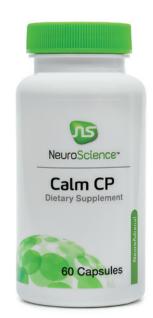


# Calm CP

Decreases cortisol levels and provides ingredients important for calm, sleep, and management of blood sugar\*

Item Number	Dosage Forms	Available Sizes	Serving Size
2099	Capsules	60 Capsules	2 Capsules



# Key Ingredients

Lagerstroemia speciosa (Banaba) leaf extract (2% corosolic acid)

- Corosolic acid selectively inhibits 11β-hydroxysteroid dehydrogenase 1 (11β-HSD1)<sup>1\*</sup>
- 11β-HSD1 catalyzes the conversion of cortisone into cortisol<sup>2</sup>

Phosphatidylserine

- Component of cell membranes important for receptor-mediated interactions<sup>4\*</sup>
- Phosphatidylserine is thought to interact with cell membranes in order to dampen hypothalamic signaling and regulate the stress response<sup>5\*</sup>

Glycine

- Major inhibitory neurotransmitter that crosses the blood-brain barrier<sup>6\*</sup>
- Binds receptors that regulate temperature during sleep<sup>7\*</sup>

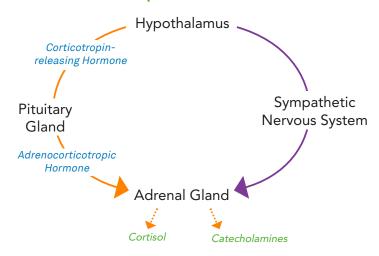
**Taurine** 

- Neuroprotective amino acid that provides antioxidant protection<sup>8,9\*</sup>
- Demonstrates GABA-A agonist activity<sup>10\*</sup>
- GABA is the primary inhibitory neurotransmitter in the brain important for calm and sleep<sup>11-13</sup>

### The Science

- In response to **stress**, the sympathetic nervous system (SNS) and hypothalamic-pituitary-adrenal (HPA) axis signal to the adrenals to release catecholamines (norepinephrine and epinephrine) and cortisol<sup>14</sup>
- Prolonged stress is associated with dysregulation of the HPA axis, which can affect catecholamine and cortisol levels<sup>15</sup>

### NeuroAdrenal Response



Green = Biomarker

Blue = Hormone

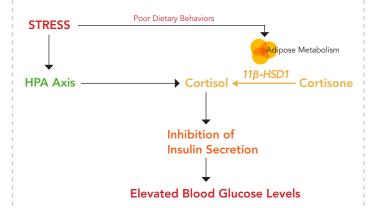
Orange = Hypothalamic-Pituitary-Adrenal (HPA) axis

Purple = Sympathomedullary Pathway

\*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.

# MORE SCIENCE BEHIND CALM

Figure 1. HPA Axis and Cortisol Metabolism



#### Stress, Cortisol, and Weight

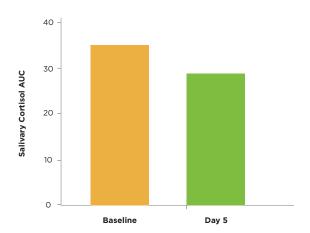
Cortisol secretion follows a marked circadian pattern and increases in response to stress through activation of the HPA axis16

Adipocytes (fat cells) play a major role in the body's production of cortisol17

#### High stress has been linked to less healthy dietary behaviors and increased body weight<sup>18</sup>

- Cortisol inhibits the secretion and actions of insulin (glucose uptake, central appetite reduction)19
- Cortisol promotes the maturation of adipocytes (fat cells)<sup>20</sup>
- Upregulation of the enzyme 11β-HSD1 promotes fat accumulation by increasing cortisol levels<sup>20</sup>
- Elevated bedtime cortisol levels are associated with increased abdominal fat21

Figure 2. Calm CP Lowers Cortisol<sup>22\*</sup>



#### **Proven Benefits of Calm CP**

A randomized study with corosolic acid was shown to significantly lower blood glucose levels3\*

- 10 subjects were pre-screened and selected to receive corosolic acid once daily for 15 days<sup>3</sup>
- Blood glucose levels were 20-30% lower after two weeks<sup>3\*</sup>

#### The effectiveness of Calm CP was analyzed in a study

- Participants were prescreened for elevated cortisol levels
- Calm CP (2 capsules twice daily for 4 days) significantly lowered total daily cortisol levels (area under the curve - AUC) compared to baseline values (day 0)22\* (2 capsules twice daily for 4 days) (Figure 2)<sup>22\*</sup>
- Calm CP decreased mean daily cortisol levels by 17%<sup>22\*</sup>
- 71% of participants reported they would take Calm CP again









### Concerned about memory?

Learn more about ImmuWell at www.neuroscienceinc.com/products/immuwell

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