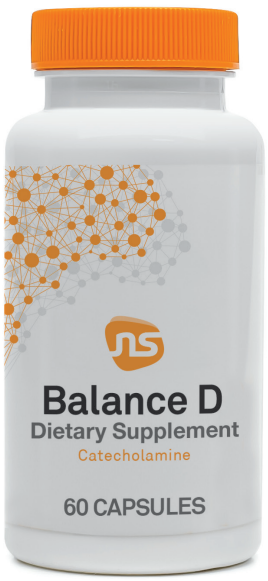
NeuroScience™



Balance D

Contains ingredients important for the synthesis of dopamine, a catecholamine important for positive affect, mood, cognition, and craving control*

Item Number	Available Sizes	Serving Size
2067	60 Capsules	2 Capsules

Key Ingredients

N-acetyl-L-cysteine	■ Precursor to L-cysteine[1] ■ L-cysteine is required for the **synthesis of glutathione**, an endogenous antioxidant[2]
N-acetyl-L-tyrosine	■ L-tyrosine is a **precursor to catecholamines** including dopamine, norepinephrine, and epinephrine[3]
Mucuna cochinchinensis seed extract (99% L-DOPA)	■ Natural source of L-DOPA[4] ■ L-DOPA crosses the blood-brain barrier and is the **direct precursor to dopamine**[5]
Vitamins B6, C, and folate	■ **Active forms** of vitamin B6, C, and folate are important for catecholamine synthesis[6-8]*

‡This product uses Gnosis S.p.A's (6S)-5-methyltetrahydrofolic acid, glucosamine salt (Quatrefolic®) and is protected by U.S. Patent No. 7,947,662. Quatrefolic is a registered trademark of Gnosis S.p.A., Milan, Italy.

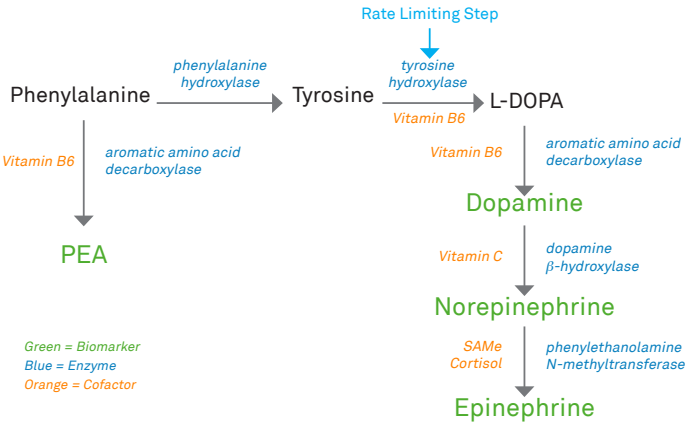
The Science

Catecholamines

A class of neurotransmitters responsible for many functions in the nervous and endocrine systems[9]

- Catecholamines play an important role in **mood**, energy, **memory**, attention, and **cognition**[10-13]

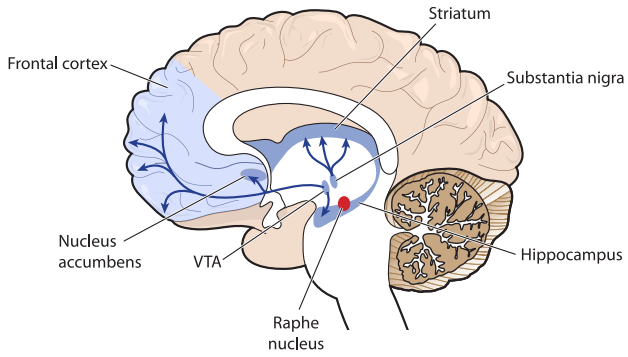
Catecholamine Pathway



*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

MORE SCIENCE BEHIND BALANCE D

Figure 1. Dopaminergic Signaling in the Brain



Dopamine is important for craving control

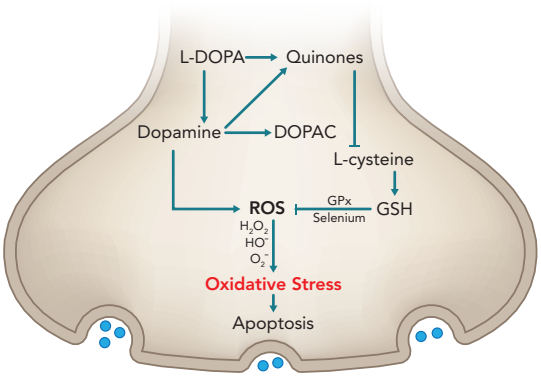
Dopaminergic function is critical in the regulation of cravings, reward based behaviors, and weight management[14]

- Dopamine release from the ventral tegmental area (VTA) to the nucleus accumbans is the primary pathway in which reward based behaviors such as cravings are modulated[15]
- Impaired signaling from decreased dopamine release or receptors (DRD2) is thought to reduce sensitivity to natural reward-based behavior *in vitro*[16]

Balance D provides ingredients to support dopamine synthesis[3,6]*

- N-acetyl-L-tyrosine and *Mucuna cochinchinensis* seed extract (99% L-DOPA) are amino acid precursors to dopamine[3]
- Vitamin B6 is a necessary cofactor for the synthesis of dopamine[6]*

Figure 2. Oxidative Stress Affects Neuronal Health



Formulated for a comprehensive pathway approach

Produced in excess, dopamine is oxidized into quinones, free radicals, and reactive oxygen species (ROS)[17]

- Quinones react with glutathione (GSH) and deplete levels of the reduced GSH and total antioxidant capacity[18]
- Excessive production of ROS and decreased antioxidant function contributes to cellular damage, dysfunction, and/or death[17]

Balance D contains ingredients for the synthesis of glutathione

- N-acetyl-L-cysteine is the precursor to L-cysteine; L-cysteine is an amino acid precursor in the synthesis of glutathione[1,2]
- Selenium is a micronutrient that helps to comprise selenoproteins; these proteins are crucial for brain function and the enzyme glutathione peroxidase (GPx)[19]*

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