

Research breakdown L-Dopa is linked to 2 conditions and outcomes. Get Examine+ to unlock these insights and the details of over 50,000 other studies. What else is L-Dopa known as? Note that L-Dopa is also known as: Levodopa L-3 4-dihydroxyphenylalanine L-Dopa should not be confused with: Mucuna Pruriens (Source of L-Dopa) Examine Database: L-Dopa

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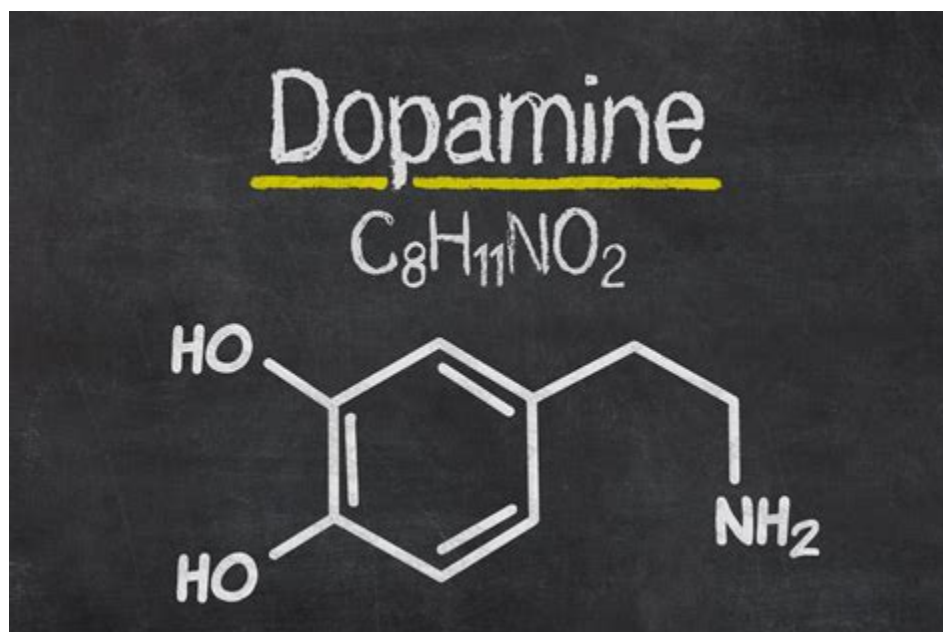
Analysis of Levodopa Content in Commercial Mucuna pruriens Products .

Product #	Label claim for L-DOPA content/ dose 1 dose = 1 serving	Single dose (Serving size)	L-DOPA CLAIMED mg/dose	L-DOPA FOUND mg/dose	L-DOPA % OF CLAIM
1	Mucuna Pruriens 60% L-Dopa 100mg	1 capsule	60	3.6	6 %
2	Mucuna (Mucuna Pruriens) (Kaunch) seeds 25% L-DOPA 135mg per capsule	1 capsule	33.8	11.6	34 %
3	Cowhage extract (standardized to contain 15% L-DOPA) (mucuna pruriens) (seed) 200mg	1 capsule	30	12.0	40 %
4	Velvet Bean (Mucuna pruriens) (seed extract) 333mg; (Guaranteed 66mg [20%] catecholamines including 50mg [15%] L-dopa)	1 capsule	50.0	55.6	111 %
5	Mucuna pruriens Seed extract 166 mg Yielding 100mg L-DOPA	1 capsule	100	120.2	120 %
6*	Each 7.5g contains: standardized processed seed powder of Mucuna pruriens Bak..6.525g in a flavored base	*As directed by the physician*	250	357.2	143 %*

*Label does not state L-DOPA content, serving size or dosage but 7.5g scoop provided. Internet sites indicate 7.5g has 250mg L-DOPA.

Mucuna pruriens is a dietary supplement that has gained popularity for its potential benefits on brain health and mood. It contains L-dopa, a precursor to dopamine, which can improve mood, enhance cognitive function, improve physical performance, and reduce inflammation. While it is generally safe, it can cause side effects in some people.

L-Dopa benefits, dosage, and side effects - Examine



1. Introduction. Mucuna pruriens (M. pruriens) is a tropical legume in Fabaceae family. Mucuna seed

contains abundant natural L-dopa, which has been shown to be more tolerated and more potent than synthetic L-dopa [1,2,3]. Pre-clinical and clinical studies have shown that *M. pruriens* seed containing natural L-dopa had benefits over synthetic L-dopa in terms of higher efficacy and lower adverse .

Everything You Need to Know About Mucuna Pruriens - Verywell Health



45 Citations 227 Altmetric Metrics Abstract Mucuna pruriens is the best known natural source of L-dopa, the gold standard for treatment of Parkinsonism. *M. pruriens* varieties are protein rich.

Mucuna Pruriens: Uses And Dosage - EndurElite



Overview Uses Side Effects Precautions Interactions Dosing Reviews (9) Overview Cowhage (Mucuna pruriens) is a legume that grows in the tropics, including India and the Bahamas. Its seed is.

