

Five Symptom Subtypes Highlighted in New Long COVID Index

The 2023 research index for adults with post-coronavirus disease 2019 ([COVID-19](#)) condition or long COVID has been updated using additional participant data from the Researching COVID to Enhance Recovery (RECOVER-Adult) study.



Study

A total of 13,647 participants from the RECOVER-Adult study were included in the current analysis, 11,743 of whom had a positive history of SARS-CoV-2 [infection](#). The remaining 1,904 individuals did not have a history of COVID-19.

Study participants were enrolled at 83 sites in the United States and Puerto Rico. These individuals completed at least one study visit 4.5 months after the first SARS-CoV-2 infection or later and not within 30 days of a [reinfection](#).

The original 44 participant-reported symptoms were analyzed using the least absolute shrinkage and selection operator (LASSO) regression approach to assign points to each [symptom](#). The summation of these points was used to define the participant-level long COVID research index.

An optimal long COVID index threshold was selected based on the estimated false-positive rate. Study participants above this threshold were considered as likely to have long COVID, whereas those who were not above this threshold but had at least one LASSO-selected symptom were considered as having possible [long COVID](#).

Updates to Long COVID Index

Symptoms that contributed to the updated 2024 research index for long COVID included post-exertional malaise, fatigue, brain fog, dizziness, palpitations, change in smell or taste, thirst, chronic cough, chest pain, shortness of breath, and [sleep apnea](#). Three symptoms including lack of sexual desire or capacity, gastrointestinal symptoms, and abnormal movements, which were present in the 2023 long COVID research index, were excluded from the updated long COVID index.

For the updated long COVID research index, the optimal threshold for identifying highly symptomatic long COVID [patients](#) was 11 or greater. Based on this threshold, 20% of patients with prior SARS-CoV-2 infection and 4% of patients without prior infection were likely to have long COVID.

Based on the 2023 long COVID index threshold, the incidence of likely long COVID was reported in 21% of patients with prior SARS-CoV-2 infection and 5% of patients without prior infection. The 2024 long COVID index threshold also classified 39% of patients with prior infection as having possible long COVID, which is a new category for the 2024 [model](#).

The most common symptoms in individuals with likely long COVID included fatigue, post-exertional malaise, post-exertional soreness, dizziness, [brain fog](#), gastrointestinal symptoms, and palpitations.

Long-COVID Symptom Subtypes

A total of five long-COVID symptom subtypes were identified among participants with likely long COVID and prior SARS-CoV-2 infection. The most common features in subtypes one, two, three, four, and five were change in smell or taste, [chronic cough](#), brain fog, palpitations, and post-exertional soreness, dizziness, and gastrointestinal symptoms, respectively. The most prominent features in all subtypes except subtype one were fatigue and post-exertional malaise.

Participants belonging to the subtype five with multisystem symptoms more frequently reported worsened quality of life, [physical health](#), and daily function as compared to those with other long COVID subtypes.

Variations in demographic features were observed among those in all five subtypes. For example, the proportion of female participants was lower in subtype three and higher in subtypes four and five as compared male participants. Furthermore, higher proportions of Hispanic and multiracial participants, unvaccinated participants, and individuals with [SARS-COV-2 infection](#) before the Omicron wave were identified as having long COVID subtype five.

Conclusion

The 2024 long COVID research index established in the current study has the potential to accurately identify people with symptomatic long COVID and its subtypes. Additional benefits associated with the updated index as compared to the 2023 index include its refined long COVID classification, consolidated candidate [organ systems](#), greater symptom specificity, and differentiation of long COVID symptoms into five subtypes.

Source:

<https://www.news-medical.net/news/20241219/New-long-COVID-index-highlights-five-symptom-subtypes.aspx>