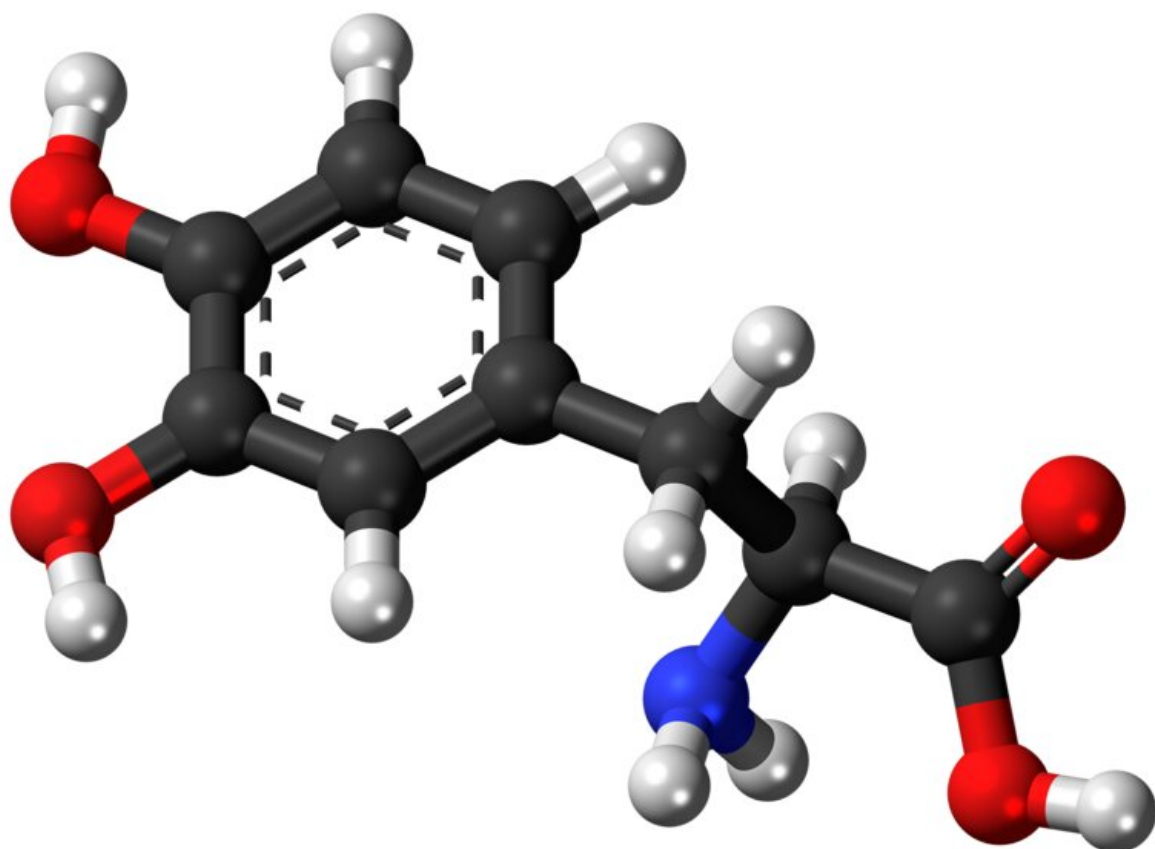


# Study of OTC supplements shows some have very high levels of levodopa, which can lead to paranoia

August 11 2022, by Bob Yirka

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Ball-and-stick model of the levodopa molecule, also known as L-DOPA, a non-standard amino acid. Credit: [Jynto](#) ([talk](#))/Wikimedia Commons, [CC 1.0](#)

A team of researchers from the Cambridge Health Alliance and the University of Mississippi School of Pharmacy has found that over-the-counter supplements that are advertised as containing extracts from *Mucuna pruriens*, a type of bean that contains levodopa, sometimes contain high levels of levodopa. In their paper published in the journal *JAMA Neurology*, the group describes testing the levels of levodopa in several *Mucuna pruriens*-based supplements.

Levodopa (known more commonly as L-DOPA) is a type of amino acid that is commonly found in plants and animals. In humans, it serves as a precursor to several types of neurotransmitters, one of which is dopamine. In 1969, researchers discovered that giving L-DOPA to patients with Parkinson's disease could reduce their symptoms; therefore, it is widely used today.

Prior research has also found that many patients with Parkinson's disease believe that higher doses of L-DOPA will further improve their condition, but doctors do not agree. Still, some people with the disease buy over-the-counter [supplements](#) containing *Mucuna pruriens* extracts because research has shown the beans contain L-DOPA. In addition to overriding established [medical advice](#), taking such supplements can have negative effects on patients, such as the development of paranoia.

In this new effort, the researchers sought to learn more about *Mucuna pruriens* supplements—specifically, the amount of levodopa they contain. They purchased 16 bottles of the supplements and tested them. They found that the supplements all had different amounts of levodopa and that the amounts did not match what were listed on the labels. They also found some of the supplements had more levodopa in them than prescription medications.

The researchers suggest their findings should be a warning to Parkinson's patients—they have no way of knowing how much [levodopa](#) they are

consuming if they take such supplements, which can wreak havoc with the treatment prescribed by their doctor. The researchers note that some people who do not have Parkinson's disease also purchase and consume the supplements, which can lead to paranoia, agitation, impulse control and sometimes psychosis. The researchers sent their findings to the FDA in the hopes that the government will look into abuse of the supplement.

**More information:** Pieter A. Cohen et al, Levodopa Content of Mucuna pruriens Supplements in the NIH Dietary Supplement Label Database, *JAMA Neurology* (2022). [DOI: 10.1001/jamaneurol.2022.2184](https://doi.org/10.1001/jamaneurol.2022.2184)

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