Development of Jelly Loaded with Nanogel Containing Natural L-Dopa from .



Article

Development of Jelly Loaded with Nanogel Containing Natural L-Dopa from *Mucuna pruriens* Seed Extract for Neuroprotection in Parkinson's Disease

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Citation: Chittasupho, C.; Tadtong, S.; Vorarat, S.; Imaram, W.; Athikomkulchai, S.; Samee, W.; Sareedenchai, V.; Thongnookon, T.; Okonogi, S.; Kamkaen, N. Development of Jelly Loaded with Nanogel Containing Natural L-Dopa from *Mucuna pruriens* Seed Extract for Neuroprotection in Parkinson's Disease. *Pharmaceutics* **2022**, *14*, 1079. <https://doi.org/10.3390/pharmaceutics14051079>

Academic Editors: Bogdan Stefan Vasile and Irenela Andriana Neaciu

Received: 12 April 2022
Accepted: 16 May 2022
Published: 17 May 2022

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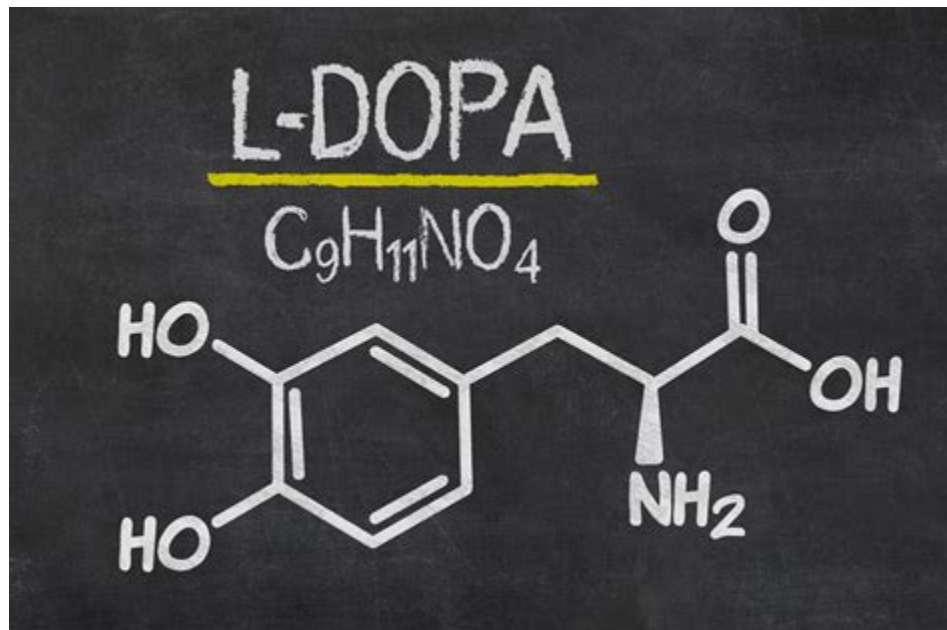


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Abstract: The first line therapy of patients with Parkinson's disease, a neurodegenerative disorder caused by the degeneration of dopaminergic neurons, is levodopa (L-dopa) given orally. Recently, the presence of natural L-dopa in the seed of *Mucuna pruriens*, a tropical legume in the Fabaceae family, was reported and it showed superior efficiency compared with synthetic L-dopa. Therefore, this study aimed to examine the phytochemical compounds, particularly for natural L-dopa, in *M. pruriens* seed extract and subsequently prepare a nanogel containing the extract prior to incorporation into a jelly formulation for use as a functional food in elderly patients with Parkinson's disease. The results show that *M. pruriens* seed extract contains phenolic compounds, flavonoids, tannins, alkaloids, terpenoids, and saponins. The quantitative analysis performed by the HPLC method revealed that spray-dried *M. pruriens* seed extract contained $5.59 \pm 0.21\%$ L-dopa. *M. pruriens* seed extract possesses a ferric-reducing antioxidant power and shows free-radical scavenging activity, determined by DPPH and ABTS methods, suggesting a distinctive antioxidant ability of the extract. *M. pruriens* seed extract at 10 ng/mL did not show cytotoxicity against a neuronal cell line (SH-SY5Y cells), kidney cells (HEK293 cells), or Caco-2 cells. Nanogel of *M. pruriens* seed extract prepared by ionic gelation had the hydrodynamic diameter, polydispersity index and zeta potential value of 384.53 ± 11.24 nm, 0.38 ± 0.05 , and -11.23 ± 1.15 mV, respectively. The transepithelial transport of L-dopa in *M. pruriens* seed-extract nanogel through Caco-2 cells was measured. Nanogel containing *M. pruriens* seed extract at the concentration of 10 ng/mL exhibited neuroprotective activity. A jelly formulation containing *M. pruriens* seed-extract nanogel was successfully developed. The prepared jelly exhibited the acceptable physical and microbiological stabilities upon 6 months of the stability test. The half-life of natural L-dopa in jelly were 3.2, 0.9, and 0.6 years for storage conditions at 4, 30, and 40 °C, respectively, indicating the thermal degradation of natural L-dopa. The prepared jelly containing natural L-dopa from *M. pruriens* seed extract with the prominent antioxidant activity is a promising option for elderly patients suffering from Parkinson's disease.

