

## CORTISOL MANAGER™ STRESS HORMONE STABILIZER

Cortisol, often referred to as the “stress hormone,” is produced by the adrenal cortex in response to signals from the hypothalamus and pituitary gland, as part of the hypothalamic-pituitary-adrenal (HPA) axis. Upon exposure to acute stressors, cortisol secretion can generally help maintain homeostasis in the body. Because of its central role as a “first responder” and its capability to modulate multiple critical physiological functions, cortisol is often seen as the bridge between stress and its health consequences.

Integrative Therapeutics has formulated Cortisol Manager with stress-reducing ingredients and botanicals to promote relaxation, help alleviate fatigue, and support healthy cortisol levels.\* By balancing cortisol levels, Cortisol Manager can help reduce stress, which supports a restful night’s sleep without diminishing daytime alertness.\*

### Cortisol Manager features:

- Ashwagandha
- L-theanine
- Phosphatidylserine
- Magnolia
- Epimedium

Cortisol Manager is a part of the HPA Axis Optimizaton Program.  
To access these resources, visit [integrativepro.com/HPA](http://integrativepro.com/HPA)



wheat free



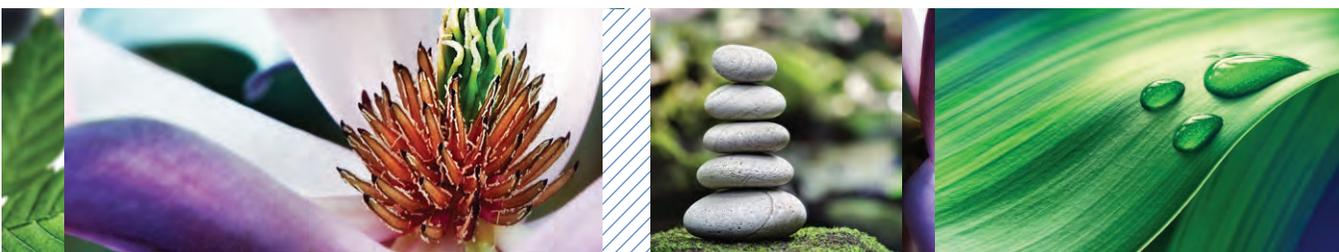
gluten free



dairy free



vegetarian



# CORTISOL MANAGER™

## Background

Cortisol, often referred to as the “stress hormone,” is produced by the adrenal cortex in response to signals from the hypothalamus and pituitary gland, as part of the so-called hypothalamic-pituitary-adrenal (HPA) axis. It is intricately involved in many physiological functions: it helps regulate gluconeogenesis; it has regulatory effects on certain aspects of immune function; it participates in fat, protein, and carbohydrate metabolism; it influences bone mineralization; and modulates cytokines involved in vascular responses to various stimuli.\*<sup>1</sup> Because of its central role as a “first responder” to stress and its capability to modulate multiple critical physiological functions, cortisol is often seen as the bridge between stress and its health consequences.

It would be a mistake to label cortisol strictly as a negative influence, however, as it serves many vital functions critical to our survival. Upon exposure to acute stressors, cortisol secretion can stimulate a quick burst of energy (“fight-or-flight”), can heighten memory functions, lower sensitivity to pain, and can generally help maintain homeostasis in a body under stressful conditions. Normally present at higher levels in the morning, and at its lowest at night, the diurnal variations of cortisol secretion can be an indicator of how well a body is coping with stress in both short and long-term scenarios. In chronic stress, cortisol may modulate underlying issues of mood and cognitive performance, sleep, thyroid function, cardiometabolic function and blood sugar metabolism, bone density, muscle mass, blood pressure, immune function and related vascular responses, tissue regenerative processes, or other health impacts of stress.<sup>2-9</sup>

## How Does Cortisol Manager Work?

Cortisol Manager has been formulated to support an adaptive and balanced cortisol response to stress.\*

**Ashwagandha:** Traditional Indian medicine has used ashwagandha for centuries to alleviate fatigue and improve general well-being. Preliminary human studies suggest ashwagandha may improve measures of energy and cognition in certain groups of people.\*<sup>10,11</sup> In a double-blind, placebo-controlled clinical trial, supplementation with standardized ashwagandha root and leaf extract led to significant experiential and biochemical improvements in indicators of stress, including sleeplessness.\*<sup>12</sup>

**L-theanine** is an amino acid known to promote relaxation and stress reduction by inducing muscle relaxation, and reducing occasional anxiety.\* L-theanine increases the activity of alpha brain waves – which has been associated with a relaxed yet alert mental state.\*<sup>13-15</sup>

**Phosphatidylserine**, which is extracted from soy lecithin, has been clinically shown to significantly reduce serum adrenocorticotropin (ACTH) and cortisol levels and salivary cortisol levels following mental stress.\*<sup>16</sup> It also reduces plasma levels of epinephrine, norepinephrine, ACTH and cortisol after exposure to physical stress.\*<sup>17</sup> This phospholipid is a critical structural component of neuronal cells and helps promote a positive mood, by decreasing feelings of stress.\*<sup>18</sup>

**Magnolia and Epimedium** are included as botanical synergists which, based upon evidence of animal studies, may have a relaxing effect and support the hypothalamic-pituitary-adrenal axis for a healthy response to stress.\*<sup>19-22</sup> Human clinical trials are needed to confirm these preliminary observations.

