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This information is provided as a medical and scientific educational resource for the use of physicians and other licensed health-care practitioners ("Practitioners"). This information is intended for Practitioners to use as a basis for determining whether to recommend these products to their patients. All recommendations regarding protocols, dosing, prescribing, and/or usage instructions should be tailored to the individual needs of the patient considering their medical history and concomitant therapies. This information is not intended for use by consumers.

Migranol™ is a synergistic combination of botanical extracts, magnesium, and riboflavin (vitamin B2) to support brain health and a healthy response to stress.* This formula provides 300 mg of feverfew, 150 mg of riboflavin, 75 mg of rosemary extract, 75 mg of curcuminoids, and 180 mg of magnesium as di-magnesium malate to help support neuromuscular function and relaxation, a normal response to stress, optimal vascular health, antioxidative status, and a healthy response to neuroinflammation.* This product may be ideal for individuals seeking traditional herbs to help support a normal response to pain associated with headache, those concerned with neuroinflammation, and those who may require support for healthy antioxidative status.*

Ingredient Highlights

- Synergistic combination of botanical extracts, magnesium, and riboflavin to support neuromuscular health*
- Features a blend of three well-researched curcuminoids: curcumin, bisdemethoxycurcumin, and demethoxycurcumin to promote a healthy response to neuroinflammation and antioxidative status*
- Gluten-free, dairy-free, and soy-free
- Non-GMO

Riboflavin

Riboflavin (vitamin B2) is critical for mitochondrial function and myelin synthesis.¹ Riboflavin is an essential component of two coenzymes that aid in energy production and cellular metabolism: flavin mononucleotide and flavin adenine dinucleotide.² Disruptions in mitochondrial health have been associated with certain aspects of migraine pathogenesis. Riboflavin has been well-researched for its potential supportive role in the prevention of migraines.³⁻⁵ The American Academy of Neurology classifies riboflavin as a level B intervention for migraines.¹

A 12-week randomized controlled clinical trial investigated the potential prophylactic qualities of a combination of 100 mg of feverfew, 300 mg of magnesium, and 400 mg of riboflavin in 49 adults with a history of migraines.⁴ Of note, the placebo contained 25 mg of riboflavin; the recommended dietary allowance of riboflavin is 1.1 mg in females and 1.3 mg in males.² Although no statistically significant differences between groups were observed, significant reductions in the number of migraine days, migraine index, and incidence of migraine when comparing baseline and treatment terminus were reported in both groups.⁴ Migraine attack frequency was reduced by more than 40% in the treatment group, as compared to a 16% reduction in the placebo group.⁴

A systematic review exploring the potential prophylactic role of riboflavin for migraines reported the results of four placebo-controlled clinical trials. These studies involved the treatment intervention of 400 mg of riboflavin for a period of between 3 months and 12 months. Improvements in the frequency of headaches per month were observed when compared to a placebo.⁵ Improvements in headache duration and severity were reported. Riboflavin was also reported to be well-tolerated.⁵

Feverfew

Feverfew (*Tanacetum parthenium*) is a botanical that has been shown to support the body's response to inflammation and oxidative stress, along with brain health, and it may help promote a healthy response to pain associated with headaches and migraines.^{6,7} Its constituents include parthenolide and other sesquiterpene lactones, flavonoids, and volatile oils.⁷

A study involving both laboratory and animal components assessed the efficacy of feverfew extracts in simulated migraine conditions. Reductions in cortical prostaglandin E₂ and interleukin (IL)-1 beta were observed.⁶ The gene expression of IL-10 and brain-derived neurotrophic factor (BDNF) also increased in the presence of feverfew extracts. Reduced BDNF levels have been associated with the incidence of migraine.⁶

A systematic review reported on clinical studies involving feverfew supplementation in individuals with a history of migraines. Servings ranged between 6.24 mg and 150 mg per day during treatment periods from 8 weeks to 8 months. The groups that supplemented with nutritional ingredients experienced a lower incidence of symptoms.

