

# CatecholaCalm™



A unique formulation specially designed for the ever-increasing number of "burned-out" anxious patients suffering from a unique combination of low cortisol and elevated catecholamines (epinephrine and norepinephrine).

THIS INFORMATION IS PROVIDED FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ONLY. THIS INFORMATION IS INTENDED FOR PHYSICIANS AND OTHER LICENSED HEALTH CARE PROVIDERS TO USE AS A BASIS FOR DETERMINING WHETHER OR NOT TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS. THIS MEDICAL AND SCIENTIFIC INFORMATION IS NOT FOR USE BY CONSUMERS. THE DIETARY SUPPLEMENT PRODUCTS OFFERED BY DESIGNS FOR HEALTH ARE NOT INTENDED FOR USE BY CONSUMERS AS A MEANS TO CURE, TREAT, PREVENT, DIAGNOSE, OR MITIGATE ANY DISEASE OR OTHER MEDICAL CONDITION.

It is now becoming increasingly evident, based both on research data and anecdotal reports, that chronic stress can no longer be defined strictly in terms of the degree of cortisol elevation or depression. In contrast, research data suggests that, as chronic stress inevitably leads to a state of adrenocortical exhaustion or "burn-out," a compensatory adrenal response will often occur in the form of increased sympathetic, catecholamine activity.<sup>1</sup> Because anecdotal and research information suggests that this is becoming an increasingly more common phenomenon, often seen with such conditions as post-traumatic stress disorder<sup>2</sup> and classic fibromyalgia,<sup>3, 4</sup> it has become necessary to employ formulations that not only optimize cortisol balance, but correct catecholamine imbalances as well, particularly when sympathetic responses appear to be excessive.

CatecholaCalm™ is a formula that is specifically designed to address this very unique but increasingly prevalent set of adrenal hormone imbalances. The product accomplishes this objective by employing adaptogenic, nervine and adrenal tonic herbs that are relaxing, along with nutrients that are designed to help with adaptation to stress and optimization of adrenal gland health. The specific focus is on both cortisol and catecholamine balance. Elevated catecholamines can affect serum blood glucose and insulin levels, and therefore contribute to development of metabolic syndrome, just like elevated cortisol.<sup>5</sup> With today's stressors it is becoming especially important to focus on the often under appreciated issue of catecholamine optimization.

Supplement Facts		
Serving Size 3 capsules		
Servings Per Container 30		
Amount Per Serving		% Daily Value
Vitamin C (as Ascorbic Acid)	100 mg	167%
Vitamin B1 (as Thiamine HCl)	50 mg	3333%
Vitamin B2 (as Riboflavin-5-Phosphate)	10 mg	588%
Vitamin B6 (as Pyridoxal-5-Phosphate)	5 mg	250%
Folic Acid	500 mcg	125%
Vitamin B12 (as Methylcobalamin)	2 mg	33%
Vitamin B5 (as Pantothenic Acid)	50 mg	500%
Magnesium (as di-Magnesium Malate)	75 mg	19%
Taurine	300 mg	*
L-Theanine	200 mg	*
Lemon Balm ( <i>Melissa officinalis</i> )(leaves) [standardized to contain 2% rosmarinic acid]	100 mg	*
Passion Flower ( <i>Passiflora incarnate</i> )(herb) [standardized to contain 2.5% vitexin flavonoid]	100 mg	*
Valerian Root ( <i>Valeriana officinalis</i> )(root) [standardized to contain 0.8% valeric acid]	100 mg	*
Ashwagandha ( <i>Withania somnifera</i> )(root) [standardized to contain 1.5% withanoloids]	100 mg	*
Phosphatidylserine	50 mg	*

\*Daily Value not established.  
**Other Ingredients:** gelatin capsule, rice powder, magnesium stearate.

## CatecholaCalm™ contains a blend of standardized botanicals including:

### Ashwagandha (*Withania somnifera*)

This herb has been demonstrated to have a sparing effect on stress-induced cortisol depletion<sup>6, 7</sup> and promote relaxation. "Somnifera" in the scientific species name of the herb is derived from the word somnolence, meaning rest and sleep. Ashwagandha is a relaxing adaptogen!

### Valerian root (*Valeriana officinalis*)

This herb has demonstrated sedative effects due to its ability to induce the release of GABA from brain tissue.<sup>8</sup>

### Passion flower (*Passiflora incarnate*)

It has been suggested that the passion flower constituent, apigenin, binds to central benzodiazepine receptors, possibly causing anxiolytic effects without impairing memory or motor skills.<sup>9</sup>

### Lemon balm (*Melissa officinalis*)

This herb has been suggested to improve calmness via the inhibitory action of GABA, similar to benzodiazepines,<sup>10</sup> but without the overt side-effects of these medications.

## **CatecholaCalm™ also contains the following substances that have been documented to optimize mood and stress physiology:**

**L-theanine** - L-theanine has demonstrated in animal models to decrease norepinephrine, decrease systolic and diastolic blood pressure, and suppress the stimulatory effects of caffeine.<sup>9</sup>

**Phosphatidylserine** - This nutritional substance has been demonstrated to decrease reactivity of the pituitary-adrenal axis to stress and control cortisol release.<sup>11</sup>

**Taurine** - Along with GABA, taurine is recognized to be a major inhibitory neurotransmitter, specifically acting as a modulator of GABAergic function.<sup>12</sup> Feeding taurine to mice has led to increased expression of glutamic acid decarboxylase, the enzyme responsible for GABA synthesis.<sup>13</sup>

**Magnesium-malate-chelate** - Given that patients who are experiencing elevated catecholamines are often insulin resistant,<sup>5</sup> and given the fact that insulin resistance retards cellular uptake of magnesium,<sup>14</sup> it is extremely important to use highly absorbable chelated forms of magnesium such as malate or glycinate. Concerning catecholamine metabolism, magnesium has been demonstrated to suppress the release of catecholamines by the heart, which is an indirect index of sympathetic efferent neuronal activity.<sup>15</sup> Magnesium has a calming effect and makes us less irritable under stress.

**Thiamine** - A deficiency of thiamine has been linked with norepinephrine depletion.<sup>16</sup>

**Folic acid and vitamin B12 (methylcobalamin)** - Deficiencies of folic acid and vitamin B12 have been related to disturbances in norepinephrine metabolism.<sup>17</sup>

**Pyridoxal-5'-phosphate** - Pyridoxine supplementation induces an antistress effect by significantly reducing levels of brain norepinephrine.<sup>18</sup>

**Vitamin C** - Vitamin C has been found to reduce the oxidation rate of catecholamines.<sup>19</sup>

Also included are pantothenic acid and riboflavin-B2 as riboflavin 5-phosphate, which play critical roles as enzyme co-factors in the balanced production of stress hormones.<sup>20-23</sup>

**Suggested Dosage:** Take 3 capsules, one to two times daily, with meals or as directed by your health care practitioner.

**Suggested Laboratory Studies:** Adrenal Stress Test (Metametrix Clinical Laboratories 800-221-4640) and catecholamine markers, such as VMA, found on organic acid section of the Designs for Health Comprehensive Metabolic Assessment panel (call for more information).

### *References:*

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