Mucuna beans (*Mucuna pruriens* (L.) DC. var. *utilis*) are unique plants containing 3-9% L-3,4-dihydroxyphenylalanine (L-DOPA). Here we investigated the effect of the administration of

Levodopa (L-Dopa) - StatPearls - NCBI Bookshelf



The D5 Mucuna 40% was then increased weekly in six-pill increments (L-dopa daily dosing value increases of 720 mg) until symptoms were brought under control or an L-dopa daily dosing value of 6,720 mg was achieved, whichever came first. If there was no symptom relief at 6,720 mg per day, a pill stop, as outlined in the following section, was .

An assessment of potential nutritive and medicinal properties of Mucuna .

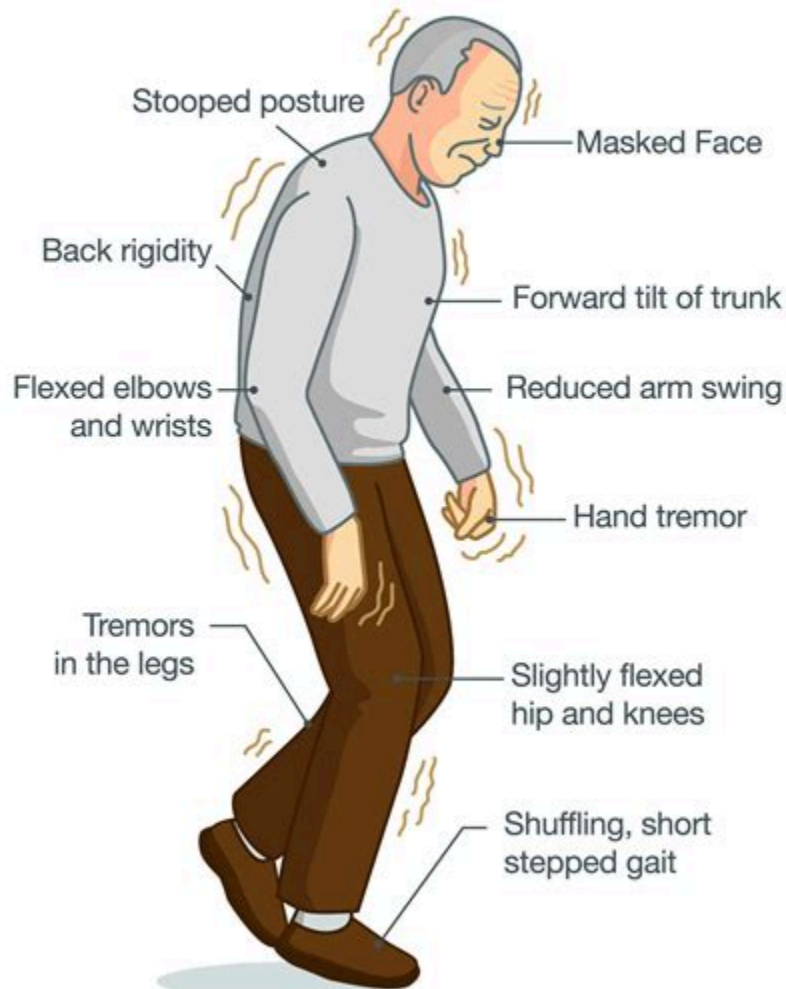


Background The Ayurvedic medicinal system claims *Mucuna pruriens* (MP) to possess pro-male

fertility, aphrodisiac and adaptogenic properties. Some scientific evidence also supports its pro-male fertility properties; however, the mechanism of its action is not yet clear. The present study aimed at demonstrating spermatogenic restorative efficacy of MP and its major constituent L-DOPA (LD), and .

Science of Mucuna Pruriens for Treating Parkinson's | APDA

Parkinson's Disease Symptoms



Mucuna pruriens belongs to the Fabaceae family and is ordinarily known as velvet bean, in English cowitch and Hindi Kawaanch. The restorative quality of this bean makes it an excellent component in pharmaceutical and therapeutic applications. Apart from high protein and starch content, these beans contain (l-Dopa) 3, 4-dihydroxy-l-phenylalanine, which exhibits several medicinal properties.

Administration of mucuna beans (*Mucuna pruriences* (L.) DC. var. utilis .



Mucuna Pruriens contains: L-DOPA, or Levodopa, the precursor to dopamine and seen as the main constituent [17] and eventually adrenaline. The three catecholamines are also present in *Mucuna* [18]; Nicotinic Acid [19]; Tetrahydroisoquinoline alkaloids in dosages of 8-24mg/500g dried milled seeds, which may have interactions with μ -opioid receptors based on their structures.

