



GENESTRA
BRANDS®

LSP

HERBAL FORMULA

Calcium, magnesium and multi-herbal formulation

- Helps to maintain normal muscle function
- Passionflower and lemon balm are traditionally used in Herbal Medicine as sleep aids
- Chaste tree is used in Herbal Medicine to help relieve premenstrual symptoms, as a hormone normaliser to help stabilise menstrual cycle irregularities, and to help relieve symptoms associated with menopause, such as hot flushes

Improved formula

- Improved source of calcium - now provides 70 mg of calcium (from calcium citrate)
- Increased amount of magnesium - now offers 70 mg of magnesium (from dimagnesium malate)
- Added lemon balm and chaste tree fruit extract
- Removed magnesium stearate
- Risk Information updated - product is now more suitable for wider audience

LSP is a calcium-magnesium formula that combines three herbs with long histories of use in Herbal Medicine. Passionflower and lemon balm are traditionally used in Herbal Medicine as sleep aids. Preclinical research suggests that these extracts may regulate the activity of GABA, the primary inhibitory neurotransmitter in the brain, to provide calming support that aids sleep.^{1,2} In addition, chaste tree is used in Herbal Medicine to help relieve premenstrual symptoms, as a hormone normaliser to help stabilise menstrual cycle irregularities, and to help relieve symptoms associated with menopause, such as hot flushes. Clinical trials have demonstrated that supplementation with chastetree berry extract for three months significantly alleviates premenstrual symptoms, including irritability, mood, headache, breast fullness, fatigue, and general aches and pains.³⁻⁵ LSP also offers calcium and magnesium for their essential roles in maintaining healthy muscle contractile function and supporting bone health.

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EACH CAPSULE CONTAINS:

Calcium (calcium citrate)	70 mg
Magnesium (dimagnesium malate)	70 mg
Passionflower (<i>Passiflora incarnata</i>) Aerial Parts Extract (4-6:1) ..	25 mg
100-150 mg Dried Equivalent	
Lemon Balm (<i>Melissa officinalis</i>) Herb Top Extract (4-6:1)	25 mg
100-150 mg Dried Equivalent	
Chaste Tree (<i>Vitex agnus-castus</i>) Fruit Extract (7-10:1)	15 mg
105-150 mg Dried Equivalent	

Non-Medicinal Ingredients: Hypromellose, ascorbyl palmitate, silica

Recommended Adult Dose: Take two capsules two times daily with meals, a few hours before or after taking other medications or natural health products, or as recommended by your healthcare practitioner. Use for a minimum of three months to see beneficial effects.

Product Size: 120 Vegetable Capsules **Product Code:** 05516A

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Scientific Rationale:

Passionflower

Passionflower has a long history of use in traditional medicine as a sleep aid.¹ Preclinical research suggests that passionflower promotes feelings of calm, which may in turn improve sleep quality.² These effects may be due to the active compounds present in passionflower, such as amino acids, alkaloids and flavonoids such as chrysin, which can bind to GABA receptors.¹ GABA is the primary inhibitory neurotransmitter in the brain, and activating GABA receptors may enhance slow wave (deep) sleep.³ Passionflower may also contain GABA itself, which would provide additional calming support to aid sleep.²

Lemon balm

Lemon balm is also traditionally used in Herbal Medicine as a sleep aid. It contains a wide variety of active compounds, including polyphenolics, flavonoids and triterpenes.¹ Specifically, *in vitro* research has reported that the bioactive compounds rosmarinic acid, ursolic acid and oleanolic acid present in lemon balm can inhibit the activity of GABA-transaminase.¹ This enzyme is involved in the conversion of GABA to succinate, which can enter the Krebs cycle for energy production.¹ By helping to maintain GABA levels, lemon balm may promote calmness to aid sleep.¹

Chaste tree

Chaste tree is a plant used in Herbal Medicine to help relieve premenstrual symptoms and as a hormone normaliser to help stabilise menstrual cycle irregularities. Premenstrual symptoms include both physical and behavioural changes that repeatedly occur in the latter phase of the menstrual cycle.⁴ These symptoms may result from imbalances in hormones, such as estrogen, prolactin and progesterone.⁴ Chaste tree may improve hormonal balance by decreasing estrogen and prolactin secretion, while increasing progesterone levels.⁵ In clinical trials, supplementation with this extract for three months has been shown to significantly alleviate premenstrual symptoms, including irritability, mood, headache, breast fullness and fatigue.⁶⁻⁸ Similarly, chaste tree is used in Herbal Medicine to help relieve menopausal symptoms, including hot flushes. Research

suggests that chaste tree helps decrease hot flushes and emotional symptoms of menopause by mediating dopamine, a neurotransmitter involved in temperature regulation and cognitive function.⁹ Chaste tree has also been shown to increase melatonin levels, and therefore help minimize menopause-related sleep disruption.⁹

Magnesium

As the second most abundant cation inside cells, magnesium participates in nearly all key intracellular metabolic processes.¹⁰ Magnesium plays a critical role in maintaining muscle function by helping to regulate oxygen uptake, energy production and electrolyte balance.¹¹ This mineral also regulates calcium transport and binding to further influence muscle contractions.¹⁰ Low levels of magnesium have been associated with hypercontractibility, which can present as muscle cramps and spasms.¹⁰ In addition to its important role in muscles, magnesium also promotes the differentiation of bone-forming osteoblast cells to support bone health.¹⁰ Although it is a necessary mineral for human health, many Canadian adults do not consume adequate levels of magnesium each day.^{10,12} This may result from magnesium losses during food processing or the use of mineral-deficient soil in agriculture.¹⁰ As magnesium excretion increases with age and after strenuous exercise, elderly individuals and athletes may also benefit from magnesium supplementation.^{11,13} LSP provides a source of magnesium to help contribute to the recommended dietary allowance.

Calcium

Similarly, calcium's role in bone health has been well-documented. It is the most abundant mineral in the skeleton, where it acts as an important structural component of bones and teeth.^{14,15} Research has demonstrated that calcium supplementation also helps to increase calcium balance and bone mineral density, while decreasing fracture risk and bone loss during aging.¹⁶ In addition, calcium is an electrolyte for the maintenance of good health and plays an important role in maintaining proper muscle function. As many Canadian adults do not consume adequate levels of calcium from the diet, LSP can help contribute to the recommended dietary allowance.¹⁷

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