

## New study reveals who was more vulnerable to post-COVID syndrome early in the pandemic

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People with post-COVID syndrome (PCS) following the COVID-19 infection often suffer from intense fatigue and dyspnea. This is what emerges from a new Nordic study led by Umeå University and recently published in *BMJ Public Health* journal. High blood pressure also appears to be a risk factor for PCS diagnosis, according to the study's findings.

"These <u>scientific results</u> are an important step in better understanding PCS. By identifying key factors, we can improve diagnosis, adapt care and pave the way for research into more effective treatments," says Anne-Marie Fors Connolly, MD Ph.D., Assoc Prof, clinical researcher at Umeå University and the study's senior author.

The study analyzed data from more than 1 million people in Sweden who tested positive for COVID-19 during the period from February 2020 to May 2021. Of these, 1.5%, just over 16,000 people, were diagnosed with PCS after the main COVID-19 infection. They were diagnosed in both outpatient and inpatient care, which provided <u>large datasets</u> for the researchers to examine the clinical footprint of PCS. The researchers conducted an in-depth study of PCS symptoms in individuals who required ongoing health care three months after the COVID-19 infection.

The researchers found that the most common symptoms associated with PCS were dyspnea (difficulty breathing), malaise, and fatigue, as well as abnormal lung examination findings. People with PCS were more likely to have hypertension and <u>high blood pressure</u> compared to both people who had undergone COVID-19 infection without later being diagnosed with PCS and compared to people who had not contracted COVID-19 at all.



This indicates a vulnerability in people with high blood pressure. Notably, dyspnea emerged as a new symptom for the majority of those diagnosed with PCS, underscoring its significance in PCS symptomatology and how clinicians diagnose PCS.

In determining which COVID-19 patients were diagnosed with post-COVID syndrome, a strong correlation was observed with the severity of illness during the early stages of infection. In particular, individuals who required <u>mechanical ventilation</u> for breathing assistance were at high risk of being diagnosed with PCS after recovering from the COVID-19 <u>infection</u>.

The study's comprehensive approach, leveraging data from multiple nationwide registries, provides a unique overview of PCS and valuable insights for health care providers. The results underline the importance of future studies on the underlying causes and potential treatments of PCS.

"Our study elucidates symptomatology and how clinicians diagnose PCS. Understanding the clinical and demographic characteristics of PCS is crucial to develop targeted care strategies for those suffering from longterm effects of COVID-19," says Dr. Hanna Ollila, FIMM-EMBL Group Leader at the University of Helsinki.

**More information:** Hanna M Ollila et al, How do clinicians use post-COVID syndrome diagnosis? Analysis of clinical features in a Swedish COVID-19 cohort with 18 months' follow-up: a national observational cohort and matched cohort study, *BMJ Public Health* (2024). DOI: <u>10.1136/bmjph-2023-000336</u>

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