Mucuna pruriens and Its Major Constituent L-DOPA Recover . - PLOS



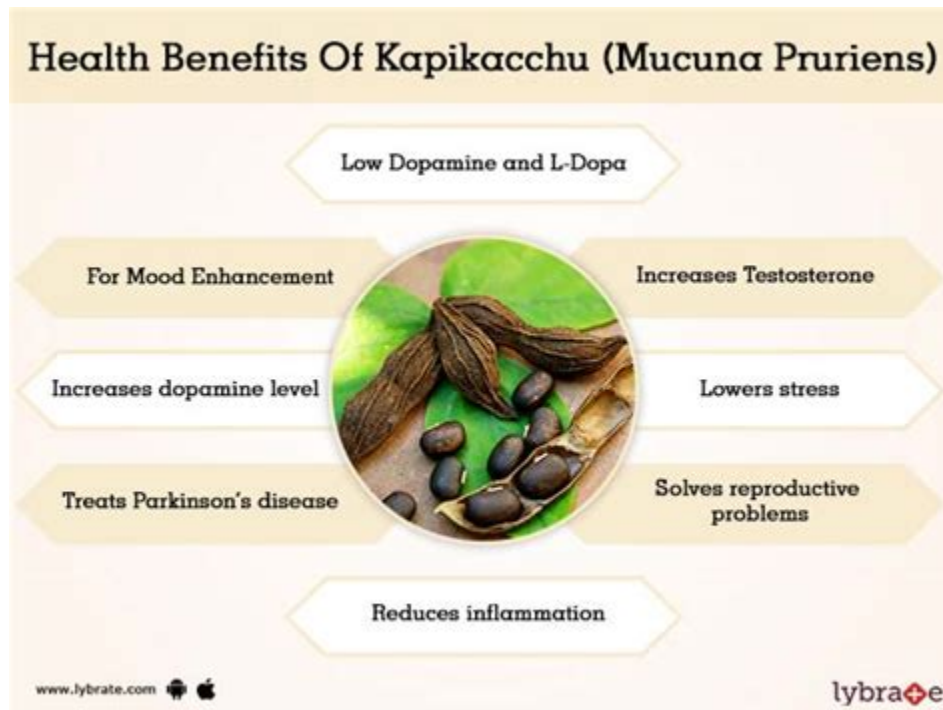
Nowadays, Mucuna is widely studied because L-dopa is a substance used as a first-line treatment for Parkinson's disease. Some studies indicate that L-dopa derived from *M. pruriens* has many advantages over synthetic L-dopa when administered to Parkinson's patients, as synthetic L-dopa can have several side effects when used for many years.

Mucuna Pruriens and Testosterone: Androgenic L-Dopa - Anabolic Men



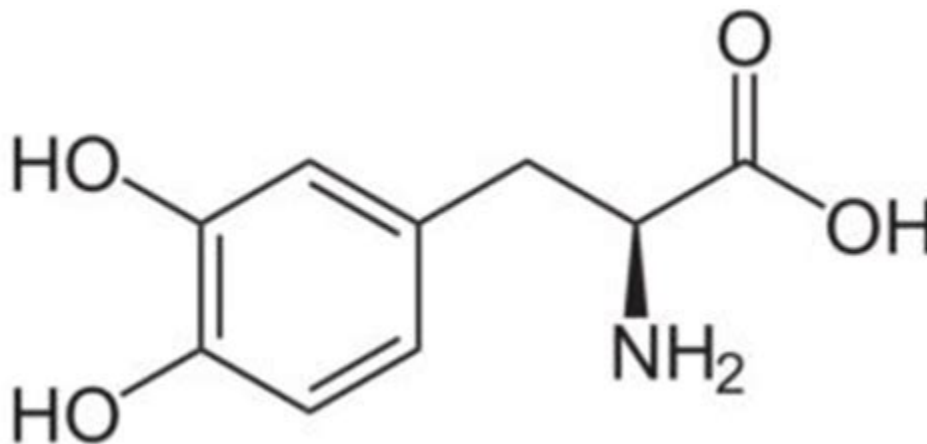
L-Dopa in Mucuna pruriens is the main active component that may reduce the symptoms of Parkinson's Disease . . One study showed that mucuna may cause more side effects than typical Parkinson's disease therapy, which warrants further safety trials.

