

Two studies unveil key insights into long COVID

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Health care providers are learning critical new information to help

improve care for patients with long COVID, thanks to a pair of recent studies out of the Post-COVID-19 Program at UT Health Austin, the clinical practice of Dell Medical School at the University of Texas at Austin. Over the past several months, UT researchers have edged closer to defining the pattern of symptoms it generates and how it affects patients, as well as developing methods to differentiate patients suffering from long COVID versus other conditions.

While consensus around the clinical definition is evolving, the [National Institutes of Health](#) (NIH) defines long COVID as symptoms and conditions of COVID-19 that linger for weeks, months or even years after a person's initial infection. Even people who had no symptoms when they were infected can develop symptoms later.

"These research efforts are instrumental for both clinicians and [health systems](#) in grasping the complexities of long COVID, and as part of providing the highest possible care for patients," said W. Michael Brode, M.D., medical director of the Post-COVID-19 Program.

Brode highlighted that long COVID, which occurs in approximately 10% of COVID-19 cases, remains a challenge.

"Our research is not only refining the definition and treatment needs for long COVID, but also demonstrating the effectiveness of innovative testing methods," said Brode, who is also an assistant professor in the Department of Internal Medicine at Dell Med. "These methods are capable of identifying and diagnosing long COVID's common issues, even when traditional tests fall short."

Clinical characteristics of long COVID patients

Research published in [Scientific Reports](#) aims to understand the experiences of long COVID patients to improve services at specialized

post-COVID clinics. The study of 252 patients found that they experienced complex and disabling symptoms regardless of the severity of their initial infection, age, gender, or if they had pre-existing health problems.

Patients reported a median of 18 new symptoms after recovering from COVID-19 illness. The most common were fatigue (89%), "brain fog" (89%), and difficulty concentrating (77%).

Almost half displayed mild cognitive dysfunction on testing, and 65% of patients rated their mental health and 73% their physical health as "fair" or "poor." The disease significantly affected patients' ability to work, with a decrease in full-time employment and an increase in unemployment rates.

Metabolic fingerprinting to distinguish long COVID from fibromyalgia

Another study, done in collaboration with researchers at Ohio State University, introduces a blood test that can differentiate between patients suffering from fibromyalgia versus long COVID with 100% accuracy.

Published in [Biomedicines](#), the study presents a promising approach for differentiating between long COVID and fibromyalgia. Fibromyalgia is a chronic disorder that causes pain and tenderness throughout the body, as well as fatigue and trouble sleeping— symptoms that tend to overlap with long COVID. Neither condition currently has a [diagnostic test](#).

The study involved 100 adult patients, half diagnosed with long COVID and half with fibromyalgia. Researchers found a distinct chemical marker in the blood of fibromyalgia patients, which was absent in those with long COVID. The [blood test](#) is quick and could easily be conducted

in clinics, potentially leading to quicker and more accurate diagnoses, according to Brode.

"We hope findings can not only enhance our understanding of long COVID but also pave the way for targeted diagnostics and interventions," said Brode. "Millions of Americans are still living with the scars of the pandemic, and we hope to translate these insights into tangible health care solutions."

More information: Rija Aziz et al, Clinical characteristics of Long COVID patients presenting to a dedicated academic post-COVID-19 clinic in Central Texas, *Scientific Reports* (2023). [DOI: 10.1038/s41598-023-48502-w](https://doi.org/10.1038/s41598-023-48502-w)

Kevin V. Hackshaw et al, Metabolic Fingerprinting for the Diagnosis of Clinically Similar Long COVID and Fibromyalgia Using a Portable FT-MIR Spectroscopic Combined with Chemometrics, *Biomedicines* (2023). [DOI: 10.3390/biomedicines11102704](https://doi.org/10.3390/biomedicines11102704)

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