

**W**hen 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

**“It's highly likely these patients could experience anxiety and/or depression.” – Professor Luis Vitetta**

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

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

#### 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.

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.”