12 Potential Mucuna Pruriens Benefits + Dosage, Side Effects



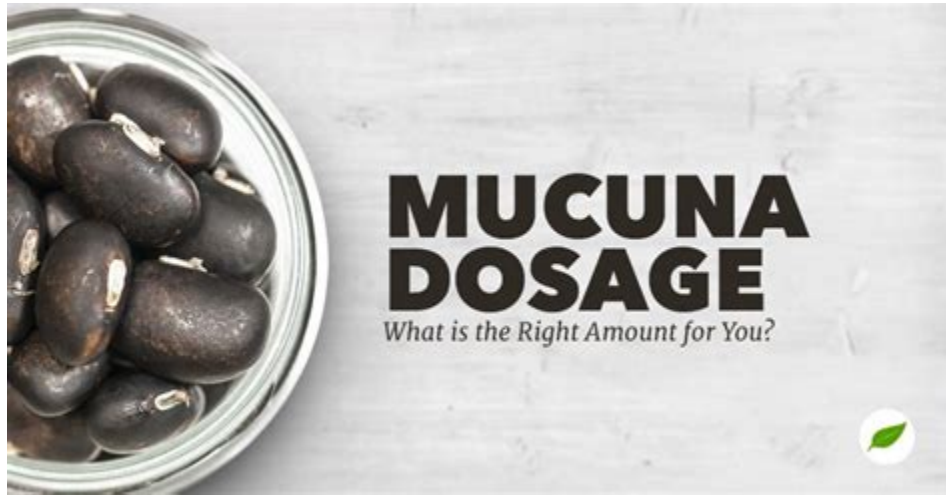
One example is *Mucuna pruriens*, a bean containing levodopa, which has been investigated as a potential treatment for Parkinson disease. Supplement use in the US is unknown, but a recent survey of 205 patients with Parkinson disease found that 7% of supplement users used supplements to treat the disease.

L-DOPA - Nootropics Expert



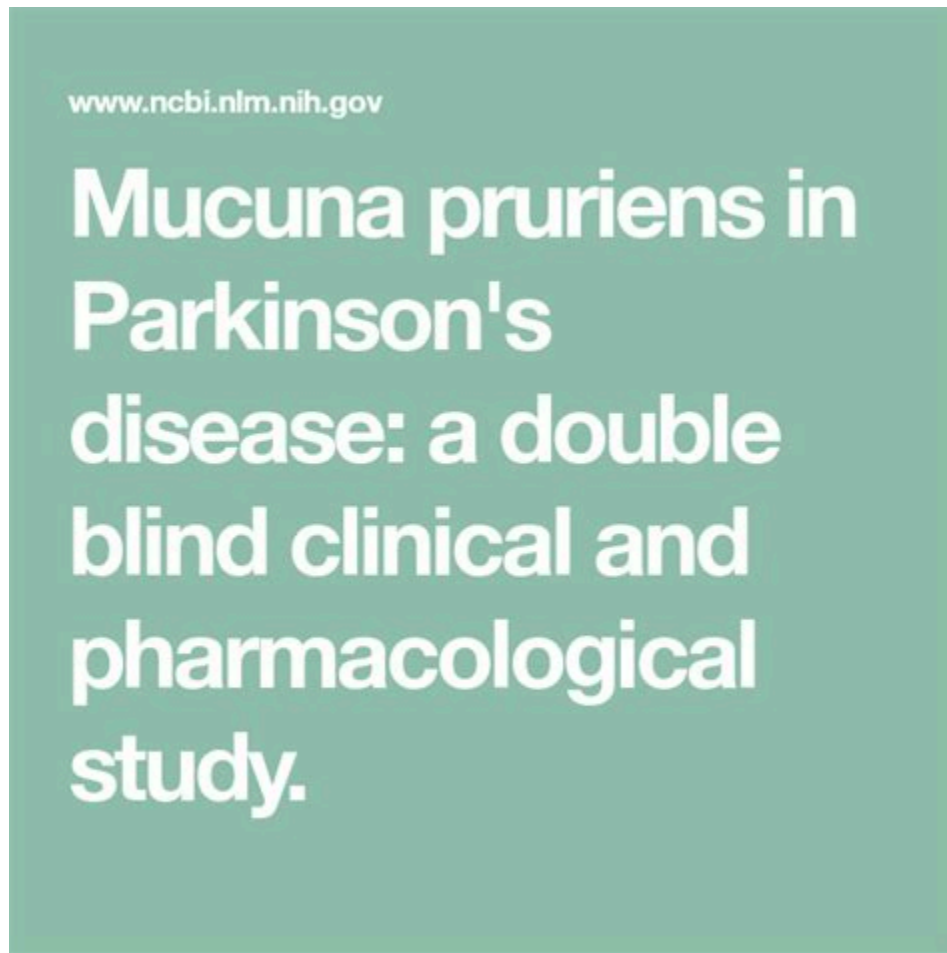
Last Updated: October 26, 2022 Research Snapshot 12 references on this page 40 participants in 3 trials Examine Evidence Grades A Parkinson's Disease Symptoms Summary Dosage Information Examine Database Research feed Research breakdown References *Mucuna Pruriens* is linked to 1 condition and outcome.

What You Need to Know About a Proper Mucuna Dosage



The latest research about mucuna pruriens as a treatment for Parkinson's. In 2004, a study was conducted comparing the efficacy of MP with the standard medication used in PD, carbidopa/levodopa (C/L). Eight patients were given one dose of a MP preparation or C/L in a blinded fashion (neither the patient nor the physician knew whether MP or C).

Mucuna pruriens in Parkinson's and in some other diseases: recent .



