

# Adrenal Manager™

Stress Response Support†



Available in 60 capsules and 120 capsules

## Discussion

Stress is caused by physiological, psychological, or emotional triggers (stressors) that cause a disturbance in the homeostasis of an organism. How we respond to those stressors (physiologically and psychologically) influences how well we cope with change and with ongoing stress. Structural or physical trauma, distress, poor diet, infection, toxic exposure, leaky gut, births, deaths, lack of sleep, temperature changes, electromagnetic radiation, and allergies or food sensitivities are all potential stressors. Combined, they amount to a total stress level and can ultimately disrupt homeostasis with direct effects on the autonomic nervous system, the hypothalamic-pituitary-adrenal (HPA) axis, and the cardiovascular, metabolic, and immune systems.<sup>[1]</sup> Specifically, research reveals that prolonged stress has a profound effect on the adrenal glands, lymph nodes, thymus gland, and gastrointestinal system.<sup>[2]</sup> Endocrinologist Hans Selye identified the various stages of the stress response (alarm, resistance, and exhaustion) and described the entire phenomenon as the general adaptation syndrome (GAS).

Micronutrients, such as vitamins, minerals, and antioxidants, are involved in the majority of metabolic functions in the body. B vitamins are especially important to energy generation within the cellular mitochondria, and a deficiency of any B vitamin can compromise mitochondrial function.<sup>[3,4]</sup> Riboflavin supports the respiratory chain, niacin supplies protons for oxidative phosphorylation, and pantothenic acid is required for coenzyme A production, metabolic enzyme complex formation, and fatty acid oxidation. Stressors can increase metabolic demand, energy expenditure, and micronutrient needs.<sup>[5]</sup> Micronutrient sufficiency and balance have been established as crucial to helping maintain a healthy psychological and physiological response to stress.<sup>[6]</sup> Unfortunately, experts estimate that a significant proportion of the general population does not consume adequate dietary levels of several micronutrients. Experts suggest that exogenous supplementation can improve micronutrient status and sufficiency and help support a healthy response to stress.<sup>[7]</sup>

## Clinical Applications

- » Supports the Body's Response to Stress†
- » Supports Energy Production and Metabolic Function†

*Adrenal Manager™ pairs glandulars with targeted nutrients to support the body's response to everyday stressors. Among the comprehensive blend of nutrients are high-potency pantothenic acid and vitamin C, activated B vitamins, and mineral amino acid chelates. Gland and organ tissues are derived from an Argentinian bovine source that ensures safety and purity.\**

Clinical research supports the premise that micronutrient supplementation can favorably support the stress response in a variety of circumstances.<sup>[7]</sup> In a randomized, double-blind, placebo-controlled (RDBPC) trial, high-potency doses of B vitamins and vitamin C along with an array of minerals were studied for their effects on perceived stress scores (measuring one's self perception of stress) in 215 males aged 30 to 55 years. Results revealed significant improvements on the perceived stress scale (PSS), the profile of mood states (POMS), and the general health questionnaire (GHQ-12) for those taking the multivitamin/mineral supplement.<sup>[8]</sup> Another RDBPC study of 80 males revealed consistent and statistically significant modulation in anxiety and perceived stress in the men who took a high-potency multivitamin/mineral supplement compared to those who took the placebo. Participants taking the supplement also reported feeling less tired and better able to concentrate compared to their placebo-taking counterparts.<sup>[9]</sup> Similar results were achieved in a double-blind, placebo-controlled, double-center study of 300 subjects taking a multivitamin/mineral supplement, with significant improvement in baseline stress scores.<sup>[6]</sup> The levels of vitamin C, riboflavin, B6, pantothenic acid, and zinc provided in the recommended dose of two Adrenal Manager capsules twice daily meets or exceeds the levels used in these clinical studies. The recommended daily dose of four capsules also provides 30 mg of niacin (compared to 50 mg used in studies) and 90 mg of magnesium (compared to 100 mg used in studies).†

Adrenal Manager also contains a blend of complementary nutrients and purified glandulars. *Rhodiola rosea*, chlorella, grape seed extract, magnesium, zinc, chromium, bioflavonoids, and L-tyrosine are present at levels that allow for additional supplementation to round out their profile. Activated B vitamins and Albion® TRAACS® (the real amino acid chelate system) mineral amino acid chelates, along with other chelated minerals, are key features of the formula. Adrenal, parotid, thymus, and spleen glandulars are extracted from an Argentinian bovine source that ensures safety and purity.†

\*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.

**Adrenal Manager™ Supplement Facts**

Serving Size: 2 Capsules

	Amount Per Serving	%DV
Vitamin C (ascorbic acid)	175 mg	194%
Riboflavin (as riboflavin 5'-phosphate sodium)	15 mg	1,154%
Niacin (as niacinamide)	15 mg	94%
Vitamin B6 (as pyridoxal 5'-phosphate)	10 mg	588%
Pantothenic Acid (as d-calcium pantothenate)	105 mg	2,100%
Magnesium (as magnesium citrate)	45 mg	11%
Zinc (as zinc bisglycinate chelate) <sup>S1</sup>	5 mg	45%
Chromium (as chromium nicotinate glycinate chelate) <sup>S1</sup>	50 mcg	143%
Potassium (as potassium glycinate complex) <sup>S1</sup>	2 mg	0%
Lemon Bioflavonoid Complex ( <i>Citrus × limon</i> ) (fruit peel)(25% bioflavonoids)	225 mg	**
L-Tyrosine	175 mg	**
Parotid (from bovine)(Argentina)	80 mg	**
Thymus (from bovine)(Argentina)	70 mg	**
Chlorella ( <i>Chlorella vulgaris</i> )	50 mg	**
Adrenal Cortex (from bovine)(Argentina)	25 mg	**
Rhodiola Extract ( <i>Rhodiola rosea</i> )(root)(3% rosavins and 1% salidroside)	25 mg	**
Spleen (from bovine)(Argentina)	20 mg	**
Grape Extract ( <i>Vitis vinifera</i> )(seed)(5% monomers)	1 mg	**

\*\* Daily Value (DV) not established.

**Other Ingredients:** Capsule (hypromellose and water), microcrystalline cellulose, vegetable stearic acid, vegetable magnesium stearate, medium-chain triglyceride oil, and silica.**DIRECTIONS:** Take two capsules daily, or as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

**STORAGE:** Keep closed in a cool, dry place out of reach of children.**FORMULATED TO EXCLUDE:** Wheat, gluten, yeast, soy, dairy products, fish, shellfish, peanuts, tree nuts, egg, sesame, ingredients derived from genetically modified organisms (GMOs), artificial colors, and artificial sweeteners.

S1. Albion® and TRAACS® are registered trademarks of Albion Laboratories, Inc.

**References**

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Additional references available upon request



All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

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