

Chang had her fifth COVID vaccination in the fall and recommends that others do the same. "The booster you got however many years ago was effective for the COVID of that time but there is a new COVID now. You can't just say, 'I had one and I'm fine forever.'"