# Soft Tissue Support Pack





#### **CLINICAL APPLICATIONS**

- Supports the Function, Recovery and Repair of Healthy Connective Tissue
- Helps Alleviate Muscle Soreness, Muscle Spasm and Promote Muscle Relaxation
- Maintains Normal Inflammatory Balance

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### MUSCULOSKELETAL HEALTH

Soft Tissue Support Pack combines the functional formulations of four top products in a single pack to create the ideal acute nutritional protocol for soft tissue and muscle support. It promotes healthy connective tissue, supports the body's healing process and relieves muscle soreness and stiffness, all while maintaining normal inflammatory balance. Soft Tissue Support Pack includes the following supplements: 2 Traumeric capsules, 2 Vascuzyme capsules, 2 GABAnol capsules and 1 C-Flav capsule. These ingredients provide a multidimensional approach for soft tissue support delivered in convenient packets for ease of use and better compliance.

#### **Overview**

Inflammation is a natural part of the body's immune response, a cascade triggered to protect the body and maintain normal tissue repair. Soft Tissue Support Pack provides a full spectrum of botanicals, enzymes and micronutrient factors to maintain normal inflammatory balance and address connective tissue discomfort. In addition, gamma-aminobutyric acid (GABA), glycine and magnesium are included to support muscular relaxation. The addition of flavonoids, such as quercetin and rutin, provide additional soft tissue and blood vessel support.

#### Turmeric (Complete Turmeric Matrix)<sup>+</sup>

Whole-root turmeric and its active components have been used in traditional Ayurvedic medicine for centuries. In herbal medicine of old, practitioners used teas, tinctures and extracts of all types. In the 21st century, as research grew on the benefits of turmeric, the focus shifted to identifying and isolating one individual compound, curcumin, rather than delivering the comprehensive benefits of a matrix of turmeric bioactives. As a result, concentrating curcumin led to poor absorption, and pharmaceutical methods were applied to bypass the gut and increase its bioavailability. The glaring disadvantage of applying this pharmaceutical model to botanicals is that it misses the benefits of other bioactives present within the turmeric matrix and their positive effects on the microbiome.

The Complete Turmeric Matrix includes compounds from the entire turmeric root, all working together as nature intended to deliver better results.

- Curcumin: Activates alkaline phosphatase that decreases LPS activity and inhibits the expression of the NF-kB/lkB pathway.<sup>1,2</sup>
- Turmerones: Enhance the bioavailability and bioactivity of curcumin.  $\!\!\!^3$
- Turmerin: Inhibits oxidative DNA damage, formation of lipid peroxides, and arachidonic acid release.<sup>4</sup>
- Curcumol: Inhibits oxidative stress and targets key signaling pathways MAPK/ERK, PI3K/Akt and NF-kB.<sup>5</sup>
- Cyclocurcumin: Exhibits synergistic bioactivity with curcumin and inhibits the release of TNF-alpha.<sup>6,7</sup>
- Curdione: Inhibits the production of prostaglandin E2 (PGE2) and COX-2 expression.<sup>8</sup>
- B-elemene: Downregulates pro-inflammatory cytokines TNFalpha, IFN, TGF-beta, IL-6 and IL-<sup>9,10,11</sup>

This matrix of bioactive compounds supports a healthy GI tract, enhances detoxification, creates a healthy microbiome and helps maintain normal inflammatory balance. The bioactives in CTM support the gut lining and immune system, modulate acute nervous system signaling, low mood and fatigue, and provide cardioprotective and neuroprotective activity via antioxidant mechanisms.<sup>12-14</sup> CTM also plays a crucial role in maintaining inflammatory balance in a variety of tissues due to its strong MAPK and NFkB-modulating properties. Studies show CTM supports balanced inflammation in the joints and the GI tract.<sup>15-17</sup> In a randomized, double-blind, placebo-controlled clinical trial published in the *Journal of Medicinal Food*, 36 patients with immune joint challenges received either a 250 mg dose of CTM, a 500 mg dose of CTM, or placebo twice per day. Objective clinical measures and lab markers were assessed, and the results indicated that CTM improved outcome measures and maintained normal inflammatory balance.<sup>18</sup> CTM's bioactives, along with Traumeric's quercetin, rutin and bromelain, promote advanced GI mucosal health,<sup>15-17</sup> intestinal permeability,<sup>19</sup> increase microbiome diversity<sup>20</sup> and balance immune responses to lipopolysaccharides (LPS).<sup>21</sup>

