

WHY CHOOSE

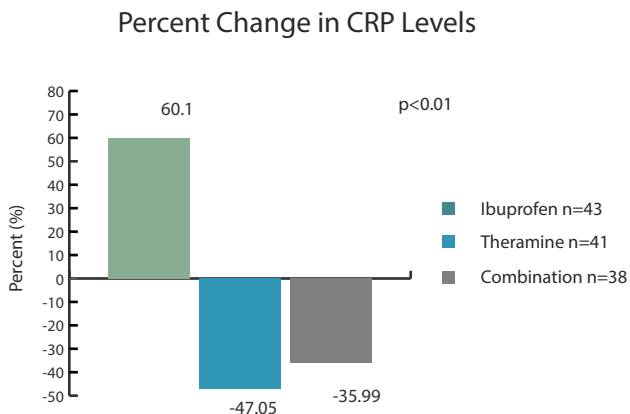
## THERAMINE

With over 15 years of clinical success, multiple clinical trials supporting efficacy, and a long track record of safety, Theramine is the heart smart choice for the long term dietary management of chronic pain.

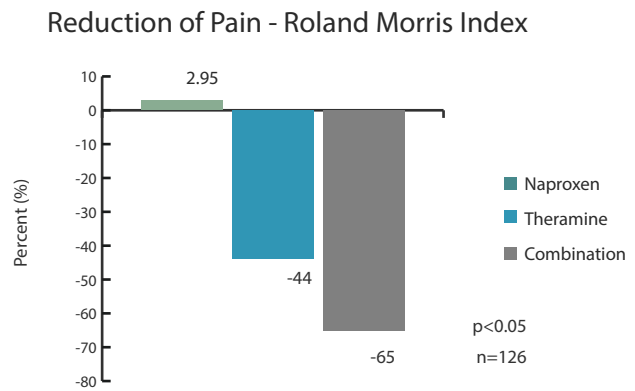


## Targeted Nutrition for Chronic Pain

Theramine has been the subject of two double-blind, multicenter clinical trials. In both trials, Theramine was proven to be effective as both a standalone, and adjunct therapy for the long term dietary management of pain. In clinical studies, subjects taking Theramine demonstrated a significant reduction in levels of the inflammatory markers CRP and IL-6 . \*



In this double-blind multicenter trial of 127 subjects with chronic established back pain, a marked decrease in CRP was measured among subjects taking Theramine compared to subjects taking ibuprofen (400mg) once daily.



In a 28 day double blind, randomized, controlled, multicenter trial of 127 subjects with chronic established back pain, subjects taking Theramine alone and as an adjunct to naproxen experienced a statistically significant reduction in pain compared to once daily naproxen (250mg)1 .

Chronic Pain is a disease of the nervous system, altering nutrient, amino acid and neurotransmitter metabolism. Over the past decade, scientific research has focused on the underlying physiologic changes created by chronic pain. Research has revealed that addressing specific amino acid and nutrient deficiencies using the dietary intervention Theramine can reduce the inflammatory markers C- Reactive Protein, and Interleukin-6 while improving the production of the neurotransmitters responsible for dampening the frequency, and volume of pain signals moving throughout the central nervous system.

Shell, et al. "A Double-Blind Controlled Trial of a Single Dose Naproxen and an Amino Acid Medical Food Theramine for the Treatment of Low Back Pain"; American Journal of Therapeutics; 2012 108-114

Shell WE; Pavlik St; Roth B; Silver M; Breitstein M; May L; Silver D "Reduction in Pain and Inflammation Associated with Chronic Low Back Pain with the use of the Medical Food Theramine" American Journal of Therapeutics 2014.



Medical Foods LLC  
2980 Beverly Glen Circle, Suite 100, Los Angeles, CA 90077

www.medicalfoodsinfo.com  
US Patent 7,582,315; 7,585,523; 7,595,067; 7,601,369.

\*The statements have not been evaluated by the FDA (U.S. Food & Drug Administration). These products are not intended to diagnose, treat, cure or prevent any disease

## KEY INGREDIENTS:

---

### GABA:

GABA is both an amino acid and a neurotransmitter that is the primary inhibitory neurotransmitter in the central nervous system. The relationship between the excitatory effects of glutamate and inhibitory effects of GABA are primary determinants of the level of pain transmission. To reduce pain, the balance between neurotransmitters with pronociceptive effects and those with the opposing antinociceptive effects must be restored and maintained.

### Choline Bitartrate:

Choline Bitartrate is converted to acetylcholine (Ach) in the human body. Ach has a variety of benefits for the nervous system. In Theramine, the antinociceptive activity of Ach is due in part to the ability of Ach to stimulate the synthesis and release of serotonin. Ach is a key inhibitor of pain receptors throughout the body, helping to decrease neuronal sensitivity to painful sensations, while suppressing the production of proinflammatory cytokines by stimulating the parasympathetic nervous system.

### L-Arginine:

Research suggests that L-arginine supplementation improves nitric oxide production. Nitric oxide (NO) is a neurotransmitter that plays an important role in pain signaling. Nitric oxide modulates spinal cord nociception through effects on the transmission frequency of pain signals from afferent neurons to the brain. It blocks the transmission of afferent pain signals in the spinal cord, activates natural opioids, and stimulates the production of anti-inflammatory prostaglandins.

### L-Histidine:

Musculoskeletal pain syndromes have been extensively studied with regard to identifying the increased needs for certain amino acids in moderation of pain. Patients with these syndromes and other types of pain disorders exhibit reduced blood levels of tryptophan, arginine, glutamate, histidine, and serine. Modulating pain relies on the ability of the central histamine system to decrease nociceptive signal transmission through the inhibition of NMDA receptor activity.

### 5-HTP:

Low blood levels of tryptophan accompanied by altered tryptophan metabolism have been frequently reported in patients with pain disorders, and have also been associated with decreased brain serotonin concentration. 5-HTP acts as an intermediate metabolite in the pathway of tryptophan conversion to serotonin, thus bypassing the rate limiting step dependent on tryptophan availability. The antinociceptive effects of serotonin are mediated by inhibition of the release of substance P and amplified by stimulation of GABA, acetylcholine activity, and the release of adenosine.

**Dosing:** It is recommended that two capsules of Theramine be taken twice daily.

---

## Non-Addictive

Over 15 years of clinical use with no reports of addiction. Theramine is a non-habit forming option for long term pain management.

## Heart Safe

Over 40 million capsules sold, and no reports of adverse cardiovascular side effects, stroke, or stomach bleeding.



## Long Term

As a Medical Food, Theramine is specially formulated to address the distinct nutritional requirements of Pain Syndromes using ingredients that are Generally Recognized as Safe (GRAS).

## Physician Formulated

Theramine was developed by a team of physicians specializing in Cardiology, Rheumatology and Integrative Medicine.

### Safety Information

Theramine® is contraindicated in an extremely small number of patients with hypersensitivity to any of the nutritional components of Theramine.

**ADVERSE REACTIONS:** Ingestion of L-Tryptophan, L-Arginine, or Choline at high doses of up to 15 grams daily is generally well tolerated. The most common adverse reactions of higher doses — from 15 to 30 grams daily — are nausea, abdominal cramps, and diarrhea. Theramine contains less than 1 gram per dose of amino acids however, some patients may experience these symptoms at lower doses. The total combined amount of amino acids in each Theramine capsule does not exceed 400 mg.

**DRUG INTERACTIONS:** Theramine does not directly influence the pharmacokinetics of prescription drugs. Clinical experience has shown that administration of Theramine may allow for lowering the dose of co-administered drugs under physician supervision.