Published: December 21, 2023 12 minute read Table of Contents L-DOPA (Mucuna Pruriens) is known for improving brain health, is an antioxidant and heavy metal chelator, improves memory & cognitive function, lowers symptoms of depression, and boosts libido. 0:00:00 Key Takeaways

The Magic Velvet Bean of *Mucuna pruriens* - PMC - National Center for .



Last Update: April 17, 2023. Go to: Continuing Education Activity Levodopa is the precursor to dopamine. Most commonly, clinicians use levodopa as a dopamine replacement agent for the treatment of Parkinson disease. It is most effectively used to control bradykinetic symptoms apparent in Parkinson disease.

Levodopa Content of *Mucuna pruriens* Supplements in the NIH Dietary .

Table. Information Regarding *Mucuna pruriens* Seed Extract on Labels of Dietary Supplements Compared With Quantity Detected in Analyzed Samples of Supplements

Claim on label	Description of <i>M pruriens</i> according to label	Amount per serving size of <i>M pruriens</i> seed extract according to label, mg	Measured levodopa per serving size, mean (SD), mg/estimated levodopa per serving size, mg [%] ^a
Strength, power, performance	<i>M pruriens</i> seed extract; std to 98% naturally occurring levodopa	150	129.1 (0.2)/5.9 [2186]
Brain support	<i>Mucuna</i> seed extract (<i>M pruriens</i>); std to contain 60% levodopa (3,4 dihydroxy-L-phenylalanine)	425	241 (0.3)/16.6 [1452]
Preworkout	<i>M pruriens</i> ; std 98% levodopa	NA	78.9 (0.5)/NP
Brain support	<i>Mucuna</i> extract (<i>Mucuna</i> spp seed); minimum 15% naturally occurring levodopa or levodopa	800	154.2 (0.3)/31.2 [494]
No claim	Organic <i>M pruriens</i> seed extract 10:1; 15% naturally occurring levodopa	250	53.1 (0.3)/9.8 [544]
Positive mood, mental clarity and focus, performance, hormone health	Natural <i>M pruriens</i> seed extract	1000	94.4 (1.0)/39 [242]
Supports dopamine production and motivation	<i>M pruriens</i> seed extract	250	93.8 (0)/9.8 [957]
Fat metabolism, appetite control, focus and stimulation	<i>M pruriens</i> seed extract	NA	31.5 (1.1)/NP
Dopamine and serotonin boosters	<i>Mucuna</i> (<i>M pruriens</i>) bean	NA	56.2 (0.1)/NP
Cognitive support	<i>M pruriens</i> seed extract	600	53.4 (0.8)/23.4 [228]
Dopamine bean	<i>Mucuna</i> (<i>M pruriens</i>) bean	NA	17.3 (0.5)/NP
Natural source of energy	<i>M pruriens</i> seed extract; std to contain minimum 50% levodopa	95	12.4 (0.5)/3.7 [335]
Rest and rejuvenation support	<i>M pruriens</i> ; 15% extract (seed)	50	7.4 (1.2)/2.0 [370]
Fat burner	<i>M pruriens</i> ; std to 98% levodopa	NA	2.0 (0.2)/NP
Deep calm	<i>M pruriens</i> (seed)	NA	3.4 (0.3)/NP
Adaptogen	Organic <i>Mucuna</i> (<i>M pruriens</i>) seed extract 20:1	NA	Not detected/NP ^b

Abbreviations: NA, not available; NP, not possible (estimate not possible given lack of declared quantity of *M pruriens* seed extract on label); spp, species; std, standardized.

^a Estimated quantity of levodopa calculated by multiplying the declared quantity of the *M pruriens* seed extract listed on the label (in mg) by the highest percentage of levodopa found in the extracts of authenticated *M pruriens* seeds (3.9%).

^b Detection limit of 50 ng/mL for levodopa.

We have assessed the clinical effects and levodopa (1-dopa) pharmacokinetics following two different doses of mucuna preparation and compared them with standard 1-dopa/carbidopa (LD/CD).

SCIENTIFIC REPORTS

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Levodopa in *Mucuna pruriens* and its degradation

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Received: 12 January 2015

Accepted: 13 May 2015

Published: 09 June 2015

Mucuna pruriens is the best known natural source of L-dopa, the gold standard for treatment of Parkinsonism. *M. pruriens* varieties are protein rich supplements, and are used as food and fodder worldwide. Here, we report L-dopa contents in seeds of fifty six accessions of four *M. pruriens* varieties, *M. pruriens* var. *pruriens*, *M. pruriens* var. *hirsuta*, *M. pruriens* var. *utilis* and *M. pruriens* var. *thekkadiensis*, quantified by HPTLC-densitometry. L-dopa contents varied between 0.58 to 6.42 (% dr. wt.). High and low L-dopa yielding genotypes/chemotypes of *M. pruriens* could be multiplied for medicinal and nutritional purposes, respectively. HPTLC profiles of *M. pruriens* seeds on repeated extraction (24 h) in 1:1 formic acid-alcohol followed by development in butanol:acetic acid:water (4:1:1, v/v) showed consistent degradation of L-dopa (R_f 0.34 \pm 0.02) into a second peak (R_f 0.41 \pm 0.02). An average of 52.11% degradation of L-dopa was found in seeds of *M. pruriens* varieties. Since *M. pruriens* seeds and/or L-dopa are used for treatment of Parkinson's disease and as an aphrodisiac both in modern and/or traditional systems of medicine, the finding of high level of L-dopa degradation (in pure form and in *M. pruriens* extracts) into damaging quinones and ROS is very significant.