#### Proteolytic Enzymes (as Vascuzyme)<sup>+</sup>

Soft Tissue Support Pack also includes Vascuzyme, which provides the powerful enzymes bromelain, trypsin, amylase, lipase, lysozyme, cellulase, peptidase and alpha chymotrypsin. Studies have highlighted the efficacy of systemic enzyme therapy for a variety of uses, including maintaining normal inflammatory balance, nasal passage health, bronchial health,<sup>17,18,33</sup> musculoskeletal health and exercise-related recovery.<sup>19-21,25,26,28</sup> In vitro, animal and human data show that enzyme therapies are capable of cleaving immune complexes, which are known inflammatory mediators.<sup>30-32</sup> In one study, among four different types of immune complexes prepared in vitro and incubated with different concentrations of an enzyme mixture (papain or pancreatin), approximately 90% of the antigen complexes were cleaved by low doses of enzymes. In addition, antibody complexes were gradually cleaved by concentrations from 5-80 mg.<sup>31</sup>

Proteolytic enzymes have also been shown to reduce levels of the immune marker, TGF- $\beta$  (transforming growth factor beta), by converting the protease inhibitor alpha2M from the slow form into the fast form, which binds and inactivates TGF- $\beta$ . In one study, oral proteolytic enzyme therapy reduced TGF- $\beta$  levels, maintaining normal inflammatory balance.<sup>23,26,27</sup> Another study found that a systemic enzyme therapy given to patients after surgery significantly reduced post-traumatic and post-operative swelling versus the control group. Enzyme therapy also supports improvements in exercise-induced discomfort, stiffness and mobility, especially when helping to support cartilage and joint function in the knee and hip.<sup>25</sup>

Strong peptidase enzymes have been used in both Japan and Europe for maintaining normal inflammatory balance since the early 1980s, with systematic reviews supporting their beneficial role in lowering the release of harmful amines in various tissues, balancing the bodies systemic inflammatory burden, and supporting the breakdown of unwanted proteins without affecting healthy tissues.<sup>24-28</sup> Additionally, in an animal study, similar enzymes were found to be effective as more traditional options for maintaining normal inflammatory balance. Research has also

shown that flavonoids, such as rutin and quercetin, maintain normal inflammatory balance. Specifically, they have been shown to reduce the production of TNF- $\alpha$  by macrophages, microglial cells and mast cells, helping to maintain normal inflammatory balance.<sup>32</sup>

In a randomized, single-blind study on the antioxidant effect of rutin, after six weeks, those receiving rutin had significantly elevated plasma flavonoids (quercetin, kaempferol and isorhamnetin), displaying the powerful antioxidant effect of rutin.<sup>32</sup> Quercetin was also found to decrease the expression and production of TNF- $\alpha$ , IL-1beta, IL-6 and II-8.<sup>33</sup> Finally, systemic enzyme therapy has been shown to stimulate internal defenses to support a normal musculoskeletal inflammatory response. Systemic enzyme therapy has also been shown to modulate cytokine levels and shift immune balance toward a calm, efficient immune state.<sup>27-28</sup>

#### Flavonoids (as C-Flav)<sup>+</sup>

Quercetin, hesperidin complex, hibiscus flowers and rutin are also included in the Soft Tissue Support Pack to help support healthy capillary permeability and stabilize tendon and ligament function. Quercetin is a potent antioxidant which inhibits inducible ICAM-1 expression, an important pathway for maintaining normal inflammatory balance.<sup>32</sup> Quercetin has been shown to stabilize mast cells by releasing key cytoprotective factors to promote the balanced release of inflammatory mediators from mast cells.<sup>34</sup> It also directly inhibits tyrosine kinase and nitric oxide synthase and modulates the activity of inflammatory mediator NFkB. Rutin is a flavonoid that has been shown to help maintain levels of the biological antioxidant reduced glutathione. Vitamin C is always recommended with flavonoids, such as rutin and quercetin, since they act in synergy, and vitamin C has been shown to increase the cross-linking of collagen to improve the structural integrity of ligaments and tendons. It is also a potent antioxidant, reducing oxygen free radicals caused by inflammatory processes.<sup>34</sup>

