

EndoAxis

Formula 18

COMPENSATION PHASE

Adaptogenic blend to promote a healthy adrenal pattern.

AT A GLANCE

Stress is a ubiquitous part of our lives. Stress serves a purpose – it supports cellular regeneration of dysfunctional cells, improves cellular resiliency, and attempts to ensure our cellular survival in times of famine, illness, or injury.

However, how our body responds to stress and the way in which we experience stress in the 21st century are at odds with one another and can lead to adrenal dysfunction – both in the way we circulate and metabolize cortisol, as well as in the way we respond to and regulate our stress response through the HPA axis.

Adrenal dysfunction can manifest in several stages, depending on the underlying cause and severity of the condition. In a healthy individual, our hypothalamus will generate CRH in response to a stress signal. CRH triggers our pituitary to generate ACTH. ACTH acts as a “knock” on the adrenal glands, triggering production within the adrenal cortex to produce DHEA (from the zona reticularis), Cortisol (from the zona fasciculata) and Aldosterone (from the zona glomerulosa). ACTH also triggers production of Norepinephrine from the adrenal medulla.

Cortisol metabolism reflects the total daily tissue exposure to, and clearance of, free cortisol over the collection window. This formulation targets poor metabolism of cortisol while supporting adrenal health and stress hormone balance.

When cortisol metabolism is low while free cortisol is in range, it can suggest that either the metabolism of cortisol is being reduced due to poor liver detox or in response to poor cellular free T3 activity (as is seen in hypothyroid conditions and even chronic stress), or that they may be compensating for truly low cortisol production by circulating what free hormone they do make for a longer duration.

Support is similar, and our product addresses both aspects of this lower metabolized cortisol picture in the presence of normal free circulating cortisol, with a focus on cellular T3 response, liver health, mitochondrial balance and overall adrenal restoration.



KEY BENEFITS



Focused on optimizing cortisol metabolism through improved cellular response to free T3



Targeted nutrients aimed at mitochondrial health to optimize cortisol response and utilization



Adrenal co-factors to regulate adrenal health

FORMULA ANALYSIS

Rhodiola rosea root

Rhodiola Rosea is a herbal supplement that has been used traditionally to stimulate the nervous system, treat stress-induced fatigue and depression, and enhance physical performance. The active constituents include rosavin and salidroside, which act as antioxidants and have been shown to reduce the oxidative damage and inflammation associated with stress.[1] Various clinical studies have evaluated the cognitive and mental performance benefits of *Rhodiola*, particularly in relation to symptoms of life-stress, fatigue, and burnout. The systematic review and meta-analysis provide encouraging evidence for the clinical efficacy of *Rhodiola* preparations for managing various stress-induced conditions, including anxiety, stress, fatigue, and depression.[2] *Rhodiola* has adaptogenic effects and is able to enhance the body's non-specific resilience to physical and mental stresses and normalize its functions. Additionally, several clinical studies have demonstrated the remedial effects of *Rhodiola* on cardiovascular and reproductive health, reversing or healing disrupted physiologies and dysfunctions related to non-specific stress damage.[3]

Eleutherococcus senticosus

Eleutherococcus senticosus (Siberian Ginseng) has been used for centuries in traditional Chinese and Western medicine practice for its adaptogenic effects on the body. It has been studied for its use in supporting healthy adrenal function and managing stress. Studies have shown that the chemical constituents of *Eleutherococcus* have a variety of protective effects on the endocrine system, including the adrenals. *Eleutherococcus* contains active compounds known as eleutherosides, which have been shown to stimulate the adrenal glands, modulate cortisol levels, and help to reduce stress[4]. The adaptogenic properties of *Eleutherococcus* have also been studied for their ability to help the body better cope with physical and mental stressors. *Eleutherococcus* has been shown to reduce symptoms of fatigue, improve mental clarity, and improve overall quality of life. *Eleutherococcus* has also been linked to improved cognitive performance and reduced anxiety levels.[5]

Niacinamide

Niacinamide, a precursor of the coenzyme nicotinamide adenine dinucleotide (NAD+), participates in various metabolic pathways. Studies have demonstrated that NAD+ is integral to the functioning of enzymes involved in thyroid hormone synthesis and adrenal steroidogenesis. Niacinamide's role in enhancing NAD+ levels may positively influence the activity of these enzymes, thereby modulating hormone production[6]. Niacinamide's influence on adrenal function has been investigated in both animal and human studies. Experimental evidence indicates that niacinamide may modulate the activity of enzymes involved in adrenal steroidogenesis, leading to improved cortisol and dehydroepiandrosterone (DHEA) production. Preliminary clinical data suggest potential benefits in managing adrenal dysfunction and related symptoms[7].

Tyrosine

During acute stress, dopamine production is elevated in response to a sharp rise in cortisol, a process involving and potentially depleting tyrosine over time.[8] This rise in cortisol subsequently triggers PNMT activity, converting dopamine to norepinephrine. Over time, this activity is blunted, with research demonstrating that chronically elevated cortisol levels can decrease PNMT gene expression.[9] Tyrosine is also involved in the production of thyroid hormone. Chronic stress increases conversion of active T3 into an inactive isomer, reverse T3, and diminishes TSH pulsation, reducing thyroid response over time.[10] Active T3 is a critical step for free cortisol metabolism. When we begin to see high circulating free cortisol, with low metabolized cortisol, it is critical we introduce tyrosine to support the hypothalamic-pituitary-adrenal and thyroid axis. In fact, a literature review reflects the importance of tyrosine for reducing stress and improving overall health and performance outcomes in adults.[11]

Meet Optimize

Products blended to support alignment to our HPA axis. Optimizing our circadian activity and adrenal balance.



Scan to view all formulas.

SUPPLEMENT FACTS

Serving Size 2 Capsules
Servings Per Container 60

Amount Per Serving		% Daily Value
Vitamin C (as calcium L-ascorbate)	150 mg	167%
Thiamin (as thiamin mononitrate)	25 mg	2083%
Riboflavin (as riboflavin 5'-phosphate)	5 mg	385%
Niacin (as niacinamide)	50 mg	313%
Vitamin B ₆ (as pyridoxal 5-phosphate)	5 mg	294%
Vitamin B ₁₂ (as hydroxocobalamin)	75 mcg	3125%
Pantothenic Acid (Vitamin B ₅) (as Calcium d-Pantothenate)	25 mg	500%
Selenium (as L-Selenomethionine)	0.1 mcg	< 1%
Bacopa Extract (<i>Bacopa monnieri</i>) (whole plant) (standardized to 20% bacosides)	150 mg	†
Acetyl-L-Carnitine (as acetyl-L-carnitine HCl)	127.2 mg	†
Russian Rhodiola (<i>Rhodiola rosea</i>) (root) extract	100 mg	†
Siberian Ginseng (<i>Eleutherococcus senticosus</i>) (root) extract	100 mg	†
Ashwagandha (<i>Withania somnifera</i>) (root) extract	100 mg	†
N-acetyl L-tyrosine	75 mg	†
L-Serine	50 mg	†
Alpha Lipoic (as R-lipoic acid)	50 mg	†

† Daily Value not established

Other ingredients: Vegetable capsule (hypromellose), microcrystalline cellulose, magnesium stearate and silicon dioxide.

SUGGESTED USE

Take 2 capsules 2 times a day with a meal or as directed by your healthcare practitioner.

CAUTION: Do not use if pregnant or nursing. Consult your physician before use if you have a medical condition, or taking any medication. Do not use product if the safety seal is broken or damaged. Keep out of reach of children.

MADE WITHOUT

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

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

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