The serotonin effect: Here’s an intriguing explanation for the mystery of long COVID

A team of scientists is proposing a new explanation for some cases of long Covid, based on their findings that serotonin levels were lower in people with the complex condition.

In their study, published on [October 16] in the journal Cell, researchers at the University of Pennsylvania suggest that serotonin reduction is triggered by remnants of the virus lingering in the gut. Depleted serotonin could especially explain memory problems and some neurological and cognitive symptoms of long Covid, they say.

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Here’s the idea: Viral remnants prompt the immune system to produce infection-fighting proteins called interferons. Interferons cause inflammation that reduces the body’s ability to absorb tryptophan, an amino acid that helps produce serotonin in the gut. Blood clots that can form after a coronavirus infection may impair the body’s ability to circulate serotonin.

Depleted serotonin disrupts the vagus nerve system, which transmits signals between the body and the brain, the researchers said. Serotonin plays a role in short-term memory, and the researchers proposed that depleted serotonin could lead to memory problems and other cognitive issues that many people with long Covid experience.

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