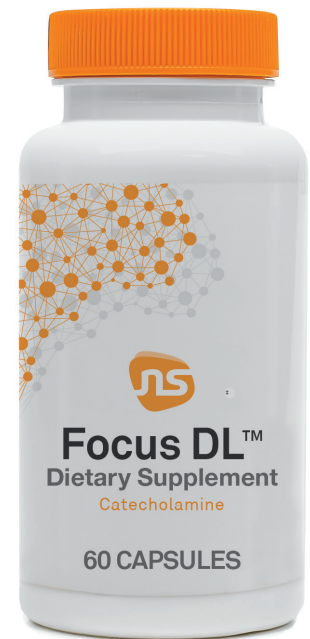


Focus DL

Contains the precursor to PEA, a neuromodulator important for attention and cognition*

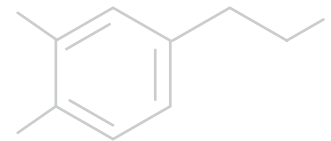
Item Number	Available Sizes	Serving Size
20003	60 Capsules	2 Capsules



Key Ingredients

Ingredient	Description
DL-phenylalanine	<ul style="list-style-type: none"> ■ Precursor to phenylethylamine (PEA), dopamine, norepinephrine, and epinephrine¹ ■ PEA is a neuromodulator shown to increase the release of catecholamines such as dopamine and norepinephrine² ■ PEA levels were found to be significantly lower in individuals with focus issues compared to controls³

The Science

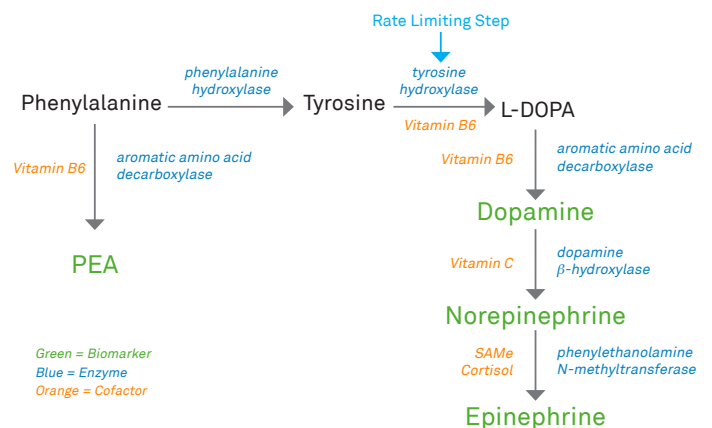


Catecholamines

A class of neurotransmitters responsible for many functions in the nervous and endocrine systems⁴

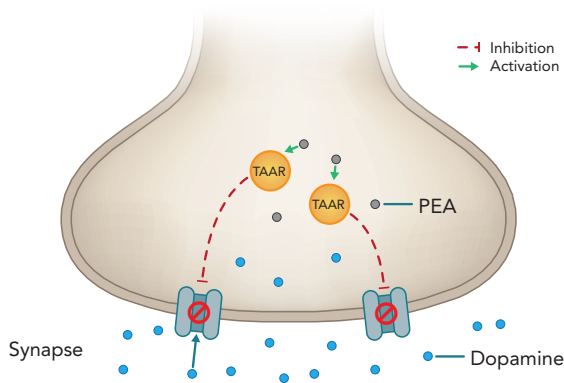
- Catecholamines play an important role in mood, energy, memory, **attention**, and **cognition**⁵⁻⁸

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.

Figure 1. Activation of TAAR by PEA



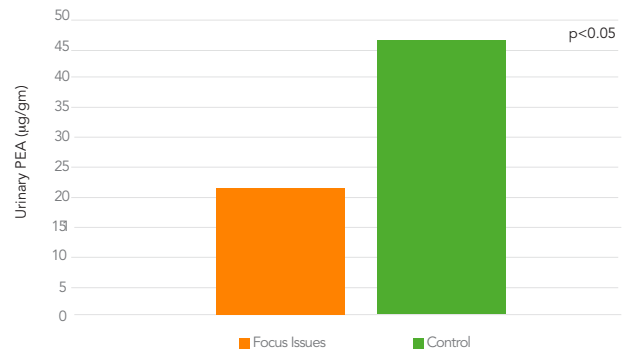
PEA as a neuromodulator

Trace amines, like PEA, are similar in structure to neurotransmitters and are involved in the regulation of dopamine, norepinephrine, and serotonin²

- As no individual neurons exclusively utilize PEA, it is considered as a neuromodulator²
- The trace amine associated receptor (TAAR) functions to inhibit the reuptake of the catecholamines dopamine and norepinephrine *in vitro* (Figure 1.)⁹
- Activation of TAAR by PEA allows these neurotransmitters to remain in the synapse, leading to increased concentrations of catecholamines⁹

Catecholamines from the prefrontal cortex control multiple cognitive functions including attention, impulse control, and memory⁵

Figure 2. PEA Levels and Focus

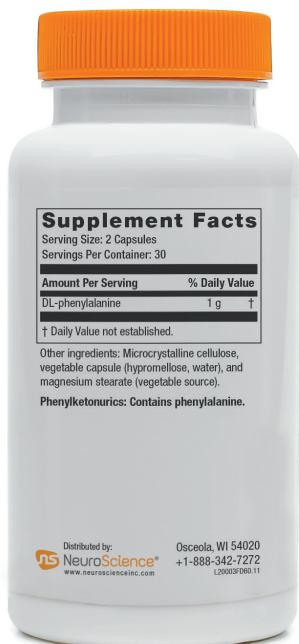


The science behind symptoms

A cohort study of pediatric subjects with focus concerns had significantly lower PEA levels when compared to the control group ($p < 0.05$)³

- There was a 73% difference in urinary PEA levels in the control subjects (Figure 2.) when compared to the group with focus issues³
- Another double-blind study showed that daily use of 200mg of DL-phenylalanine for 30 days may improve mood^{10*}
- PEA is converted into the metabolite phenylacetic acid, a compound with similar natural effects to that of endorphins⁹

Focus DL contains amounts of DL-phenylalanine per serving that meet and exceed those used in this study¹⁰



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