

Long COVID-19 is linked to chronic pain conditions, says study

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Many patients continue to struggle in the wake of the pandemic as they grapple with ongoing symptoms triggered by COVID-19 infection, a condition commonly known as long COVID. However, the onset of

symptoms such as brain fog, fatigue, headache, and other types of pain is not unique to COVID infection, according to a new U-M study.

The research is [published](#) in the journal *Pain*.

What's more, these patients may be helped by capitalizing on the body of research around chronic overlapping pain conditions (COPCs), such as fibromyalgia, migraine, [low back pain](#) and others.

The work, led by Rachel Bergmans, Ph.D., of the Department of Anesthesiology and a team from the Chronic Pain & Fatigue Research Center at Michigan Medicine, sought to identify whether long COVID was distinct from other pain syndromes and whether chronic pain conditions increased the risk of features of long COVID.

"We hypothesized we'd see an increase in pain and fatigue because it's something we've seen in the past with other [infectious diseases](#), like the SARS outbreak in 2002," said Bergmans.

To test this, they identified health records of three subsets of patients from throughout the U.S.: people with COVID, people with influenza, and people without an infection. They then compared the likelihood of receiving a long COVID diagnosis in people with COPCs vs. those without pain conditions.

They discovered that having a COPC increased the risk for long COVID features in each group and had a similar effect size as sex or being hospitalized for COVID, known [risk factors](#) for long COVID.

Interestingly, those with influenza were even more likely than those with COVID infection to have features of long COVID. Furthermore, long COVID features were found in a little over 24% of people with COPCs even in the absence of infection.

What could be going on? Bergmans noted that a relatively recently defined type of pain known as nociplastic pain—pain due to heightened sensitization in the central nervous system—might help explain some of the findings.

"A big predictor of future pain is having had pain in the past," she said. "With nociplastic pain, some people have what you might call a pain setting turned up in their central nervous system. There's evidence showing that infections, trauma, and stress can be a trigger for nociplastic pain features and related symptoms."

Nociplastic pain often co-occurs with cognitive dysfunction and other symptoms related to long COVID, she added. The good news is the existing body of evidence around the treatment of [chronic pain](#) could offer patients with long COVID a basis for management as more research into the condition continues. For example, Michigan Medicine has developed a [resource for patients with post-acute sequelae of COVID-19](#), providing advice for navigating this often-misunderstood condition.

"The pandemic brought awareness to how disabling these symptoms can be and the burden they have on people's lives," said Bergmans.

Additional authors include Daniel J. Clauw, Candace Flint, Herb Harris, Seth Lederman and Andrew Schrepf.

More information: Rachel S. Bergmans et al, Chronic overlapping pain conditions increase the risk of long COVID features, regardless of acute COVID status, *Pain* (2023). DOI: [10.1097/j.pain.0000000000003110](https://doi.org/10.1097/j.pain.0000000000003110)

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