

Much Remains to Be Learned About Long COVID

Several mechanisms may play a role, including persistent virus and ongoing immune dysregulation.

February 28, 2023 By [Liz Highleyman](#)

The annual [Conference on Retroviruses and Opportunistic Infections \(CROI\)](#) is primarily an HIV meeting, but it also often features presentations on the latest infectious diseases in the news, which this year included COVID-19 and [mpox \(formerly monkeypox\)](#).

The conference had a symposium dedicated to COVID, several abstract sessions that interwove both HIV and SARS-CoV-2 and dozens of posters related to acute COVID and its long-term consequences, collectively known as long COVID (also called post-acute sequelae of SARS-CoV-2, or PASC).

The symposium, titled “Where Are We Now?,” featured Kara Chew, MD, of the University of California Los Angeles, speaking about outpatient treatment for mild to moderate COVID; Jonathan Li, MD, of Harvard Medical School, speaking about SARS-CoV-2 viral rebound after treatment; and Michael Peluso, MD, of the University of California San Francisco (UCSF), speaking about long COVID.

Michael Peluso, MDLiz Highleyman

Peluso, longtime HIV researcher Steven Deeks, MD, and colleagues are studying a cohort of people with long COVID, dubbed LIINC, that now includes more than 700 people. The new cohort leverages the infrastructure of [UCSF's long-running SCOPE cohort of people living with HIV](#).

Peluso explained that long COVID is not just one syndrome. There are several possible mechanisms underlying the condition—alone or in combination—including persistent SARS-CoV-2 infection, inflammation and immune dysregulation, reactivation of coexisting viruses (for example, Epstein-Barr virus or cytomegalovirus), microbial translocation (leakage of bacteria and other microbes from the gut, triggering inflammation), vascular dysfunction (including microclots) and autoimmunity.

As was the case in the early years of AIDS when there were no effective approved treatments, people with long COVID are trying a wide variety of therapies, ranging from vitamins and supplements to repurposed medications to fight brain fog and fatigue. The antiviral [Paxlovid \(nirmatrelvir/ritonavir\)](#), used to treat acute COVID, is currently under study for long COVID as well. Some patients are using HIV antiretrovirals off-label, including tenofovir disoproxil fumarate (which has [yielded mixed results for acute COVID](#)) and maraviroc.

All the possible underlying mechanisms are potentially targetable, Peluso said, but effective management of long COVID requires a unified, cross-disciplinary approach. Also important is the discovery of biomarkers that could enable monitoring of disease progression and treatment effectiveness, much as the validation of viral load as a surrogate marker transformed the HIV field.

Click here for a Twitter thread summarizing Peluso's presentation in more detail.

It's been a long day at [#CROI2023](#), but I'll attempt to live-tweet [@MichaelPelusoMD](#)'s presentation on [#longCOVID](#). Though mainly an [#HIV](#) meeting, CROI also includes the hot infectious diseases of the day. (Thanks Dr Peluso for providing advance slides & permission to share.) 1/ pic.twitter.com/SLGkiHGG7z
— Liz Highleyman (@LizHighleyman) [February 22, 2023](#)

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