WORDS *by* EVA-MARIA BOBBERT

# *The* LONG HAUL

Brain fog, sleeplessness and debilitating fatigue can linger months after contracting coronavirus, but researchers are closing in on the Long COVID puzzle.

When my little girl caught COVID, she was struck down with a curious symptom: exhausted as she was, she couldn't lie down because it made the room spin like the Luna Park Rotor (without the giddy delight of a thrill ride, just with the pesky nausea). We took turns to sit up with her, night after night, plumping her pillows so she could stay fully upright and offering everything from chamomile tea to foot massages and soothing sleep meditation apps to at least try to help ease her angst that the persistent spinning meant she would be sucked into some kind of other-worldly vortex at any given moment.

More than three months later, her circadian rhythm hasn't recovered and debilitating fatigue and dizzy spells occur at random, unofficially making her one of the estimated 400,000 Australians (and counting) who meet the current clinical criteria for Long COVID.

In 2020, the World Health Organisation formally recognised Long COVID which, under its definition, requires symptoms to last for more than two months and continue to linger more than three months after a confirmed COVID infection. The data varies wildly – between 5 and 54 per cent of COVID patients, depending on the study, have lingering symptoms, of which there are more than 100. The most common include fatigue (especially after activity), shortness of breath (in which, curiously, the lungs can appear normal in tests but sufferers are left feeling totally oxygen drained), brain fog (making simple tasks difficult), sleep problems, chronic cough, muscle aches, loss of smell or taste, headaches, depression and anxiety.

"There is no one test that diagnoses Long COVID," says Professor Peter Wark, Conjoint Professor at the School of Medicine and Public Health at the University of Newcastle. "This multitude of complex symptoms makes it a difficult condition to track down, study and treat. Severity is also quite variable from mild to profound and life-limiting symptoms." He cites a 12-month UK study of COVID patients who had been hospitalised which found that almost half still had lingering fatigue, muscle aches and sleep disturbances one year later. Meanwhile, US researchers from the Cleveland Clinic found that 40 per cent of COVID patients reported moderate sleep disturbance and 8 per cent severe sleep issues. "The reasons for this remain unclear but it's proposed that it may be linked to inflammatory responses that occur within the brain," says Professor Wark. "There are thoughts they can also be direct effects from infection on the brain as well."

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*Plant* DETOX

## Liver cleanse

**The liver is the main detoxifying organ and works hard during any infection, so if you have been ill, it will appreciate some extra support. According to qualified naturopath Robyn Chuter, bitter and cruciferous foods are helpful. "Bitter compounds in culinary and medicinal plants stimulate liver cells to produce more bile, which is how these cells expel toxins in order to eject them from the body," says Robyn, who recommends to:**

- **Swap your regular coffee for dandelion root coffee or unsweetened cacao.**
- **Pile your plate with bitter vegies, such as rocket, brussels sprouts, endive, chicory, dandelion greens, bitter melon and artichokes.**
- **Speak to your GP about bitter herbal supplements that support the liver, such as dandelion root, milk thistle, barberry and yellow dock.**

So, what exactly causes these debilitating long-term health issues following a COVID infection? One hypothesis is that COVID can cause micro-clots that gum up the small blood vessels, leading to persistent fatigue and breathlessness.

"There are also associations with an increased risk of heart attack and stroke in the 12 months after COVID, so it's an attractive hypothesis, but there is very little evidence at this stage confirming it in large numbers and no justification for treatments that thin the blood," says Professor Wark.

Another hypothesis centres on persistent inflammation as a potential cause. Researchers at the University of New South Wales found that the immune system of Long COVID patients in their study was still going haywire more than eight months after infection. Other studies have shown that the virus can live in tissue, such as the gut.

"COVID-19 can persist in the gut for months because the intestines have a very high expression of the angiotensin-converting enzyme 2 (ace2), recognised as the receptor for COVID-19 virus entry," says Professor Luis Vitetta from the Faculty of Medicine and Health at the University of Sydney. Once the bugs have found their way in, it's not only your digestive system that takes a beating but also your general mood, as the gut-brain axis is closely linked.

"Intestinal dysbiosis is complicit in anxiety and depression symptomatology," says Professor Vitetta. "If patients already have an unbalanced gut microbiome and are experiencing mood disorder symptoms, and then become infected with COVID-19, it is highly likely that these patients could experience anxiety and/or depression."

According to Robyn Chuter, Lifestyle

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Medicine Practitioner at Empower Total Health, gut health could be an important preventative factor.

"There is very strong evidence that poor gut health increases people's risk of getting COVID-19, having a more severe course of illness, and developing Long COVID," says Robyn.

Could probiotics be the answer?

"There have already been a couple of small studies which found that a mixture of plant compounds, probiotics and prebiotics, which are the food for our good gut bugs, reduce many of the symptoms of Long COVID, including fatigue and bowel symptoms," says Robyn.

Professor Vitetta says studies on the role of probiotics in preventing the severity of COVID-19 are underway, but cautions that this is "just one answer. It is not a panacea to fix everything, it is part of an overall lifestyle solution." That lifestyle solution is pretty much the same sage medical advice your grandma would have given: good food, quality sleep and an active lifestyle is the healthy baseline you should be targeting, but it requires consistent effort.

"No-one is in a constant state of healthy gut flux," says Professor Vitetta. "People experience daily stressors due to family or work life and this can significantly influence gut-triggered low level inflammatory responses that, in some, are transient and, in others, are persistent."

