# DynamX Calm



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# **Clinical Applications**

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

**DynamX 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.

All Absolute Health Formulas Meet or Exceed cGMP Quality Standards

## Discussion

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 DynamX Calm has yielded positive clinical results in similar products

*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>

**Passionflower 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 passionflower 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 passionflower extract (80 mg) taken at bedtime increased total duration of sleep, decreased nighttime awakenings, and reduced sleep latency.<sup>13</sup>

**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>

**Magnesium** (TRAACS® magnesium bisglycinate chelate and magnesium taurate) Magnesium is provided as patented Albion® TRAACS® 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. 19,20 Magnesium affects permeability of excitable membranes and thereby acts as a "gatekeeper" to excitatory neurotransmitters. 20 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. 21,22

**Potassium (Albion® 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 DynamX 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.



#### Supplement Facts Serving Size: 2 Capsules Servings Per Container: 30 Amount Per Serving %Daily Value Calcium (as calcium carbonate) 85 mg Magnesium (as TRAACS® magnesium bisglycinate chelate 18% 75 ma and magnesium taurate) Potassium (as Albion® potassium glycinate complex) 45 mg Valerian Extract (Valeriana officinalis)(root)(0.8% valerenic acids) 200 mg Sour Cherry (Prunus cerasus)(cherry) 80 mg Passion Flower Extract (Passiflora incarnata)(aerial part)(4% vitexin) 60 mg Hops Extract (Humulus lupulus)(strobulus)(0.3% rutin) \*\* Daily Value not established.

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

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

## **Directions**

Take one or two capsules daily, or as directed by your healthcare practitioner.

## **Does Not Contain**

Wheat, gluten, corn, yeast, soy, animal or dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, or preservatives.



# References

- 1. Bent S, Padula A, Moore D, et al. Valerian for sleep: a systematic review and meta-analysis. Am J Med. 2006 Dec;119(12):1005-12. [PMID: 17145239]
- 2. Fernández-Šan-Martín MI, Masa-Font R, Palacios-Soler L, et al. Effectiveness of Valerian on insomnia: a meta-analysis of randomized placebo-controlled trials. Sleep Med. 2010 Jun;11(6):505-11. [PMID: 20347389]
- Hudson T. Valerian: A sleep aid and anxiolytic. Plant Intelligence Professional Resources. https://www.gaiaherbs.com/uploads/A\_Research\_Review\_of\_Valerian-1371566791.pdf. Accessed August 9, 2018.
- 4. Benke D, Barberis A, Kopp S, et al. GABA A receptors as in vivo substrate for the anxiolytic action of valerenic acid, a major constituent of valerian root extracts. Neuropharmacology. 2009 Jan;56(1):174-81. [PMID: 18602406]
- Sarris J, Panossian A, Schweitzer I, et al. Herbal medicine for depression, anxiety and insomnia: a review of psychopharmacology and clinical evidence. Eur Neuropsychopharmacol. 2011 Dec;21(12):841-60.[PMID:21601431]
- Leathwood PD, Chauffard F, Heck E, et al. Aqueous extract of valerian root (Valeriana officinalis L.) improves sleep quality in man. Pharmacol Biochem Behav. 1982 Jul;17(1):65-71. [PMID: 7122669]
- 7. Ingale AG, Hivrale AU. Pharmacological studies of Passiflora sp. and their bioactive compounds. African Journal of Plant Science. 2010 Oct 31:4(10):417-26. doi:10.1007/s00216-016-9376-4.
- 8. Barbosa PR, Valvassori SS, Bordignon CL Jr, et al. The aqueous extracts of Passiflora alata and Passiflora edulis reduce anxiety-related behaviors without affecting memory process in rats. J Med Food. 2008 Jun;11(2):282-8. [PMID: 18598170]
- 9. Miyasaka LS, Atallah AN, Soares BGO (2007). Cochrane Database of Systematic Reviews, 24: 1, CD004518.
- 10. Reginatto FH, De-Paris F, Petry RD, et al. Evaluation of anxiolytic activity of spray dried powders of two South Brazilian Passiflora species Phytother Res. 2006 May;20(5):348-51. [PMID: 16619361]
- 11. Dhawan K, Kumar S, Sharma A. Antiasthmatic activity of the methanol extract of leaves of Passiflora incarnata. Phytother Res. 2003 Aug;17(7):821-2. [PMID:12916087]
- 12. Morin CM, Koetter U, Bastien C, et al. Valerian-hops combination and diphenhydramine for treating insomnia: a randomized placebo-controlled clinical trial. Sleep. 2005 Nov;28(11):1465-71. [PMID: 16335333]
- 13. Maroo N, Hazra A, Das T. Efficacy and safety of a polyherbal sedative-hypnotic formulation NSF-3 in primary insomnia in comparison to zolpidem: a randomized controlled trial. Indian J Pharmacol. 2013 Jan-Feb;45(1):34-9. [PMID: 23543804]
- 14. Howatson G, Bell PG, Tallent J, et al. Effect of tart cherry juice (Prunus cerasus) on melatonin levels and enhanced sleep quality. Eur J Nutr. 2012 Dec;51(8):909-16. [PMID: 22038497]
- Kuehl KS, Perrier ET, Elliot DL, Chesnutt JC. Efficacy of tart cherry juice in reducing muscle pain during running: a randomized controlled trial. J Int Soc Sports Nutr. 2010 May 7;7:17. [PMID: 20459662]
- 16. Levers K, Dalton R, Galvan E, et al. Effects of powdered Montmorency tart cherry supplementation on acute endurance exercise performance in aerobically trained individuals. J Int Soc Sports Nutr. 2016 May 26;13:22. [PMID: 27231439]
- 17. Bell PG, Stevenson E, Davison GW, et al. The effects of Montmorency tart cherry concentrate supplementation on recovery following prolonged, intermittent exercise. Nutrients. 2016 Jul 22;8(7). [PMID: 27455316]
- 18. Albion Minerals. http://www.albionminerals.com/human-nutrition/products-trade/quality/traacs-ft-ir. Accessed August 9, 2018.
- Laires MJ, Monteiro CP, Bicho M. Role of cellular magnesium in health and human disease. Front Biosci. 2004 Jan 1;9:262-76. [PMID;14766364]
- 20. Long S, Romani AM. Role of Cellular Magnesium in Human Diseases. Austin J Nutr Food Sci. 2014 Nov 18;2(10). [PMID: 25839058]
- 21. Nielsen FH, Johnson LK, Zeng H. Magnesium supplementation improves indicators of low magnesium status and inflammatory stress in adults older than 51 years with poor quality sleep. Magnes Res. 2010 Dec;23(4):158-68. [PMID: 21199787]
- 22. Papadopol V, Nechifor M. Magnesium in neuroses and neuroticism. In: Vink R, Nechifor M, editors. Magnesium in the Central Nervous System [Internet]. Adelaide (AU): University of Adelaide Press; 2011. Available from http://www.ncbi.nlm.nih.gov/books/NBK507254/ [PMID: 29920008