

What is long COVID?

MAY 15, 2022



Most people recover from SARS-CoV-2, the virus that causes COVID-19, within a couple of weeks, but others may experience new or lingering symptoms, even after recuperating from COVID-19. Although, there is no universal clinical case definition for these lingering symptoms the [CDC labels long COVID](#), also known as post-COVID conditions, as a wide range of new, returning or ongoing health problems people can experience four or more weeks after first being infected with SARS-CoV-2.

According to the CDC, long COVID may also be referred to as long-haul COVID, post-acute COVID-19, long-term effects of COVID or chronic COVID.

What experts are saying about long COVID

The National Institutes of Health (NIH) has given these symptoms the name: postacute sequelae of SARS-CoV-2 infection (PASC). At the AMA June 2021 Special Meeting of the House of Delegates, the [AMA adopted policy](#) supporting “the development of an ICD-10 code or family of codes to recognize long COVID (PASC) and other novel post-viral syndromes as a distinct diagnosis.

Long COVID may be [considered a disability](#) under the Americans with Disabilities Act (ADA).

Symptoms of long COVID

Fatigue and “brain fog” are among the most-reported long COVID symptoms. According to an article published by the [JAMA Network™](#), additional symptoms include insomnia, changes in smell and taste, shortness of breath, chest pain, palpitations, dizziness, depression and anxiety. In some cases, the symptoms are disabling, preventing patients from working or even going about their normal daily activities.

In the [April 11, 2022 edition](#) of the AMA COVID-19 Video Update, Akiko Iwasaki, PhD, the Sterling Professor of Immunobiology at Yale University and a principal investigator at the Howard Hughes Medical Institute, said patients with long COVID report over 200 symptoms affecting many different organ systems.

3 categories for long COVID

Patients with long COVID can be placed in [one of three categories](#), according to Devang Sanghavi, MD, an intensivist and medical director of the medical intensive care unit (ICU) at Mayo Clinic in Jacksonville, Florida.

1. Patients with COVID-19 who do not recover completely and have ongoing symptoms because of direct cell damage from the virus.
2. Patients with symptoms related to chronic hospitalization such as when someone is in the hospital, ICU or is bed bound for weeks.
3. Patients with symptoms that appear after recovery.

Hypothesis on causes of long COVID

Currently, there is no known definite cause for long COVID, but Iwasaki says researchers are looking at three hypotheses.

- A persistent virus or viral remnants in tissues, such as viral RNA or protein could be triggering chronic inflammation.
- Autoimmunity: An acute respiratory infection can induce autoimmune conditions in some patients. Once this happens, it is difficult to reverse.
- Dysregulated gut microbiome, dysbiosis and latent reactivation of viruses such as Epstein-Barr.

Children and long COVID

Studies indicate that children with both mild and severe COVID-19, including children who previously had multisystem inflammatory syndrome (MIS-C) also suffer from long COVID, with similar symptoms to adults. Children commonly report insomnia, fatigue, headache,

muscle and joint pain, cough, and difficulty with concentration.

“The key difference between long COVID in adults and children is that the symptoms may be similar, but the [number of patients affected is lower in kids,](#)” said Dr. Sanghavi. “And then most of these symptoms tend to go away within a couple of months.”

Understanding treatment options

The NIH has awarded nearly \$470 million to build a national study population of diverse research volunteers and support large-scale studies on the long-term effects of COVID-19, known as the [RECOVER Initiative](#). The understanding of evidence-based [treatments](#) for long-COVID remains incomplete and guidance for health care professionals will likely change over time.

While we work to understand the long-term effects of COVID-19 and the best available treatments, Iwasaki says it is important to understand the different endotypes that underlie long COVID.

Taking a patient-centered approach to treatment

Physicians from the Atlantic Health System in New Jersey—a member of the AMA Health System Program, are taking a [patient-centered approach to treatment](#) of long COVID.

“Taking that holistic approach—breaking it down, just kind of looking at everything—is really beneficial because they usually come in with more than one symptom,” said Federico Cerrone, MD, a pulmonary critical care and sleep medicine specialist with Atlantic Medical Group and center co-director. “Even though the prevailing ones are still the fatigue, maybe the brain fog, maybe the breathing issues, they still tend to have multiple. So that approach has worked well, and the patients are very appreciative of that approach as well.”

The [July 2021 issue](#) of the *AMA Journal of Ethics* also points to the importance of listening to a patient’s experience with an illness, referencing reports of debilitating symptoms from COVID patients who experience myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) and postexertional malaise (PEM).

Vaccinations may help prevent long COVID

Emerging data indicates that getting vaccinated may help prevent long COVID. "What is reassuring is that patients who were vaccinated are estimated to be 50% less likely to develop long COVID or post COVID syndrome," said Dr. Sanghavi.

Dr. Sanghavi also points to anecdotal reports that symptoms of long COVID have disappeared in some patients after they got vaccinated against COVID-19.

Explore other AMA resources on COVID-19

The AMA has developed frequently-asked-questions documents on COVID-19 vaccination covering safety, allocation and distribution, administration and more. There are two FAQs, one designed to answer [patients' questions](#) (PDF), and another to address [physicians' COVID-19 vaccine questions](#) (PDF).

The AMA's [COVID-19 resource center](#) has evidence-based [news](#), guidance, [videos](#), podcasts, research highlights and more on the pandemic. Read about the latest on [COVID-19 vaccines](#).

Other key COVID-19 resources include:

- [JAMA Network™ coronavirus resource center](#)
- [AMA Ed Hub™ coronavirus education center](#)
- [AMA Journal of Ethics COVID-19 Ethics resource center](#)

Reviewed by: Andrea Garcia, JD, MPH, director of science, medicine & public health, AMA

Reviewed on: May 12, 2022