Persistent low-level inflammation is associated with other chronic illnesses – heart disease, arthritis and autoimmune issues – but inflammation isn't always bad news. "During an infection, your body uses inflammation to defend you against viruses and bacteria," says Robyn. "Normally, as soon as the bug has been fought off, a kind of switch is flipped in your immune system, which turns off the inflammation and returns everything to normal. However, in chronic illnesses it's like that switch is jammed in the 'on' position. Inflammatory chemicals continue to be produced, making you feel fatigued, brain fogged, depressed, headachey, allergy-prone and generally miserable."

*Health* BOOSTERS

## Six easy ways to fight inflammation

**Gut boost:** A healthy wholefood diet is vital for good gut health. According to the American Gut Project, the key is to eat 30 or more different plant foods per week. "There are also probiotics that help calm the abnormal immune system activity and neuroinflammation that are part of post-viral syndromes," says Robyn Chuter.

**Regular rhythm:** Exposing your eyes to natural light within 30 minutes of waking (outdoors and without sunglasses) causes a natural cortisol surge (your body's wake-up call) and decreases melatonin (the drowsy hormone), which can help regulate your circadian rhythm.

**Stay connected:** If you're run down it can be harder to keep up with people, but loneliness can increase inflammation in the body so much that it carries the same risk for heart disease as smoking.

**Supplement:** Evidence published in the *Bratislava Medical Journal* found viral infections can deplete mitochondria (cellular energy) function. "Supplementing with ubiquinol has been shown to support mitochondrial energy depletion," says Gerald Quigley, Master Herbalist and Community Pharmacist.

**Herbs:** Brain fog is linked to neuroinflammation. "Several herbal medicines have been shown in studies to reduce neuroinflammation, including ginkgo, baical skullcap and ashwagandha, which have a history of use for cognitive decline and cognitive dysfunction," says Robyn.

**Forest bathing:** Spending at least 10 minutes in greenery has been proven to lower inflammation and reduce blood pressure, heart rate and stress hormones.

**"Poor gut health increases people's risk of getting COVID, and developing Long COVID."**
*– Robyn Chuter*

According to Rose Zaffino, Director of Clinical Services at LifeWorks, it's the extreme fatigue that triggers a negative domino-effect for sufferers. "Mental and physical exhaustion can lead to lack of motivation, social isolation, irritability, stress eating or loss of appetite and insomnia," she says. "Left untreated, this can lead to bigger issues such as anxiety, burnout and even more serious health problems."

These issues are all too familiar for anyone suffering Chronic Fatigue Syndrome (CFS), also known as Myalgic Encephalomyelitis (ME), which shares a striking resemblance to Long COVID.

"For decades, patients with ME/CFS have been treated with exercise therapy, which makes them worse, or treated for mental illness and hypochondria because the disease couldn't be explained," says Professor Sonya Marshall-Gradisnik from the National Centre for Neuroimmunology and Emerging Diseases at Griffith University in Queensland. "We now have scientific evidence of the overlap between Long COVID and CFS which means we have a 10-year head start when it comes to finding a cure."

The medical research team led by Professor Marshall-Gradisnik was the first to discover that CFS was caused by dysfunctional calcium-iron receptors, which leaves the body's cells without enough energy to function. The test to measure whether these receptors are faulty is now expected to become the world's first

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The medical research team led by Professor Marshall-Gradisnik was the first to discover that CFS was caused by dysfunctional calcium-iron receptors, which leaves the body’s cells without enough energy to function. The test to measure whether these receptors are faulty is now expected to become the world’s first rapid test for Long COVID. “Finally, the community is starting to understand what they have been going through and the lessons we have learned will be vital for helping patients with Long COVID,” says Professor Marshall-Gradisnik. “We want patients to get help as fast as possible. That is why we have been investigating whether we can repurpose existing drugs to treat ME/CFS as they have already been approved by regulatory bodies and have significant safety data.”

For now, the only way to avoid Long COVID is not to catch the virus in the first place as there is no way to predict who will end up suffering lingering symptoms, though scientists do have some leads on risk. “The risk increases for those who suffer more severe acute disease, in females, and those with a chronic illness like diabetes or chronic lung or heart disease,” says Professor Wark. “One small study has shown that people with asthma were more likely to develop Long COVID.”

According to Robyn, women are more prone to post-viral symptoms in general, including CFS and autoimmune diseases. “All these conditions share a common element: a dysregulated immune system with inappropriate inflammation.”

Until tests and treatment plans are widely available, Long COVID patients must endure the unpredictability and uncertainty the condition brings. Each time my little girl clings to me, her eyes wide with fear when her world starts spinning, I feel the sharp sting of disquiet tug on my own heart strings. For the moment, all I can do is hold her tight and reassure her, one cup of chamomile tea at a time, that her once peaceful nights and general sense of steadiness in the world will return in time. **AWW**

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## The first step

**Perth-based GP Deb Cohen-Jones has noticed a steady rise in Long COVID cases, particularly in patients over 60. “There are blood tests that measure your inflammation markers and check liver and kidney function, and these should be conducted if symptoms persist past 12 weeks,” she says.**

## Three steps to wellness

*Health practitioner Robyn Chuter says closely listening to your body is the best way to get back on track when you’re struck down by COVID.*

**1 When ill** “When your immune system is fighting off a virus it needs an enormous amount of energy, so rest, eat lightly, or not at all, until a strong appetite returns, and stay warm until the fever breaks.”

**2 While in recovery** “Convalescence is vitally important. Pushing yourself to go back to the gym or get straight back into a heavy work schedule when you’re still tired is just asking for trouble.”

**3 Long-term support** “Take a whole person approach. We can absolutely apply the lessons learned from Chronic Fatigue Syndrome to Long COVID. Choose nutritious foods, prioritise sleep and rest, get outdoors on a regular basis, learn how to manage thoughts and emotions through cognitive therapy and mindfulness training, and replace harmful patterns of overwork and overcommitment with activities that are meaningful.”