Quick Adrenal Energizer*

Adrenal POWER Powder® is a simple one-product solution to the energy lows people often experience during adrenal fatigue and after stress. Providing targeted, quick-acting, long lasting nutrition to boost flagging energy in a healthy, supportive way, it is an excellent morning starter, midmorning or afternoon pick-me-up, and immediate energy source for people experiencing adrenal fatigue.* This nutritionally robust energizer combines high quality porcine glandular concentrates with specially selected nutrients and herbs formulated to comprehensively support HPA axis and adrenal function, and help the body rebound from stress more quickly.* The added natural fiber and flavors create a pleasant tasting powder that can be mixed easily into smoothies, milk or other beverages. Adrenal POWER Powder contains smaller amounts of many of the ingredients in the Adrenal Fatigue Quartet® supplements formulated by Dr. Wilson for his Program for Adrenal Fatigue. For optimal results, people experiencing adrenal fatigue should use it with, but not as a substitute for, the Adrenal Fatigue Quartet.*

Provides critical nutrients for optimal adrenal and nervous system functioning during times of stress*

**Vitamin C**
- Vitamin C becomes depleted under stress, and humans cannot synthesize their own. 1, 2, 3
- The adrenal cortex contains more vitamin C than any other tissue and, along with leucocytes and the pituitary, has one of the highest requirements for C in the human body. 1, 4, 5, 6, 7
- Vitamin C plays an important role in immune function, tissue repair, antioxidant protection and recovery from stress. 1, 2, 3, 8, 9

**B Vitamins**
- Niacin (in the form of NADPH) and riboflavin (as FAD) are required by mitochondrial P450 enzymes to catalyze central steps in steroid biosynthesis, including cholesterol conversion to pregnenolone and 11β and 18 hydroxylation in glucocorticoid synthesis. 10
- Thiamin is necessary for glycolysis and the subsequent ATP production, steroidogenesis and proper nerve conduction. 1
- Pantothenic acid is a vital component of coenzyme A (required for energy and steroidogenesis) and, along with other B vitamins, is essential for ATP production in all cells, including the HPA axis and central nervous system. 1
- Folate, a water-soluble B vitamin, is critical to the proper biosynthesis of the monoamine neurotransmitters serotonin, epinephrine and dopamine, and deficiency has been shown to be linked to depression. 11, 12
- Hypercortisolism is associated with reduced serum folate concentrations in humans. 13

**Minerals** (magnesium, zinc, copper, manganese, selenium, chromium)
- Manganese and magnesium shown to directly increase adrenal enzymatic activity 14
- Zinc demonstrated to be necessary for glucocorticoid signaling in the hippocampus in response to stress 15
- Manganese-superoxide dismutase (Mn-SOD), copper, and zinc-superoxide dismutase (Cu, Zn-SOD) are important adrenal antioxidants and scavengers of free radicals created during steroidogenesis and catecholamine synthesis. 16
- Selenium is essential to glutathione peroxidase, an antioxidant that reduces hydrogen peroxide free radicals during steroidogenesis in the adrenals. A deficiency of selenium resulted in a marked decrease in steroid hormone production. 17
- Chromium shown to help balance steroid-induced increase in blood glucose levels 18

**Vitamins A, E and Bioflavonoids**
- Bioflavonoids enhanced bioavailability of ascorbic acid and helped prevent it from auto-oxidation. 19, 20
- Flavonoid-rich orange peel significantly increased ascorbic acid concentration in the adrenals of guinea pigs that, like humans, are unable to synthesize their own vitamin C. 21
- Retinol (the active form of vitamin A) activates tyrosine hydroxylase, the rate-limiting enzyme in the biosynthesis of catecholamines. 22
- Alpha-tocopherol (vitamin E) increases adrenal sensitivity to adrenocorticotropic hormone (ACTH). 23

**Choline and 5-HTP**
- Choline is essential for the production of acetylcholine and membrane structures critical to healthy brain function. Low levels of choline have been correlated with higher anxiety levels in human subjects. 24
- 5-HTP shown to stimulate HPA axis activity and serotonergic neurotransmission 25

**Porcine glandulars**
- Pioneering endocrinologists throughout the 20th century found that adrenal glandular supplementation promoted healthy normal adrenal function in patients with hypoadrenia. 26, 27, 28

**Optimizes HPA axis functions to enhance stress management capacity and cognition**

**Eleutherococcus senticosus** (formerly known as Siberian Ginseng)
- Helps regulate homeostasis through mechanisms of action associated with the HPA axis and control of key mediators of the stress response, including favorably modulating HPA axis changes under extreme conditions 29, 30, 31
- Shown to enhance mental and physical endurance, performance, attention, quality of work under stressful conditions, and tolerance to mental exhaustion and adverse physical conditions 29, 30, 32

**Ashwaganda** (Withania somnifera)
- Demonstrated to help moderate many of the biological changes accompanying extreme stress 29, 33, 34, 35
- Shown to attenuate stress-induced perturbation of glucose homeostasis and corticosterone levels induced by stress 36

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*These statements have not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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Licorice (Glycyrrhiza glabra)
- Enhanced salivary DHEA and testosterone in humans and promoted cortisol synthesis in incubates of adrenocortical cells
- Prolonged the half-life of cortisol
- Helped attenuate or eliminate stress-induced variations in homeostasis
- Enhanced salivary DHEA and testosterone in humans and promoted sexual function

Maca (Lepidium meyenii)
- Helped attenuate or eliminate stress-induced variations in homeostasis
- Moderated anxiety and promoted positive mood and sexual function in both men and women

Suggested Use
Adrenal POWER Powder tastes best in smoothies, protein shakes, milk (soy, rice, goat or cow) and flavorful juices such as mango, orange or tangerine. Find the ones that work best for individual taste. Mix or blend ½ scoop of Adrenal POWER Powder with 8 oz. or more of the beverage of choice. Take once or twice a day as a morning jump start, or as a healthy snack to recharge mid-morning, mid-afternoon, after a workout, or at any other time of the day. Take regularly and consistently for best results.

Companion Products Formulated by Dr. Wilson

Adrenal Fatigue: Herbal Adrenal Support Formula®, Adrenal Rebuilder®, Adrenal C Formula®, and Super Adrenal Stress Formula®

Supplement Facts
Serving Size: 1 scoop (2 tsp) (43 g)  Servings Per Container: 30

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<th>Amount Per Scoop</th>
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<th>Amount Per Container</th>
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Other Ingredients: Guar Gum, Xanthan Gum, Citric Acid, Silica, FD&C Blue #1, FD&C Red #3, FD&C Yellow #5, FD&C Green #3

Dairy-free, caffeine-free, contains NO egg, wheat, gluten, milk, soy, fish, crustaceans, tree nuts, peanuts,

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References