Mucuna pruriens (L.) DC. is a climbing legume distributed across the tropics. Four varieties of the species have been documented so far from south India, of which *M. pruriens* var. *pruriens* is well distributed^{1,2}, *M. pruriens* var. *hirsuta* and *M. pruriens* var. *thekkadiensis* are restricted to the southern parts of the Indian peninsula, and *M. pruriens* var. *utilis* occurs only in cultivation². *M. pruriens* var. *pruriens* and *Mucuna pruriens* var. *utilis* find importance as food, feed, cover crop and fodder and are extensively cultivated worldwide³⁻⁶. *M. pruriens* varieties propagate mostly through their seeds. *M. pruriens* var. *pruriens* is best known as the natural source of the aromatic amino acid, L-3,4-dihydroxy phenylalanine (levodopa or L-dopa) (Fig. 1). L-dopa is widely used for the clinical treatment of the neurodegenerative disorder, Parkinson's disease (PD)⁷⁻¹¹. Seeds of *M. pruriens* var. *pruriens* have long been used in Indian traditional medicine for treatment of PD and also for its aphrodisiac property. *M. pruriens* var. *pruriens* is the only variety of *M. pruriens* extensively studied for its chemical and biological properties¹²⁻¹⁷. L-dopa, 5-methoxy-N,N-dimethyl tryptamine and 5-hydroxy tryptamine (serotonin) are the major therapeutic constituents in *M. pruriens* var. *pruriens*.

PD is characterized by degeneration of dopaminergic neurons in the substantia nigra, and subsequent deficiency of the neurotransmitter dopamine in the brain areas. PD affects motor activities including writing and speaking abilities. Recent studies suggested oxidative stress, mitochondrial dysfunction and impairment of the ubiquitin-proteasome system as the major factors involved in pathogenesis of PD¹⁸. Patients with PD are treated with L-dopa to improve their motor functions. Dopamine as such does not cross the blood brain barrier whereas L-dopa does, and in the central nervous system dopa decarboxylase converts it into dopamine. Thus L-dopa acts as a precursor to dopamine. So far L-dopa is considered as the gold standard for the treatment of PD and dopamine-responsive dystonia^{7-11,19}. Oxidative stress, caused by oxidation of L-dopa and dopamine, generating semiquinones, quinones, oxygen radicals and other reactive oxygen species (ROS), play a role in neuronal cell death in PD^{20,21}. Moreover, O-quinone

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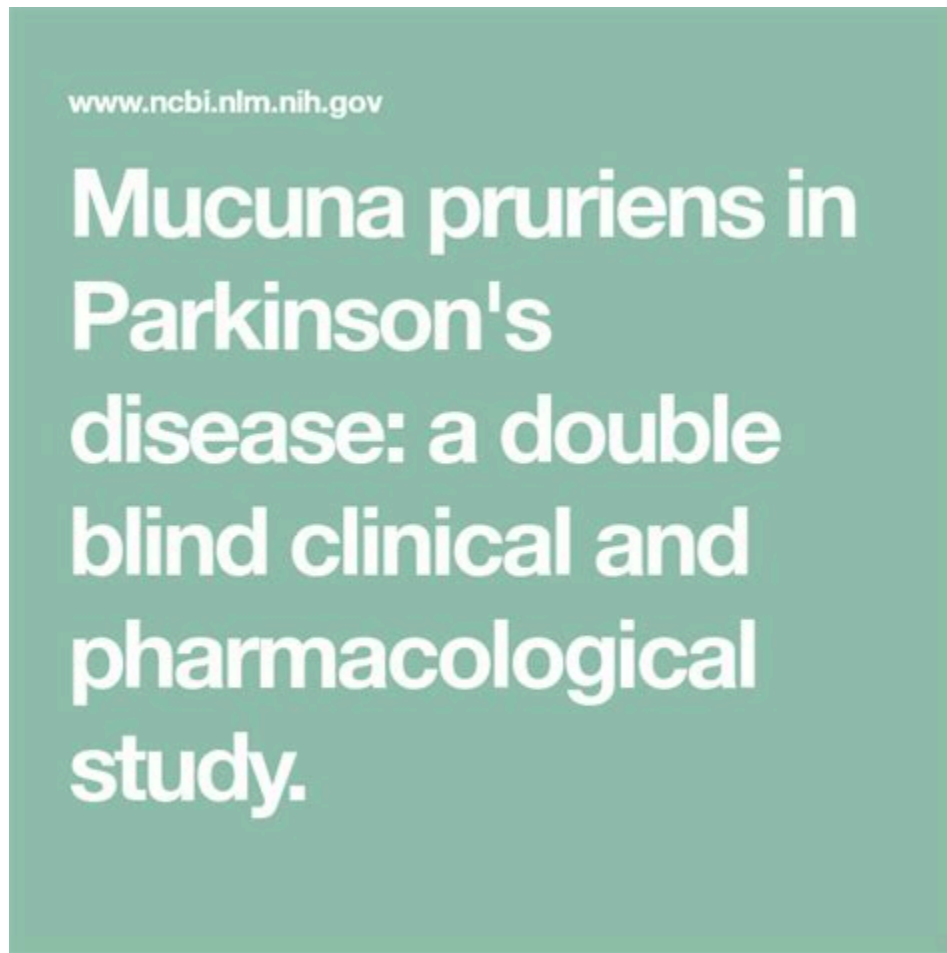
When it comes to the *Mucuna Pruriens* testosterone benefits, the first evidence came from animal studies. In rats, a pretty high dose of L-DOPA (1000mg/kg) was found to significantly increase the release of luteinizing hormone (LH) from the pituitary gland and lead to higher testosterone levels over 7-14 days. On Japanese Quails (yes, birds) it .

