



# NUTROPIC

ENDOCRINE HEALTH

This product contains a blend of adaptogenic botanicals specifically formulated to strengthen the body's stress response and support healthy energy levels. This product provides a unique blend of "stress adapting botanicals" that helps to increase the body's resistance to fatigue, improve attention and immune function, and maintain balanced cortisol and DHEA levels.

## Overview

Stress is defined as any disturbance—extreme cold or heat, psychological stress, sleep deprivation, work overload, physical trauma, or toxic exposure—that can trigger the stress response. The body's stress response system is comprised of the hypothalamic-pituitary-adrenal (HPA) axis. Prolonged stress triggers the HPA axis and consists of three stages: stage 1: alarm; stage 2: resistance; and stage 3: exhaustion.

The initial, short-lived phase is the body's normal fight-or-flight response to danger, which is characterized by elevated cortisol levels. The subsequent resistance phase allows the body to continue buffering extended stress exposure long after the initial fight-or-flight response has dissipated. Hormones released by the adrenals, such as cortisol and DHEA, help support the "resistance" reaction. However, extended periods of stress not only burden the system, creating an imbalance in cortisol and DHEA production, but can result in mental and physical fatigue, nervous tension, irritability, poor memory, and decreased immunity—all of which are characteristic of stage 3. This product provides a unique blend of botanicals that supports the body's ability to respond to and counteract the negative effects of stress.

- Strengthens the Body's Stress Response and Improves Stress Resilience
- Improves Memory, Focus and Attention
- Supports Cognitive Health
- Improves Mental and Physical Performance
- Supports Healthy Cortisol and Energy Levels

## Holy Basil

Holy basil (*Ocimum sanctum*) is an adaptogenic herb that enhances the body's stress and immune response. A comprehensive review of 24 human studies has revealed positive therapeutic effects of holy basil on neurocognition, immunity and metabolism.<sup>1</sup> Thirty-five subjects were dosed with *Ocimum sanctum*, and it was found to have a statistically significant effect on low mood and attention.<sup>2</sup>

## Ashwagandha Root Extract†

Ashwagandha's strong adaptogenic properties provide an array of benefits for individuals who have compromised health due to extreme stress exposure. Ashwagandha's benefits include improving stress resilience, supporting immune response, regulating the sleep cycle, supporting the healthy thyroid function and protecting against exhaustion of the nervous system.<sup>3,4</sup> Ashwagandha has also been shown to be beneficial in supporting proper mood regulation and restoring a sense of calmness under stress.<sup>4</sup>

## Rhodiola rosea Root Extract†

*Rhodiola rosea* has been categorized as an adaptogenic botanical due to its ability to increase resistance to a variety of stressors.<sup>5</sup> *Rhodiola* has been studied extensively and is widely used in Eastern Europe and Asia to help support the nervous system, mood regulation, mental clarity, work performance and the sleep cycle.<sup>5</sup> Within the central nervous system, *Rhodiola* has demonstrated an ability to preserve levels of neurotransmitters, such as serotonin, dopamine and norepinephrine. In a randomized, double-blind, placebo-controlled study examining the effects of *Rhodiola* on fatigue and stress, 161 patients aged 19 to 21 years received 185 mg

† 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.

of *Rhodiola* twice daily and saw a significant reduction in fatigue.<sup>6</sup> An additional study using *Rhodiola* extract in students showed significant improvements in mental performance, greater mood stability and improved sleep patterns.<sup>7</sup>

### Eleuthero Root Extract†

*Eleutherococcus senticosus* has been identified as a strong adaptogenic botanical and is widely used in China to improve general health and support memory and physical endurance.<sup>8</sup> In addition to its ability to improve stress resilience and maintain energy, eleuthero has been shown to support the immune system.<sup>9</sup> In a double-blind study, the adaptogenic effects of eleuthero were demonstrated to help maintain a sense of calm, reflected by a reduced heart rate during stress exposure.<sup>10</sup> Eleuthero has also been shown to improve performance in runners. In a study on performance athletes, eleuthero extract (2 or 4 mL) given 30 minutes prior to a race significantly reduced race time (48.7 minutes) compared to the control group (52.6 minutes).<sup>11</sup>

### Schisandra Berry Extract†

Schisandra is an adaptogenic botanical that has been used for centuries in China and Russia to help support mental clarity, stress response and emotional wellness. In a double-blind, placebo-controlled study, athletes were given *Schisandra chinensis* and *Bryonia alba* extracts or placebo. Those receiving the therapy had increased concentrations of nitric oxide, a molecule that causes the blood vessels to expand, resulting in increased circulation, blood flow and nutrients throughout the body.<sup>12</sup> The researchers concluded that schisandra provides supportive factors for physical performance in athletes.<sup>12</sup> Schisandra berry has been shown to support learning and memory and may have some protective factors that support brain health.<sup>13</sup>

### Licorice Root Extract†

The primary components in licorice root that support adrenal health include glycyrrhetic acid and glycyrrhizin. Licorice has also been shown to block 11- $\beta$ -hydroxysteroid dehydrogenase, the enzyme responsible for the conversion of cortisol to the inactive cortisone. When taken in small doses, licorice root extract can be used to maintain normal cortisol levels, an important factor for individuals that need to support adrenal hormone production and maintain healthy inflammatory pathways.<sup>14</sup>

### Directions

2 capsules one or two times per day or as recommended by your health care professional.

### Does Not Contain

Gluten, corn, yeast, artificial colors or flavors.

### Caution

Do not consume this product if you are pregnant or nursing.

Supplement Facts <sup>V1</sup>		
Serving Size 2 Capsules		
Servings Per Container 60		
	Amount Per Serving	% Daily Value
Holy Basil ( <i>Ocimum sanctum</i> ) Leaf 10:1 Extract (Containing Ursolic Acid)	300 mg	*
Ashwagandha Root Extract (Standardized to contain 1.5% Withanolides)	250 mg	*
<i>Rhodiola rosea</i> Root Extract (Standardized to contain 3% Rosavins)	200 mg	*
Eleuthero Root Extract (Standardized to contain 0.8% Eleutherosides)	150 mg	*
Schisandra Berry Extract	150 mg	*
Chinese Licorice Root Extract (Standardized to contain 12% Glycyrrhizin)	75 mg	*

\* Daily Value not established.

Other Ingredients: Hypromellose (Natural Vegetable Capsules), Microcrystalline Cellulose, Magnesium Stearate and Silicon Dioxide.



## References

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