

EndoAxis

Formula 17

INFLAMED 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.

In response to ACTH, cortisol flux will occur in circulation. There are myriad influencers to free cortisol circulation, but essentially, what is free and circulating (either as cortisol or cortisone) has the potential to act on receptors and reflects circulating activity at key intervals throughout the day.

Cortisol metabolism reflects the total daily tissue exposure to, and clearance of, free cortisol over the collection window. This formulation targets the over-metabolism of cortisol, while improving the free cortisol response.

When cortisol metabolism is elevated, the action on the body is to increase sugar, suppress the immune system, and increase clotting factors and blood pressure. Prolonged cortisol elevations can lead to insulin resistance, increase the risk for developing metabolic syndrome, increase pain response, decrease sleep, impact mood and augment weight[1][2].

When metabolized cortisol is high, it suggests that cortisol is being produced and exposed to cells in high amounts, but that there is a greater concern for elevated inflammation, hyper-thyroid activity or elevated fat tissue response increasing the clearance and metabolism of free cortisol. This can make a person feel inflamed and exhausted. The goal is to reduce inflammation and stress that drive up cortisol output and balance cortisol metabolism.



KEY BENEFITS



Herbs and nutrients focused on reducing the drivers of high cellular metabolism of cortisol



Targeted support to reduce inflammation, a primary drive to high cortisol



Herbs used to improve free cortisol in circulation to support energy and mood

FORMULA ANALYSIS

Glycyrrhiza glabra

Glycyrrhiza glabra (licorice) is used classically as an adrenal adaptogen targeting free cortisol in circulation. Licorice has been investigated for its ability to modulate cortisol levels through several mechanisms including inhibition of 11 β -hydroxysteroid dehydrogenase type 2 (11 β -HSD2). This enzyme converts cortisol to its inactive form, cortisone, in specific tissues. *Glycyrrhiza glabra* compounds, particularly glycyrrhetic acid, inhibit 11 β -HSD2 activity, leading to increased cortisol levels maintained in free circulation[3]. Licorice also demonstrates several anti-inflammatory and antioxidant properties, including inhibition of pro-inflammatory cytokines, such as TNF- α , IL-1 β , and IL-6, as well as inhibition of the NF- κ B pathway[4], a central regulator of inflammatory responses. Licorice contains flavonoids and polyphenols that possess antioxidant properties[5], helping to reduce oxidative stress and inflammation that can be drivers of elevated cortisol metabolism.

Schisandra chinensis

Schisandra exhibits adaptogenic properties, helping the body adapt to stressors, which may indirectly modulate cortisol levels by mitigating the physiological response to stress. *Schisandra* supports the hypothalamic-pituitary-adrenal (HPA) axis, influencing the release of corticotropin-releasing hormone (CRH) and adrenocorticotrophic hormone (ACTH), which in turn impact cortisol production. However, the primary use for *Schisandra* in our over-metabolized cortisol formula is to address chronic inflammation. *Schisandra chinensis* offers several anti-inflammatory mechanisms, including modulating the production of pro-inflammatory cytokines like TNF- α , IL-6, and IL-1 β [6]. *Schisandra* contains bioactive compounds, including lignans and polyphenols, with antioxidant capabilities that help counteract oxidative stress[7], a key driver of inflammation, and may even mitigate tissue fibrosis, a component of chronic inflammation, by inhibiting collagen deposition[8][9].

Berberine

When cortisol metabolism is high, it demonstrates a high cellular response to cortisol throughout the day of testing. High cellular cortisol is associated with weight gain, insulin resistance, and metabolic syndrome. Studies suggest that berberine supplementation may lead to a reduction in cortisol levels, particularly in individuals with elevated stress or metabolic disorders through reduction in the inflammation associated with high cortisol output[10]. Additionally, berberine has been shown to improve insulin sensitivity and reduce inflammation, which are often associated with high cortisol levels[11].

Carnitine

Carnitine was utilized for its role in fatty acid oxidation, which contributes to cellular energy production and helps to modulate the inflammatory response. Carnitine possesses antioxidant capabilities that counteract oxidative stress, a significant driver of inflammation. Emerging evidence suggests that carnitine may modulate immune responses, influencing the production of pro-inflammatory cytokines like TNF- α and IL-6. By modulating inflammation and supporting energy production, carnitine is a natural fit to support those in need of enhanced energy and endurance and lower inflammation elevating cortisol metabolism[12].

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)	100 mg 111%
Thiamin (as thiamin mononitrate)	10 mg 833%
Riboflavin (as riboflavin 5-phosphate)	5 mg 385%
Niacin (as niacinamide)	10 mg 63%
Vitamin B ₆ (as pyridoxal 5-phosphate)	10 mg 588%
Pantothenic Acid (Vitamin B ₅) (as Calcium d-Pantothenate)	10 mg 200%
Magnesium (as magnesium taurate, magnesium malate and magnesium citrate)	10 mg 2%
Zinc (as zinc picolinate)	0.5 mg 5%
Berberine Hydrochloride (from Indian Barberry) (<i>Berberis aristata</i>) (bark)	250 mg †
Turmeric (Curcuma Longa) Rhizome 95% Curcuminoids	90 mg †
L-Carnitine (as Carnitine Tartrate)	84.8 mg †
Alpha Lipoic Acid (as R-lipoic acid)	50 mg †
Siberian Ginseng (<i>Eleutherococcus senticosus</i>) (root) extract 4:1	50 mg †
Cinnamon (<i>Cinnamomum zeylanicum</i>) (bark) powder	50 mg †
Acetyl-L-Carnitine (as acetyl-L-carnitine HCl)	42.4 mg †
Schizandra (<i>Schisandra chinensis</i>) (fruit) extract	25 mg †
Black Pepper (<i>Piper nigrum</i>) (fruit) (95% piperine) (BioPerine®)	10 mg †
Licorice (<i>Glycyrrhiza glabra</i>) (NLT 26% Glycyrrhizine, 6% Glycyrrhizinated) (root) extract 20:1	9.6 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

Corn, soy, or wheat.

*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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