

Total Adrenal With Adrenal Concentrate*

- Improves Stress Resilience
- Supports Healthy Energy Levels
- Strengthens the Body's Stress Response
- Improves Mental and Physical Performance
- Helps Maintain a Balanced Cortisol-to-DHEA Ratio

Total Adrenal contains a blend of key micronutrients, adaptogenic botanicals and adrenal concentrate specifically formulated to strengthen the body's stress response and support healthy energy levels. Total Adrenal provides targeted amounts of vitamin A and C, pantothenic acid and other B vitamins that are critical to adrenal gland function. This powerful formulation helps support the body's resistance to fatigue and aids in maintaining balanced cortisol and DHEA levels.

Overview

Stress is defined as any disturbance—extreme cold or heat, psychological stress, sleep deprivation, work overload, physical trauma, as well as 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: 1: alarm, 2: resistance, and 3: exhaustion.

The initial, short-lived phase is the body's normal fight-or-flight response to danger, 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. 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 and poor memory- all of which are characteristic of stage 3. Total Adrenal offers a unique blend of botanicals, adrenal concentrate and micronutrients that support the adrenal glands, as well as the body's ability to counter-act the negative effects of stress.

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.¹ *Rhodiola* has been studied extensively and is widely used in East-

ern Europe and Asia to help support the nervous system, mood regulation, mental clarity, work performance and the sleep cycle.¹ 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 *Rhodiola* twice daily resulting in a significant reduction in fatigue.² An additional study using *Rhodiola* extract in students showed significant improvements in mental performance, greater mood stability and improved sleep patterns.³

Eleuthero Root Extract*

Eleutherococcus senticosus has been identified as a strong adaptogenic botanical and is widely used in China to support general health, memory and endurance.⁴ In addition to its ability to improve stress resilience and fight fatigue, Eleuthero has exhibited immune supporting effects.⁵ In a double-blind study, 45 healthy volunteers received Eleuthero or placebo for 30 days. A cognitive challenge test was given to assess stress response, and heart rate. Unlike placebo, subjects receiving Eleuthero demonstrated a 40% reduction in heart rate in response to the stressor.⁶ 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).⁷

Schisandra Berry Extract*

Schisandra berry extract 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 who were given an adaptogenic blend including *Schisandra chinensis* extract or placebo, had increased concentrations of nitric oxide, a molecule which causes the blood vessels to expand resulting in increased circulation, increased blood flow and nutrients throughout the body and healthy blood pressure.⁸ The researchers concluded that Schisan-

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dra berry enhances physical performance in athletes.⁸ Schisandra berry has also been shown to support learning and memory and may have a protective effect on brain health.⁹

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-β-hydroxysteroid dehydrogenase, the enzyme responsible for the conversion of cortisol to the inactive cortisone.¹⁰ When taken in small doses, licorice root extract can be used to maintain cortisol levels, an important factor for individuals that need to support adrenal hormone production and maintain healthy inflammatory pathways.¹⁰

Adrenal Concentrate*

For thousands of years, glandular concentrates have been used in medicine to supply key nutrients to support the body. The concept of glandular therapy states that similar organ extracts from animals will support the same organ within humans by stimulating its activity. Adrenal bovine concentrate allows for rejuvenation of the adrenal stress system in a balanced and efficient manner.

Micronutrient Blend*

Adrenal gland function, as well as the synthesis of cortisol, is dependent on an adequate supply of several vitamins. Vitamin C plays a major role in neurotransmitter production and supports general health of the adrenals.¹¹ Under stressful conditions, vitamin C and B complex vitamins are readily used and excreted from the body.¹⁰ Within the B vitamin family, pantothenic acid breaks down into Coenzyme A, which is essential for the production of energy from ingested carbohydrates, fats and proteins.¹² In a study evaluating the effects of pantothenic acid and glutathione production, pantothenic acid was found to increase CoA levels in the body, leading to increased ATP production.¹² Niacin also plays a vital role in many metabolic functions in the body, including supplying energy to cells and assisting in the production of adrenal hormones.¹⁰

Directions

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

Does Not Contain

Wheat, gluten, yeast, soy, dairy products, fish, shellfish, peanuts, tree nuts, egg, artificial colors, artificial sweeteners or preservatives.

Cautions

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

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Supplement Facts ^{v6}		
Serving Size 2 Capsules		
Servings Per Container 30 & 60		
	Amount Per Serving	% Daily Value
Vitamin A (from 500 IU as Natural Beta Carotene)	150 mcg	17%
Vitamin C (as Ascorbic Acid USP)	200 mg	222%
Vitamin E (from 20 IU as d-Alpha Tocopherol Succinate USP)	13.4 mg	89%
Niacin USP	20 mg	125%
Vitamin B6 (as Pyridoxine Hydrochloride USP, Pyridoxal 5'-Phosphate)	30 mg	1,765%
Vitamin B12 (as Methylcobalamin)	200 mcg	8,333%
Pantothenic Acid (as d-Calcium Pantothenate)	350 mg	7,000%
Calcium	30 mg	2%
Adrenal Concentrate (Bovine)	220 mg	*
Eleuthero Root Extract (Standardized to contain 0.8% Eleutherosides)	100 mg	*
Rhodiola (<i>Rhodiola rosea</i>) Root Extract (Standardized to contain 3% Rosavins)	100 mg	*
Schisandra Berry Extract	100 mg	*
Chinese Licorice Root Extract (Standardized to contain 12% Glycyrrhizin)	75 mg	*

* Daily Value not established.

Other Ingredients: Gelatin (capsules), magnesium stearate, and calcium silicate.

References

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