

Joint Relief



INTEGRATIVE
NATURAL HEALTH

Clinical Applications

- Supports Joint and Muscle Comfort*

A combination of modern science and traditional wisdom, **Joint Relief** disperses quickly to provide targeted support for muscle and joint comfort. Turmeric and *Boswellia* extracts are combined in a black sesame oil base using patented technology to swiftly inhibit cyclooxygenase and lipoxygenase receptors.*

All Integrative Natural Health Formulas Meet or Exceed cGMP Quality Standards

Discussion

Joint Relief is a novel formulation that combines bioactive ingredients from turmeric (*Curcuma longa*), Indian frankincense (*Boswellia serrata*), and sesame seed oil with bio-enhancing technology to rapidly distribute the active components. The combination of turmeric and *Boswellia* has been clinically studied for support of muscle and joint comfort.*^[1,2]

Curcumin

Curcumin is a phenolic phytochemical derived from turmeric, a root used in Chinese and Ayurvedic herbology and one of the most extensively investigated therapeutic compounds of natural origin. The mechanisms underlying curcumin's effects are diverse and have not been fully elucidated, but it is well-known that curcumin has powerful antioxidant activity and exerts a wide spectrum of biological activities related to a healthy inflammatory response. At cellular and molecular levels, curcumin has been shown to inhibit the eicosanoid pathway enzymes cyclooxygenase (COX) and lipoxygenase (LOX) that are intimately involved in the inflammatory process. The regulation of COX and LOX enzymes may be the key mechanism underlying the beneficial effects demonstrated by curcumin for support of muscle and joint comfort.^[3,4] Meta-analyses of data from randomized controlled trials in subjects with underlying conditions, primarily osteoarthritis (OA), suggest supplementation of curcumin as an effective and safe strategy for managing pain-related symptoms.*^[2,5]

Boswellia

The gum resin of *Boswellia* has a long history of Ayurvedic use, and over the last thirty years it has gained attention in the Western world resulting in the development of standardized extracts to support muscle and joint comfort. Boswellic acids have been shown to inhibit the activity of 5-LOX, the enzyme that catalyzes the formation of pro-inflammatory leukotrienes from arachidonic acid.*^[6,7]

In randomized controlled trials, *Boswellia* has been evaluated for the management of pain and physical function. Supplementation with *Boswellia* may increase pain threshold and tolerance when compared to placebo, and a potential role for boswellic acid extract as an effective and safe alternative intervention for the management of OA has been suggested.*^[2,6,7]

The safety and efficacy of formulations containing a combination of boswellic acid and curcumin have also been evaluated, with synergistic interactions thought to be of benefit because of the variations in biologically active molecules that have inhibitive actions on both the COX and LOX pathways.^[2] In a 12-week clinical trial, curcumin or its combination with boswellic acid was studied for the level of effect on pain-related symptoms in subjects (n = 201) with OA. Results suggested that curcumin combined with boswellic acid had a higher level of effect on joint pain, morning stiffness, and the limitations of physical function than curcumin alone.^[2] Further study of the effect of this combination on muscle and joint discomfort in healthy populations is warranted.*

Sesame

Oils and extracts of sesame seeds are used widely in food, in salves for medicinal purposes, or as vehicles for delivering active compounds both orally and topically. Sesamin, the main lignin component of sesame seeds, has been reported to influence a decrease in pro-inflammatory prostaglandins and leukotrienes. Research has also supported the beneficial use of sesame compounds in patients with OA. In a randomized study, subjects (N = 50) with OA were given placebo or oral sesame for a two-month period. A positive effect and significant improvement in clinical signs and symptoms were noted in the test group with the authors suggesting sesame as a viable adjunctive therapy.*^[8]

Joint Relief is a clinically studied formulation featuring 95% curcuminoid turmeric rhizome extract and BosPure® *Boswellia* extract standardized to >10% AKBA delivered in a bio-enhancing sesame seed oil base to provide rapid-release support for joint and muscle comfort.*

*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.

Supplement Facts

Serving Size: 2 Softgels
Servings Per Container: 20

	Amount Per Serving	%DV
Calories	10	
Total Fat	0.5 g	1%†
Proprietary Blend ^{S1}	1 g	**
Turmeric Extract (<i>Curcuma longa</i>) (rhizome) (26.6% curcuminoids) and <i>Boswellia serrata</i> Extract (gum resin) (1% AKBA [3-O-Acetyl-11-keto-β-Boswellic Acid])		

† Percent Daily Values are based on a 2,000 calorie diet.
** Daily Value (DV) not established.

Other Ingredients: Black sesame seed oil, softgel (bovine gelatin, glycerin, purified water, and annatto suspension in sunflower oil).

Contains: Sesame

S1. Rhuleave-K™ is a trademark of Arjuna Natural LLC.

Directions

Take two softgels as needed, or use as directed by your healthcare professional.

Consult your healthcare professional before use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

References

1. Antony B, inventor; Arjuna Natural Pvt Ltd, assignee. Pharmaceutical composition made from hydrophobic phytochemicals dispersed in sesame oil to enhance bioactivity. US patent 11,241,472. February 8, 2022.
2. Haroyan A, Mukuchyan V, Mkrtchyan N, et al. *BMC Complement Altern Med*. 2018;18(1):7. doi:10.1186/s12906-017-2062-z
3. Aggarwal BB, Sundaram C, Malani N, et al. *Adv Exp Med Biol*. 2007;595:1-75. doi:10.1007/978-0-387-46401-5_1
4. Belcaro G, Cesarone MR, Dugall M, et al. *Altern Med Rev*. 2010;15(4):337-344.
5. Sahebkar A, Henrotin Y. *Pain Med*. 2016;17(6):1192-1202. doi:10.1093/pm/pnv024
6. Sengupta K, Alluri KV, Satish AR, et al. *Arthritis Res Ther*. 2008;10(4):R85. doi:10.1186/ar2461
7. Prabhavathi K, Chandra US, Soanker R, et al. *Indian J Pharmacol*. 2014;46(5):475-479. doi:10.4103/0253-7613.140570
8. Eftekhar Sadat B, Khadem Haghighian M, Alipoor B, et al. *Int J Rheum Dis*. 2013;16(5):578-582. doi:10.1111/1756-185X.12133

Formulated To Exclude

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

***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.**