

# Do Vaccines Reduce Long-COVID Symptoms?



One of the many important questions about long-COVID is whether COVID-19 vaccination can reduce symptoms in those experiencing long-COVID. While some patients report a lessening of symptoms, it is unknown whether this is causally related to the vaccine, or merely reflective of the fact that most patients' symptoms improve over time. In addition, some patients also report a worsening of symptoms. But since there is currently a poor understanding of the causes and risk factors for long-COVID, all patient experiences following vaccination need to be carefully assessed.

For example, one observational and uncontrolled study (not yet peer-reviewed) released in March 2021 compared 44 vaccinated long-COVID patients with 22 matched unvaccinated participants. Those who received the vaccine showed a small overall improvement in long-COVID symptoms, with a decrease in worsening symptoms (5.6% vaccinated vs. 14.2% unvaccinated) and increase in symptom resolution (23.2% vaccinated vs. 15.4% unvaccinated).<sup>1</sup> Additionally, an informal survey of more than 900 patients with long-COVID by Survivor Corps, a patient advocacy group for those with long-COVID, found that only 39% of patients reported improvements following vaccination. However, Survivor Corps' results also found that 46% felt the same and, most notably, 14% felt worse.<sup>2,3</sup>

"I've heard from people who say they no longer have 'brain fog,' their gastrointestinal problems have gone away, or they stopped suffering from the shortness of breath they've been living with since being diagnosed with COVID-19."

- Akiko Iwasaki, PhD

*Professor of immunobiology at Yale School of Medicine and a major contributor to long-COVID research*



Some physicians estimate that the numbers of patients who see a reduction of symptoms may grow over time as more patients receive their second dose and experience further improvements.<sup>4</sup> Some infectious disease experts speculate that certain patients with long-COVID may be experiencing lessening of symptoms following vaccination either because there are some leftover viral fragments causing the immune system to be in an inflammatory state, or because the old viruses that stayed dormant in the body may have become active after COVID-19 infection.<sup>5</sup>

In March 2021, Dr. Anthony Fauci of the NIH was asked at a hearing on Capitol Hill whether vaccination effectively eliminated the appearance of long-COVID. He said, "Thus far [this issue is] anecdotal. Many people spontaneously get better anyway, and if you get vaccinated and you get better, you're not sure whether it's the vaccine or the spontaneous recovery. So you'll have to do a randomized trial to determine that."<sup>6</sup>

With more than 130 million Americans partially vaccinated and more than 80 million fully vaccinated as of April 2021, further anecdotal and controlled evidence around vaccination improving long-COVID symptoms will soon emerge.<sup>7</sup> Some researchers, such as Dr. Akiko Iwasaki from Yale School of Medicine, are already beginning to study to what degree vaccination helps those with long-COVID. However, ultimately larger and longer-term studies are needed to understand the relationship between vaccination and long-COVID. Through private sector research and public sector funds (such as the NIH's funding dedicated to understanding the longstanding effects of COVID-19), researchers are likely to be able to better understand the relationship between vaccines and long-COVID.<sup>8</sup> It is hoped that studies on this topic can provide new insights into what is behind the persistent symptoms and potential new treatments.

The COVID Patient Recovery Alliance is a multi-sector group of organizations whose mission is to define, develop, and assist in implementing a national strategy to characterize, diagnose, ensure care for, and sustainably fund the full recovery of individuals with long-COVID. To address the unprecedented and long-term consequences of COVID-19, the Alliance is developing national solutions that link diverse data sources, inform the development of models of care, and ensure adequate payment for the care and full recovery of these patients.

**Further research is needed to fully understand the relationship between COVID-19 vaccination and long-COVID symptoms.**

**Learn more at [COVID19PatientRecovery.org](https://COVID19PatientRecovery.org).**

<sup>1</sup> <https://www.medrxiv.org/content/10.1101/2021.03.11.21253225v3>

<sup>2</sup> <https://www.yalemedicine.org/news/vaccines-long-covid>

<sup>3</sup> <https://www.facebook.com/groups/COVID19SurvivorCorps/permalink/924012078347652/>

<sup>4</sup> <https://www.npr.org/sections/health-shots/2021/03/31/982799452/mysterious-illness-mysterious-relief-vaccines-help-some-covid-long-haulers>

<sup>5</sup> <https://www.cnn.com/2021/04/07/covid-vaccine-long-haulers-report-symptoms-easing-after-getting-shot.html>

<sup>6</sup> <https://www.c-span.org/video/?509831-1/house-energy-subcommittee-hearing-increasing-covid-19-vaccinations>

<sup>7</sup> <https://www.reuters.com/world/us/us-administers-2094-million-doses-covid-19-vaccines-2021-04-18/>

<sup>8</sup> See 2.