#### GABA, Glycine, and Magnesium (as GABAnol)<sup>+</sup>

GABA and glycine are amino acids that impart neurotransmitter activity within the central nervous system (CNS). GABA and glycine both have an inhibitory (calming) effect in the CNS, promoting a sense of relaxation in the brain and body by decreasing nerve cell over-firing. Acting as major inhibitory neurotransmitters, GABA and glycine reduce excitatory activity in the brain, resulting in a decrease in signals that trigger muscle spasms.

Magnesium, the fourth most abundant mineral, participates in roughly 300-350 enzymatic reactions in the body. It aids in maintaining normal muscle and nerve function, blood pressure, heart rate, vasomotor tone, bone density, serum glucose levels, calcium absorption and immune response. Unfortunately, magnesium deficiency is one of the most common nutrient deficiencies that can lead to unwanted side effects when left untreated. In a prospective observational study, serum



magnesium levels were measured between the control group versus the experimental group, and it was concluded that magnesium is involved in the regulation of neuronal excitability.<sup>35</sup> Because magnesium plays a significant role in regulating the influx of calcium into muscle cells, calcium can remain in the muscle cell for a longer period when magnesium is depleted, leading to cramping or muscle spasms. In a randomized, double-blind, placebo-controlled study, subjects suffering from nocturnal leg cramps received 226 mg of magnesium over a 60-day period. At the end of the study, subjects who were receiving the magnesium showed a significant decrease in magnitude and duration of nocturnal leg cramps and improvements in sleep quality versus the placebo group.<sup>36</sup>

#### Directions

1 packet per day or as recommended by your health care professional. Best if taken on an empty stomach; take closer to a meal to improve tolerance.

#### **Does Not Contain**

Yeast, artificial colors or flavors.

#### Cautions

Do not consume this product if you are pregnant or nursing.

## Supplement Facts

Serving Size 1 Packet Servings Per Container 9 & 30

	Amount Per Serving	% Daily Value
Vitamin C (as Ascorbic Acid USP, Acerola Fru	470 mg iit Juice Concentrate Powde	522% r)
Vitamin B6 (as Pyridoxine Hydrochloride USP)	50 mg	2,941%
Magnesium (as DiMagnesium Malate (Albion®)	)100 mg	24%
Pancreatin	450 mg	*
Protease (from Pancreatin) (90,	000 USP Units)	*
Amylase (from Pancreatin) (90,	000 USP Units)	*
Lipase (from Pancreatin) (7,200	USP Units)	*
Papain	180 mg (1,080,000 USP U	nits) *
Trypsin	72 mg (18,000 USP Units	5) *
Chymotrypsin	27 mg (2,025 USP Units)	*
Bromelain (from Pineapple)	375 mg (900 GDU)	*
Peptidase	40 mg (24,000 Serratiopeptidase Unit	* s [SPU])
Turmeric Root Extract (Complete Turmeric Matrix) (Standa Curcuminoids, 3-8% Volatile Oil, 2-		*
Quercetin Dihydrate	385 mg	*
Gamma Aminobutyric Acid (GABA)	250 mg	*
Glycine USP	225 mg	*
Rutin	175 mg	*
Dong Quai Root Extract	150 mg	*
Acerola Fruit Juice Concentrate Powder (Standardized to contain 1	100 mg 7% Vitamin C)	*
Citrus Bioflavonoid Complex	50 mg	*
Hibiscus (Flowers)	50 mg	*

Other Ingredients: Microcrystalline Cellulose, Hypromellose (Natural Vegetable Capsules), Magnesium Stearate, Silicon Dioxide and Stearic Acid.

ID# 351009 9 Packets ID# 351030 30 Packets



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