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Covid-19: Only a quarter of patients admitted to hospital feel fully recovered after a year, study finds

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Only around one in four people who had covid-19 reported feeling fully recovered within a year of being discharged from hospital, a study has found.[1]

The research, presented at the 2022 European Congress of Clinical Microbiology and Infectious Diseases held in Lisbon, Portugal, included 2320 patients discharged from NHS hospitals in the UK from March 2020 to April 2021. They were assessed at five months and at one year after discharge, with 807 (32.7%) completing both visits.

The study found that the proportion of patients reporting full recovery was practically unchanged between the two visits: 26% at five months (501 of 1965) and 29% at one year (232 of 804).

Recovery was assessed using patient reported outcome measures, physical performance, and organ function at five months and at one year after hospital discharge. Blood samples were also taken at five months to check for the presence of various inflammatory proteins.

Factors associated with being less likely to report full recovery at one year were being female (odds ratio 0.68 (95% confidence interval 0.46 to 0.99)), being obese (0.50 (0.34 to 0.74)), and having had invasive mechanical ventilation (0.42 (0.23 to 0.76)).

Symptom severity

The research paper, published in the *Lancet Respiratory Medicine*,[1] is part of the Post-Hospitalisation Covid-19 study, a national consortium led by experts at the University of Leicester and University Hospitals of Leicester NHS Trust to investigate the long term effects of covid-19 on health outcomes in patients who were admitted to hospital.

In an earlier paper from the same group the authors identified four clusters of symptom severity at five months,[2] which have subsequently been confirmed at the one year mark by this latest study. Just over 1600 patients had sufficient data to allocate them to a cluster, with 319 (20%) having very severe physical and mental health impairment, 493 (30%) having severe physical and mental health impairment, 179 (11%) having moderate physical health impairment with cognitive impairment, and 645 (39%) having mild mental and physical health impairment.

The researchers found that being obese, having reduced exercise capacity, a greater number of symptoms, and increased levels of the inflammatory biomarker C reactive protein were all associated with the more severe clusters. Levels of the inflammatory biomarker interleukin 6 (IL 6) were also found to be higher in the "very severe" and the "moderate with cognitive impairment" clusters than in the "mild" cluster.

Louise Wain, one of the study authors who is an epidemiologist and GSK/British Lung Foundation chair in respiratory research at the University of Leicester, said, "No specific therapeutics exist for long covid, and our data highlight that effective interventions are urgently required. Our findings of persistent systemic inflammation, particularly in those in the very severe and moderate with cognitive impairment clusters, suggest that these groups might respond to anti-inflammatory strategies . . .

"The finding also suggests the need for complex interventions that target both physical and mental health impairments to alleviate symptoms. However, specific therapeutic approaches to manage post-traumatic stress disorder might also be needed."

A paper describing the longest known covid-19 infection—a patient who tested positive for 505 days before dying—was also presented at the conference. The previous longest confirmed case was believed to be 335 days.[3]

1 Evans RA, Leavy OC, Richardson M, et al; PHOSP-COVID Collaborative Group. Clinical characteristics with inflammation profiling of long COVID and association with 1-year recovery following hospitalisation in the UK: a prospective observational study. *Lancet Respir Med* 2022 (published online 23 Apr). doi: 10.1016/S2213-2600(22)00127-8. https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(22)00127-8/fulltext

2 Evans RA, McAuley H, Harrison EM, etalPHOSP-COVID Collaborative Group. Physical, cognitive, and mental health impacts of COVID-19 after hospitalisation (PHOSP-COVID): a UK multicentre, prospective cohort study. *Lancet Respir Med* 2021;9:1275-87. https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(21)00383-0/fulltext. doi: 10.1016/S2213-2600(21)00383-0 pmid: 34627560

3 King's College. London. UK patient had COVID for 505 days. 22 Apr 2022. https://www.kcl.ac.uk/news/uk-patient-had-covid-for-505-days