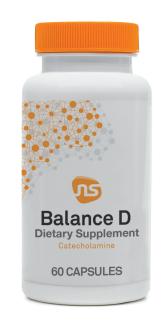


# Balance D

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

Item Number	Available Sizes	Serving Size
2067	60 Capsules	2 Capsules



# Key Ingredients

N-acetyl-Lcysteine

- Precursor to L-cysteine<sup>1</sup>
- L-cysteine is required for the synthesis of glutathione, an endogenous antioxidant<sup>2</sup>

N-acetyl-Ltyrosine  L-tyrosine is a precursor to catecholamines including dopamine, norepinephrine, and epinephrine<sup>3</sup>

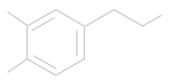
Mucuna cochinchinensis seed extract (99% L-DOPA)

- Natural source of L-DOPA<sup>4</sup>
- L-DOPA crosses the blood-brain barrier and is the direct precursor to dopamine<sup>5</sup>

Vitamins B6, C, and folate

 Active forms of vitamin B6,
 C, and folate are important for catecholamine synthesis<sup>6-8</sup>\*

# The Science

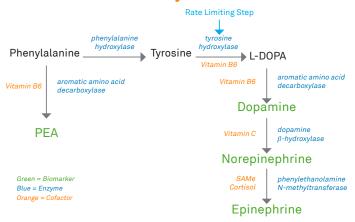


#### **Catecholamines**

A class of neurotransmitters responsible for many functions in the nervous and endocrine systems  $^{\rm 9}$ 

 Catecholamines play an important role in optimal mood, energy, memory, attention, and cognition<sup>10-13</sup>

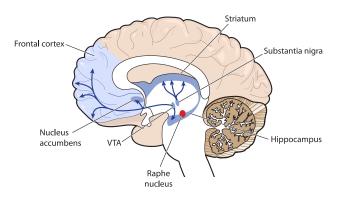
## **Catecholamine Pathway**



\*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 BALANC

Figure 1. Dopaminergic Signaling in the Brain



### Dopamine is important for craving control

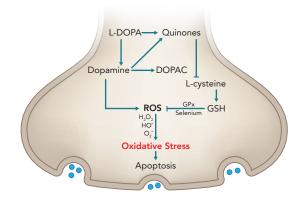
Dopaminergic function is critical in balancing cravings, reward based behaviors, and healthy weight management14

- 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<sup>15</sup>
- Impaired signaling from decreased dopamine release or receptors (DRD2) is thought to reduce sensitivity to natural reward-based behavior16

#### Balance D provides ingredients to support dopamine synthesis3,6\*

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

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)<sup>17</sup>

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

### 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<sup>1,2</sup>
- 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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<sup>&</sup>lt;sup>‡</sup>Magnafolate is a registered trademark of Lianyungang Jinkang Pharmaceutical Technology Co., Ltd.

<sup>\*</sup>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.