Research Breakdown on *Mucuna Pruriens* - Examine



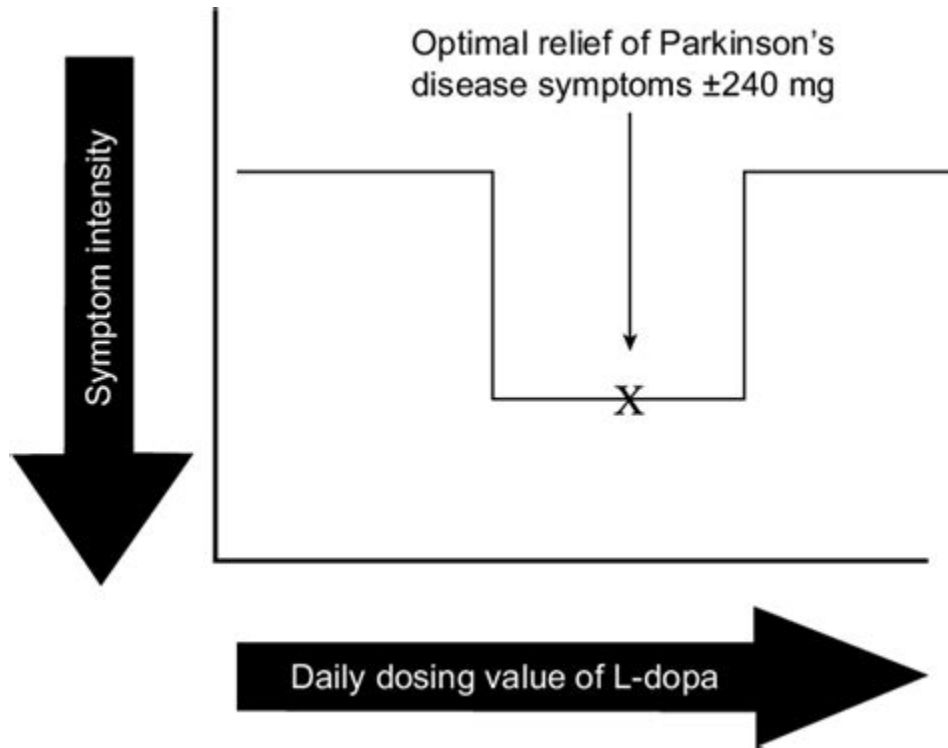
Mucuna pruriens (Mp) is an annual and perennial legume which belongs to the family Fabaceae having different types of therapeutic activity. Anti-oxidative, anti-inflammatory, anti-epileptic, anti-microbial, etc. are the example of some most common activities of Mp. It is widely utilized as a potent aphrodisiac.

Mucuna pruriens in Parkinson's disease: a double blind clinical and .



Dosage Toxicity *Mucuna pruriens* (*M. pruriens*) is a vegetable plant native to tropical and subtropical regions of Africa, South America, and Asia. It is a part of the Fabaceae family and is one of many species of *Mucuna*. *M. pruriens* is commonly referred to as velvet bean or cowhage. *M. pruriens* is classified as a legume.

Management of L-dopa overdose in the competitive inhibition state



Studies have shown that people with clinical depression have low levels of dopamine. It is well-known that mucuna pruriens is a good source of dopamine, which has a stabilizing effect on moods. This study backs up the claim that mucuna may provide support for prolonged sadness or mood fluctuations.

COWHAGE - Uses, Side Effects, and More - WebMD



The maximum daily dose of levodopa delivered by the products varied from 14.4 to 720 mg/day. COAs were inconsistent in specifications for and verification of levodopa content. Conclusions: The commercial products tested varied widely in levodopa content, sometimes deviating widely from the label claim.

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