Benefits*

- Supports a healthy inflammatory response
- Promotes a healthy antioxidative status
- Supports normal neuromuscular function and relaxation
- Promotes optimal vascular health
- Helps support a normal response to stress

Supplement Facts

Serving Size 3 capsules	
Servings Per Container 30	
Amount Per Serving	% Daily Value
Riboflavin (Vitamin B-2)	150 mg 11538%
Magnesium (as Di-Magnesium Malate)	180 mg 45%
Feverfew (<i>Tanacetum parthenium</i>)(aerial)	300 mg *
Rosemary Extract (<i>Rosmarinus officinalis</i>)(leaf, stem)	75 mg *
[standardized to contain 7% camosic acid]	
Curcuminoid Powder (as Curcumin C3 Complex™)	75 mg *
(Curcuma longa)(rhizomes)(containing three curcuminoids: curcumin, bisdemethoxycurcumin, demethoxycurcumin)	
[standardized to contain 95% curcuminoids]	

*Daily Value not established.

Other Ingredients: Cellulose (capsule), microcrystalline cellulose, vegetable stearate, silicon dioxide

In one randomized, placebo-controlled clinical study, the groups that supplemented with feverfew experienced improvements in the frequency of migraines in a dose-dependent manner. The maximum dose of 56.25 mg was used in this study, which had 147 participants with four randomized treatment groups: a placebo only group, a group of individuals taking 6.24 mg of feverfew per day, a group of individuals taking 18.75 mg of feverfew per day, or a group of individuals taking 56.25 mg per day.

Another placebo-controlled clinical study involved 76 participants who received 82 mg of feverfew per day for 4 months. Headaches were reported to be milder in the treatment group as compared to the placebo group. A greater reduction in the number of migraine attacks, significant reductions in nausea and vomiting, and a higher global rating of treatment efficacy were also observed in the treatment group as compared to the placebo group.⁸

Magnesium

Magnesium is essential for more than 300 biochemical reactions in the human body. It is a cofactor for enzymatic reactions associated with protein synthesis, metabolic health, and energy production.⁹ It plays a fundamental role in muscle health supporting the function and relaxation of muscles.⁹ Research indicates that individuals who have migraines may excrete excessive amounts of magnesium, the downstream effects of which may lead to platelet aggregation, vasoconstriction, and the release of substance P.³

A systematic review evaluated randomized controlled trials involving more than 700 participants to explore the potential role of magnesium supplementation for headaches or migraines. Study durations ranged from 12 to 24 weeks and involved supplementation between 360 mg and 600 mg of magnesium per day. Improvements in the Headache Impact Test-6, migraine pain intensity, and duration were reported.¹⁰ A meta-analysis of five double-blind, placebo-controlled studies indicated that the groups of individuals who supplemented with oral magnesium may help reduce the number of migraine incidents by 22% to 43% compared to the controls.³

Additional Ingredients

Curcumin and its related compounds, curcuminoids, are derived from turmeric (*Curcuma longa*), which is used both medicinally and as a culinary spice. Curcumin has a wide range of biological targets, including inflammatory mediators, cytokines, transcription factors, protein kinases, enzymes, and cellular pathways. In addition to helping to promote a healthy inflammatory response in the body and brain, curcuminoids may also support antioxidant status, helping to protect tissues from oxidative stress and free radical damage.⁷ Curcuminoids inhibit cyclooxygenase-2 and inducible nitric oxide synthase, tumor necrosis factor-alpha (TNF- α), and pro-inflammatory cytokines for IL-1, IL-6, and IL-8.¹¹ Curcumin regulates apoptosis and suppresses neurotoxic factors in macrophages stimulated by lipopolysaccharides. It also inhibits the production of reactive oxygen species.¹¹

Certain mechanisms of action related to migraine pathogenesis have been linked to oxidative stress and the inflammatory response.⁷ Animal migraine models have shown improvements in levels of malondialdehyde in the presence of curcumin administration.

In clinical studies, it was found that curcumin administration helped reduce levels of TNF- α .⁷ For more information about the effects of curcumin on the body, please refer to the C3 Curcumin Complex Tech Sheet.

Rosemary extract (*Rosmarinus officinalis*) may help support brain health, antioxidant status, and a healthy inflammatory response.^{12,13} Animal studies have reported improvements in cognition and attenuation of myelin degradation and neuronal degeneration in the presence of rosemary extracts.¹² This extract has been shown to influence hippocampal inflammation and oxidative stress through the modulation of IL-1, IL-6, TNF- α , glutathione, and superoxide dismutase.¹² Rosemary extract has also been shown to influence gamma-aminobutyric acid type A, serotonin, and dopamine receptors.¹³

Recommended Use: Take 3 capsules per day or as directed by your health-care practitioner.

Warning: Consult with your health-care practitioner before use if you are pregnant.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/api/library-assets/literature-reference---migranol-tech-sheet-references>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Healthcare practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.

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***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.**

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