USE OF PRODUCT
To help support healthy Dopamine levels as it relates to nutritional balance.

OTHER PRODUCTS TO CONSIDER
Other products can be used in conjunction with Dopatone® Active to balance Dopamine. Apex’s Sublingual Vitamin B12 (K34) is a rich source of micronized methylcobalamin that can provide essential methyl compounds to support neurotransmitter balance. Stress responses can cause neurotransmitter imbalance. Adaptocrine® (K02) can be used to provide stress adaptogens to support healthy neurotransmitter levels. Adrenacalm™ (K16) provides a rich source of liposomal phosphatidylserine which can be useful in the same manner.

KEY INGREDIENTS

RESEARCH COMMENTARY
The research information presented here should not be construed as claims regarding performance of this product.

MUCUNA PRURIENS is commonly known as cowhage and its active components include L-Dopa, typtamine alkaloids, lecithin, and tannins. It is postulated that the L-Dopa amino acid compounds in the botanicals are converted into dopamine in the brain. It has been used as a botanical for neurological disorders since ancient days and recent research has demonstrated that the botanical has Anti-Parkison influences due to its precursor compounds. Additionally, the active components in Mucuna pruriens have protective impacts on the substantia nigra and nigrostriatal pathways.1 2 3 4 5 6

BETA-PHENYLETHYLAMINE (PEA) is an endogenous monamine alkaloid and crosses the blood-brain barrier easily. It acts as a neuromodulator in the nigrostriatal dopaminergic pathway and stimulates the release of dopamine. PEA also has influences on beta endorphins that have been attributed to feeling of pleasure. Chocolate contains a rich source of PEA and it is this mechanism that is theorized to cause the feelings of love, pleasure, and satisfaction via dopamine activation. PEA supplementation has shown to improve attention and enhance mood.7 8 9 10 11

BLUEBERRY EXTRACT contains a rich and potent source of antioxidants, particularly the Anthocyanin compounds. These compounds have proven effective in free radical quenching areas of the dopamine-rich neurons of the central nervous system.12 13 14 15

Benefit of Product
• Provides amino acids and cofactors required for dopamine production.
• Provides phytonutrients that exhibit/support dopamine activity.
• Provides phytonutrients that have shown to support healthy dopaminergic neurons.

Supplement Facts

DIRECTIONS
Take 1-2 capsules, 3 times a day, or as directed by your healthcare practitioner.

This product is not intended for use as a replacement for medications prescribed by a medical doctor. It is intended for nutritional purposes only. Statements in this flyer have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
**N-ACETYL-TYROSINE** is an amino acid that serves as a precursor for dopamine production. Oral supplementation with tyrosine results in increased plasma and brain levels of the compound. Tyrosine supplementation has demonstrated the ability to change plasma neurotransmitter levels. Tyrosine is converted into dopamine by the enzyme tyrosine hydroxylase in the brain. Additionally, tyrosine depletion by dietary means produces symptoms of decreased dopamine in both human and animal studies.

**PYRIDOXAL-5-PHOSPHATE (P-5-P)** the active form of vitamin B6 is pyridoxal-5-phosphate (P-5-P) and undernutrition of this compound promotes loss of dopamine in the corpus striatum. It appears that dopaminergic neurons of the nigrostriatal tract may be vulnerable to long-term P-5-P deficiency. Additionally, P-5-P deficiency prolongs the time course of evoked dopamine release from the rat striatum.

**GLUTATHIONE COFACTORS** The substantia nigra is extremely sensitive to oxidative stress by hydroxyl radicals. Glutathione has demonstrate promise in protecting these neuronal tissues responsible for producing dopamine. The essential nutritional substrates for the synthesis of glutathione are selenium and N-acetyl-cysteine.

**REFERENCE INFO**

28. Guilarate TR. Effects of vitamin B-6 nutrition on the levels of dopamine, dopamine metabolites, dopa decarboxylase activity, tyrosine, and GABA in the developing rat corpus striatum. Neurochemical Research 1989;14:571-578.