

# SYNOVX<sup>®</sup> CALM

## Neuromuscular Relaxation Support\*



Available in 60 vegetarian capsules

## DISCUSSION

SynovX<sup>®</sup> Calm is part of the SynovX program of formulas, each targeted to address a specific concern related to joint health. For some individuals, even minor joint and muscular discomfort can make bedtime challenging. This specialized neuromuscular formulation features a select combination of botanical extracts traditionally used for calming, relaxation, and occasional sleeplessness complemented by bioavailable minerals that influence muscular contraction and relaxation. The combination of ingredients in SynovX Calm has yielded positive clinical results in similar products.\*

### Botanicals

#### Valerian Extract

Valerian (*Valeriana officinalis*) root has enjoyed broad historical applications, including for muscle pain and spasms, nervousness, stress, and occasional sleeplessness. Its effects can be attributed to its calming and soothing influence on the nervous system.<sup>[1-3]</sup> Among the root's more than 150 possibly synergistic constituents, perhaps the most well understood are the valepotriates and valerenic acid. Valerenic acid binds to gamma-aminobutyric acid (GABA) receptors in the central nervous system, which produces a calming effect.<sup>[3,4]</sup> GABA is the primary neurotransmitter involved in increasing the production of alpha waves (associated with a relaxed, yet mentally focused state) while decreasing beta waves (related to hyperactivity, nervousness, and fleeting thoughts). Valerian also shows effects on receptors for melatonin, the hormone that regulates the body's sleep-wake cycle.\*<sup>[5]</sup>

#### Passion Flower Extract

Passion flower (*Passiflora incarnata*) has a long history of traditional use for its calming and relaxing properties, and early evidence from both animal studies and human trials support these uses.<sup>[7-11]</sup> The flavonoids in passion flower generate activity at the brain's receptors for GABA and benzodiazepines, which theoretically contribute to the calming and restful effects.\*<sup>[5]</sup>

#### Hops Extract

Hops are the female seed cones of the hop species *Humulus lupulus*, a medicinal plant used for a variety of purposes, including calming and relaxation. Although minimal evidence supports hops as a monotherapy, studies combining hops with valerian<sup>[6,12]</sup> and hops with valerian plus passion flower have shown a modest improvement of sleep measures. In a 14-day randomized controlled trial (n = 91), a combination of hops extract (30 mg), valerian extract (300 mg), and passion flower extract (80 mg) taken at bedtime increased total duration of sleep, decreased nighttime awakenings, and reduced sleep latency.\*<sup>[13]</sup>

## CLINICAL APPLICATIONS

- Traditionally-Used Botanicals That Address Relaxation and Occasional Sleeplessness\*
- Muscular Calming Formula\*
- Targeted Minerals That Promote Healthy Muscular Contraction/Relaxation\*
- Contributes to Muscle Recovery Following Exercise\*

*SynovX<sup>®</sup> Calm is designed to help relax tight/spastic muscles and ease occasional discomfort from overworked muscles. It features botanical extracts traditionally used to calm nerves and muscles and address occasional sleeplessness plus minerals to support healthy muscular contraction and relaxation.\**

#### Sour Cherry Powder

Sour cherry (*Prunus cerasus*) is known to be rich in anthocyanins and polyphenolic compounds. Data also suggest that sour cherry naturally contains melatonin, which is critical in regulating the sleep-wake cycle.<sup>[14]</sup> Several preliminary studies have also suggested sour cherry juice or freeze-dried concentrate may ease post-exercise muscle soreness.\*<sup>[15-17]</sup>

### Minerals

**Magnesium** (TRAACS<sup>®</sup> magnesium bisglycinate chelate and magnesium taurate) Magnesium is provided as patented Albion<sup>®</sup> TRAACS<sup>®</sup> bisglycinate chelate comprised of magnesium bound to amino acids to create a chelate plus magnesium taurate. TRAACS chelates appear to be more readily absorbed through the intestinal mucosa than other mineral forms making an excellent delivery system for magnesium.\*<sup>[18]</sup>

As a cofactor for over 300 enzyme pathways, magnesium has a multitude of actions including a calming effect on the nervous system and the regulation of muscle contraction, which have both been demonstrated in animal and human studies.<sup>[19,20]</sup> Magnesium affects permeability of excitable membranes and thereby acts as a "gatekeeper" to excitatory neurotransmitters.<sup>[20]</sup> In addition to interacting with the GABA receptor, magnesium plays a role in the inhibition of the excitotoxin N-methyl-D-aspartate (NMDA) and thus promotes restfulness.\*<sup>[21,22]</sup>

#### Potassium (Albion<sup>®</sup> potassium glycinate complex)

Potassium is the most abundant intracellular electrolyte found in the body and is important for many functions, including muscle contraction and nerve impulse transmission.\*

#### Calcium (Carbonate)

Calcium carbonate is an excipient used in SynovX Calm as a densifier. When present at greater than 2% of the Daily Value, calcium must be declared on a label. Although calcium carbonate is not intended to contribute to the formula's function, this excipient provides elemental calcium which plays a role in nerve transmission so that muscles and nerves function properly.\*

\*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.

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SynovX® Calm Supplement Facts

Serving Size: 2 Capsules

	Amount Per Serving	%Daily Value
Calcium (as calcium carbonate)	85 mg	7%
Magnesium (as magnesium bisglycinate chelate and magnesium taurate) <sup>S1</sup>	75 mg	18%
Potassium (as potassium glycinate complex) <sup>S1</sup>	45 mg	1%
Valerian Extract ( <i>Valeriana officinalis</i> )(root)(0.8% valerenic acids)	200 mg	**
Sour Cherry ( <i>Prunus cerasus</i> )(cherry)	80 mg	**
Passion Flower Extract ( <i>Passiflora incarnata</i> )(aerial part)	60 mg	**
Hops Extract ( <i>Humulus lupulus</i> )(strobilus)(0.3% rutin)	30 mg	**

\*\* Daily Value not established.

**Other Ingredients:** Capsule (hypromellose and water), ascorbyl palmitate, and silica.

**DIRECTIONS:** Take one or two capsules daily, or use as directed by your healthcare practitioner.

Consult your healthcare practitioner prior to use. Individuals taking medication should discuss potential interactions with their healthcare practitioner. May cause drowsiness. Do not use if tamper seal is damaged.

**STORAGE:** Keep closed in a cool, dry place out of reach of children.

**FORMULATED TO EXCLUDE:** Wheat, gluten, yeast, soy, animal and dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, and artificial preservatives.

S1. Albion® and TRAACS® are registered trademarks of Albion Laboratories, Inc. U.S. Patent 7,838,042.

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Additional references available upon request

All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

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