

Doing daily chores around the house is best activity for individuals recovering from COVID-19, say scientists

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Patients with COVID-19 have the best chance to recover if they continue performing their daily household chores like cooking, eating,

dressing, and keeping good hygiene, scientists have found.

In their study published in the journal [*Healthcare*](#), the scientists explore three different assessment protocols for the rehabilitation of patients recovering from COVID-19.

Their findings are drawn from an evaluation of health conditions of 40 participants a month past their COVID-19 diagnosis with mild to moderate symptoms.

The participants undergo three different tests: the Londrina Activities of Daily Living (ADL) Protocol, the Glittre ADL Test, and the widely used 6-Minute Walk Test.

The ADL [protocol](#) mostly refers to routine tasks people normally do at home which include a variety of household chores activities, while the Glittre ADL Test involves lower and upper limb movements when walking, crouching, carrying objects and descending or climbing of stairs. The 6-Minute Walk Test involves walking at normal pace for six minutes.

Fatma Hegazy, University of Sharjah's Professor of physical therapy and a co-author, says, "Before and after each test, we carefully monitored their [participants'] vital signs: heart rate, breathing rate, and oxygen levels. Our study aimed to understand how their hearts and lungs coped with everyday activities during recovery.

"The results showed significant changes in how the body responded to the Londrina ADL Protocol and the Glittre ADL Test compared to the 6-Minute Walk Test. This means we now have a clearer understanding of which tests are best for tracking recovery progress in post-COVID individuals.

"Our research highlights the effectiveness of the Londrina ADL Protocol as a practical tool for health care professionals to use in routine testing of activities of daily living."

Besides Prof. Hegazy, scientists from UK's Manchester Metropolitan University, Brazil's Augusto Motta University Center and Egypt's Cairo University took part in the study titled "Cardiopulmonary Response in Post-COVID-19 Individuals: A Cross-Sectional Study Comparing the Londrina Activities of Daily Living Protocol, 6-Minute Walk Test, and Glittre Activities of Daily Living Test."

"The study concludes that the Londrina ADL protocol is a robust and practical tool for the routine clinical testing of daily living activities in post-COVID-19 individuals," the authors write.

However, they note the significance of the benefits patients get from Londrina ADL protocol should not come at the expense of the other two tests they administered in their study.

"While the 6MWT remains valuable for assessing walking-related outcomes, a combined approach employing the Londrina ADL protocol and 6MWT offers a comprehensive strategy for evaluating multifaceted functional capacities in this population."

The findings, the authors say, show "significant alterations in the cardiopulmonary response, including physiological changes in [heart rate](#), respiratory rate, and systolic and diastolic blood pressure, following the performance of both the Glittre ADL test and Londrina ADL protocol."

But surprisingly, they find that the strongly recommended practice of walking for six minutes "yielded a milder physiological response compared to the other two tests. Additionally, participants reported experiencing a lower level of dyspnea [difficulty breathing] during the

6MWT in comparison to the Londrina ADL protocol and Glittre ADL test."

The study attributes the importance of ADL protocol or Glittre ADL to the nature of the exercises involved in practicing them which lead to the movement of both lower and upper limbs, while the 6-minute walk exercise "only requires lower limb performance."

The findings, the authors claim, are of "significant implications for rehabilitation professionals in the assessment and planning of treatment strategies."

"The nature of the assessments utilized in this study offers a multifaceted understanding of post-COVID-19 functional limitations. Clinicians can leverage the insights gained from these cardiopulmonary assessments to tailor rehabilitation interventions based on individualized needs."

The study proves that recovery in the case of COVID-19 should not be confined to overcoming the virus. "It's about rebuilding resilience. Our research delves into the cardiopulmonary dynamics post-COVID-19, offering insights to enhance post-recovery care," according to the lead author Reem Jasim Al Yammahi, a researcher at University of Sharjah's Department of Physiotherapy, College of Health Science.

"From struggle emerges strength, but recovery requires precision. Our research evaluates cardiopulmonary responses post-COVID-19, providing a foundation for targeted interventions and renewed hope."

Yammahi maintains the study stands out in providing a fresh understanding of how COVID-19 affects the body through a comprehensive analysis of three commonly used assessment of physical activities patients can perform while recovering, measuring their impact

on the body, specifically heart and lung function.

Prof. Hegazy continues, "By investigating the cardiopulmonary responses triggered by the Londrina Activities of Daily Living (ADL) Protocol and comparing them with the responses from the Glittre ADL Test and the 6-Minute Walk Test, we are gaining crucial insights into the aftermath of COVID-19.

"The significance lies in the assessment of the impact of COVID-19 on individuals' cardiopulmonary function and their capacity for physical activity. This understanding is pivotal for health care professionals as they tailor rehabilitation interventions to aid in the recovery of post-COVID-19 patients.

"Furthermore, by comparing the responses elicited by different assessment protocols, we can identify which methods provide the most reliable and comprehensive evaluation of post-COVID-19 individuals. This not only enhances our ability to monitor recovery progress but also guides the development of effective rehabilitation strategies tailored to each patient's needs.

"Ultimately, the impact of this project extends beyond the realm of research. It directly influences clinical practice by providing valuable insights that can improve the quality of care and support offered to individuals navigating the complexities of post-COVID-19 recovery."

Prof. Hegazy believes the study holds significant practical implications for clinical practice and public health intervention, offering valuable insights that can directly inform health care decisions and strategies.

"First and foremost, our findings provide [health care professionals](#) with a deeper understanding of the cardiopulmonary challenges faced by individuals recovering from COVID-19. This enhanced understanding

enables clinicians to tailor rehabilitation plans more effectively, ensuring that they address the specific needs of each patient.

"By utilizing the most reliable assessment tool identified through our research, clinicians can monitor patients' progress more closely and make informed decisions regarding their care and treatment."

More information: Reem Jasim Al Yammahi et al, Cardiopulmonary Response in Post-COVID-19 Individuals: A Cross-Sectional Study Comparing the Londrina Activities of Daily Living Protocol, 6-Minute Walk Test, and Glittre Activities of Daily Living Test, *Healthcare* (2024). [DOI: 10.3390/healthcare12070712](https://doi.org/10.3390/healthcare12070712)

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