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YOUR HEALTH

Experimental Drugs Aim to Treat Long-Haul Covid Patients

People suffering from debilitating symptoms for months after getting sick with Covid could get some relief if drugs prove effective in trials



Patrick Varnes, shown here on his birthday, continues to have shortness of breath, fatigue and headaches nearly six months after being diagnosed with Covid. He hopes to participate in a drug trial for long-haul Covid.



By

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For months, Covid patients suffering from debilitating long-term symptoms have gotten few answers—and even fewer treatments—from the medical community. But now, some pharmaceutical companies and researchers are moving to launch the first clinical trials for drugs intended to treat long-term Covid.

Many Covid long-haulers, as they are known, are young and were previously healthy, and weren't hospitalized for their initial infection. But months later, many are experiencing life-altering symptoms including brain fog, extreme fatigue and shortness of breath, often making normal daily activities nearly impossible.

Doctors' understanding of the condition is still nascent, and estimates for cases vary widely. But research suggests at least 10% to 20% of Covid patients experience long-term symptoms. A recent survey from the U.K.'s Office for National Statistics, for instance, reported that at least 10% of Covid patients have symptoms lasting for three or more months.

Companies are repurposing experimental drugs being tested for other diseases, and filing applications or launching clinical trials. Some are using the treatments on patients who apply for compassionate use when possible.

So far, these drugs are experimental and are not yet FDA-approved for any condition, whether Covid or any other disease they were originally developed to treat.



CytoDyn, a biotechnology company, recently applied to the FDA to test its experimental drug, leronlimab, on 102 long Covid patients.

PHOTO: CYTODYN INC.

Doctors have previously used some existing drugs to alleviate specific symptoms of long Covid in a piecemeal fashion. What's different now is that scientists are testing drugs intended to treat the underlying causes of the condition.

CytoDyn, a Vancouver, Wash., biotechnology company, recently applied to the U.S. Food and Drug Administration to test its experimental drug, leronlimab, on 102 long Covid patients, says Scott A. Kelly, chief medical officer of the company.

Leronlimab, a monoclonal antibody administered through subcutaneous injections, was developed as an HIV drug. When the pandemic hit, the company shifted to Covid-19. The same receptor that allows HIV to enter cells is also important in regulating immune cells; some doctors believe long-term Covid symptoms are caused by the immune system going haywire. The company has recently tested the treatment in severe Covid patients as well as in mild to moderate cases, some of which were long-haul patients.

Some patients with long-term symptoms reported their brain fog and cognition issues improving after treatment. "When we started to see these patients saying the brain fog was clearing, we were encouraged," says Dr. Kelly. A new trial would test the drug specifically on long-haul patients.

Dr. Kelly says they believe leronlimab may be alleviating brain inflammation. Leronlimab binds to a cell receptor that contributes to the regulation of immune cells that sometimes flood an area and destroy tissue. Blocking that receptor may slow down the inflammatory response, which some scientists believe is triggering problems in long Covid patients.

"We are hopeful we can control the neuroinflammation in the brain which we think causes a lot of these problems with autonomic dysfunction, fatigue, brain fog," says Dr. Kelly. The company says patients haven't reported significant side effects in the clinical trials they've done for Covid and HIV.

Dr. Kelly says the interest in such a treatment is tremendous. "I get emails every day about wanting to participate in the trial," he says.

Among them is Patrick Varnes, a 41-year-old financial director in Atlanta who was diagnosed with Covid at the end of June. Nearly six months later he continues to have shortness of breath, fatigue and headaches. "I've had shortness of breath every single day," says Mr. Varnes.

Before Covid-19, Mr. Varnes was a fitness buff. He went to a CrossFit gym five days a week. Now, he can't do much more than go on a walk.

He heard about leronlimab from an online support group and reached out to Christopher Recknor, a Gainesville, Ga., physician who runs clinical trials for CytoDyn. Mr. Varnes did a pre-screening; if the FDA approves a trial, he'll be able to join it, says Dr. Recknor.

Mr. Varnes says he's tried nearly 30 different supplements, acupuncture and a steroid. "After six months of living in an internal prison, I need to try it," says Mr. Varnes. "I really, really hope it works."

Other companies are also repurposing drugs investigated for other conditions.

Organicell, a Miami-based biotechnology company, is looking at testing Zofin, an experimental drug tested for chronic obstructive pulmonary disease, or COPD, on long Covid patients. Zofin uses nanoparticles to reduce inflammation and microRNA to target different genes.

Mari Mitrani, chief science officer of Organicell, says the company decided to pivot to Covid-19 because Zofin was designed to improve lung regeneration, which is a problem for many Covid-19 patients.

The drug has been used in 18 Covid patients—including four with long Covid—through compassionate use requests approved by the FDA. The company received FDA approval to do a trial for certain groups of recently infected Covid patients. It is waiting for FDA authorization to do a trial specifically for long-haul Covid patients, says Dr. Mitrani. Organicell says no significant side effects have been reported so far.

PureTech, a Boston-based biotechnology company, is also looking to test LYT-100, its experimental drug, to treat lung-scarring in post-acute Covid patients.

Toby Maher, a professor of medicine at the University of Southern California, is principal investigator of a study testing the use of LYT-100, an anti-inflammatory drug. Dr. Maher is overseeing a Phase 2 clinical trial starting to recruit 168 patients who are at least one month post-hospitalization, but are still having difficulty breathing and whose lung scans show residue of disease.

LYT-100 is an oral tablet taken twice a day. The company says the main anticipated side effects are gastrointestinal issues such as bloating and nausea, but says most patients should be able to take the treatment without problems.

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“Increasingly we’re recognizing there are a large number of patients left with significant symptoms following Covid infection and those symptoms appear to be caused by permanent damage to the lung in the form of scarring,” says Dr. Maher.

Some doctors believe that some long-haul Covid patients are suffering from myalgic encephalomyelitis/chronic fatigue syndrome, a post-viral condition. AIM ImmunoTech, an Ocala, Fla., biotechnology company, recently got [approval to expand](#) its ongoing clinical trial for CFS to include Covid patients who have chronic fatigue-like symptoms, says Tom Equels, CEO of the company. The company is treating patients with Ampligen, an experimental antiviral drug administered as an IV infusion.

The company says Ampligen has been generally well tolerated, with the most likely side effect being mild and transitory flu-like symptoms. It works by activating and enhancing the natural human immune system.

An October study published in the journal [PLOS One](#) found that the earlier ME/CFS patients take Ampligen, the better the outcome, says Mr. Equels. “We have a unique opportunity here with the Covid long-haulers to catch the chronic disease at the early stages of the disease,” he said.

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Have you or someone you know experienced long-term health problems after getting infected with Covid-19? Join the discussion below.

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