## Conclusion

Integrative Therapeutics has formulated Cortisol Manager with stress-reducing ingredients and botanicals to promote relaxation, help alleviate fatigue, and support healthy cortisol levels.\* By balancing cortisol levels, Cortisol Manager can help reduce stress, which supports a restful night’s sleep without diminishing daytime alertness.\*

## Supplement Facts

Serving Size 1 tablet

Amount per tablet		%DV***
Stress-Reducing Proprietary Blend: ashwagandha ( <i>Withania somnifera</i> ) (Sensoril® brand) root and leaf extract and L-theanine (Suntheanine® brand)	250 mg	**
Cortisol-Reducing Proprietary Blend: magnolia ( <i>Magnolia officinalis</i> ) bark extract standardized to contain 2% honokiol and 1% magnolol and epimedium ( <i>Epimedium koreanum</i> ) aerial part extract	225 mg	**
Phosphatidylserine	50 mg	**

\*\*Daily Value not established.

**Other ingredients:** cellulose, hydroxypropyl methylcellulose, sodium carboxymethyl cellulose, stearic acid, magnesium stearate, silicon dioxide, titanium dioxide color, hydroxypropylcellulose, glycerin, soy lecithin, carnauba wax.

Contains soy.

**Caution:** Do not use if pregnant. If nursing, diabetic or are taking any prescription drugs, consult your healthcare professional prior to use.

**Keep out of reach of children.**

**Recommendation:** Take 1 tablet before bedtime, or as recommended by your healthcare professional. Increase to 2 tablets during times of high stress. For every night use.

Integrative Therapeutics	Natural Partners	Emerson Ecologics
30 CT - 70453	30 CT - IT0020	30 CT - CM30
90 CT - 70459	90 CT - IT0056	90 CT - CM90

Sensoril® is a trademark of Natreon, Inc. and is protected under U.S. Patents 6,153,198 & 7,318,938.

Suntheanine®, a patented form of L-Theanine, is a trademark of Taiyo International, Inc.

## References

- Papadimitriou A1, Priftis KN. *Neuroimmunomodulation*. 2009;16(5):265–71. doi: 10.1159/000216184. Epub 2009 Jun 29.
- Melamed S1, Ugarten U, Shirom A, Kahana L, Lerman Y, Froom P. *J Psychosom Res*. 1999 Jun;46(6):591–8.
- Capaldi li VF1, Handwerker K, Richardson E, Stroud LR. *Behav Sleep Med*. 2005;3(4):177–92.
- Dedovic K, Duchesne A, Andrews J, Engert V, Pruessner JC. *Neuroimage*. 2009 Sep;47(3):864–71. doi: 10.1016/j.neuroimage.2009.05.074. Epub 2009 Jun 13.
- Nijm J, Jonasson L. *Ann Med*. 2009;41(3):224–33. doi: 10.1080/07853890802508934.
- Anagnostis P, Athyros VG, Tziomalos K, Karagiannis A, Mikhailidis DP. *J Clin Endocrinol Metab*. 2009 Aug;94(8):2692–701. doi: 10.1210/jc.2009-0370. Epub 2009 May 26.
- Young AH. *Stress*. 2004 Dec;7(4):205–8.
- Kiraly SJ, Ancill RJ, Dimitrova G. *Can J Psychiatry*. 1997 May;42(4):415–20.
- Stokes PE. *Eur Neuropsychopharmacol*. 1995;5 Suppl:77–82.
- Biswal BM, Sulaiman SA, Ismail HC, Zakaria H, Musa K. *Integr Cancer Ther*. 2013 Jul;12(4):312–22. doi: 10.1177/1534735412464551. Epub 2012 Nov 9.
- Chengappa KN, Bowie CR, Schlicht PJ, Fleet D, Brar JS, Jindal R. *J Clin Psychiatry*. 2013 Nov;74(11):1076–83. doi: 10.4088/JCP.13m08413.
- Auddy B, Hazra J, Mitra A, Abedon B, Ghosal S. *J Am Nutraceutical Assoc* 2008;11(1):50–56.
- Ito K. *Nippon Nogeikagaku Kaishi*. 1998;72:153–7.
- Juneja LR, Chu DC, Okubo T, Nagato Y, Yokogoshi H. *Trends Food Sci Technol*. 1999;10:199–204
- Nobre AC, Rao A, Owen GN. *Asia Pac J Clin Nutr*. 2008;17 Suppl 1:167–8.
- Hellhammer J. *Stress*. 2004 Jun;7(2):119–26.
- Monteleone P. *Neuroendocrinology*. 1990 Sep;52(3):243–8.
- Benton D. *Nutr Neurosci*. 2001;4(3):169–78
- Kuribara H. *J Pharm Pharmacol*. 2000 Nov;52(11):1425–9.
- Kuribara H, Stavinoha WB, Maruyama Y. *J Pharm Pharmacol*. 1999 Jan;51(1):97–103.
- Kuribara H, Stavinoha W, Maruyama Y. *J Pharm Pharmacol* 1998;50:819–26.
- Pan Y, Wang FM, Qiang LQ, Zhang DM, Kong LD. *Psychoneuroendocrinology*. 2010 Feb;35(2):272–83. Epub 2009 Jul 23.

\*THIS STATEMENT HAS NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE, OR PREVENT ANY DISEASE.