



FORMULATED BY DAVID HAASE, MD

Clinical Applications

- Affects the Production of Arachidonic Acid-Derived Eicosanoids*
- Supports Cytokine Balance*
- Supports Joint Comfort*
- Contains 40 mg Proprietary Bioflavonoid Berry Blend*
- Supports Antioxidant Mechanisms*

*ReLeve is formulated to support eicosanoid and cytokine balance and provide support for joint comfort. 5-LOXIN®, a patented *Boswellia* extract yielding concentrated 3-O-acetyl-11-keto- β -boswellic acid (AKBA), is found to inhibit the 5-lipoxygenase enzyme. Salicin from white willow bark is a natural inhibitor of both the COX-2 and 5-lipoxygenase enzymes. Bioflavonoid-rich BerryVin™ provides additional support for eicosanoid balance and antioxidant activity.**

All Creating Health Formulas Meet or Exceed cGMP Quality Standards

Discussion

White Willow Bark (*Salix alba*) Willow bark has been used for thousands of years to help support eicosanoid and cytokine balance and to help relieve discomfort.^[1-3] Willow bark is currently approved by the German Commission E and the European Scientific Cooperative on Phytotherapy (ESCOP) for these purposes. Willow bark is also recognized in the United States for its role in supporting joint comfort.^[1] Willow bark contains glycosides, salicylates, flavonoids, tannins, aromatic compounds, and acids. A 2007 Cochrane review of the literature found moderate evidence that *Salix alba* positively affected eicosanoid metabolism and produced results that were comparable to those obtained by other commonly used compounds. Favorable results were obtained when the *Salix alba* in the studies was standardized to 120 mg or 240 mg salicin. ReLeve provides a standardized 120 mg dose of salicin per serving.^{*[4]}

Various randomized placebo-controlled studies suggest that willow bark produces positive effects on joint discomfort. The usual dose of salicin is 240 mg per day,^[5] which is the intake recommendation for ReLeve. Pharmacokinetic evaluations reveal that salicylic acid is the major metabolite of salicin, though other components of willow bark are believed to provide relief as well.^[6] The mechanism of action of white willow bark appears to involve an effect on both arachidonic acid-derived eicosanoids and cytokine compounds.^{*[7]}

5•Loxin®, a standardized *Boswellia serrata* extract enriched to 30% 3-O-acetyl-11-keto- β -boswellic acid (AKBA), is ten times more concentrated than ordinary *B serrata*. *Boswellia serrata* is an ayurvedic herb whose principle constituents—boswellic acid and alpha-boswellic acid—may help maintain healthy leukotriene metabolism by reducing the activity of the enzyme 5-lipoxygenase.^[8] 5-lipoxygenase (5-LOX) catalyzes the synthesis of unfavorable leukotrienes.*

A randomized, double-blind, placebo-controlled trial assessing the efficacy, safety, and tolerability of *Boswellia* extract produced statistically significant and clinically relevant decreases in knee discomfort, increases in knee flexion, and increases in walking distance.^[9] A randomized, double-blind, placebo-controlled study specifically designed with 5•Loxin resulted in statistically significant improvements in comfort and physical function and a significant reduction in matrix metalloproteinase (MMP) in synovial fluid.^[10] MMP represents a class of enzymes that selectively hydrolyze peptide bonds and degrade structural proteins; they play a crucial role in the degradation of joint tissues. 5•Loxin shows significant inhibition against several MMPs. It helps prevent the formation of human recombinant TNF- α inducible MMPs, which further facilitates the maintenance of healthy cartilage and cell-cycle regulation.^{*[11,12]}

BerryVin™ (40 mg) contains a blend of blueberries, strawberries, escobillo, and cranberries, along with grape and pomegranate extracts. This bioflavonoid-rich berry powder provides polyphenols, anthocyanins, ellagic acid, and an antioxidant capacity of 4000 TE/g to fight free radicals. It may also provide substantial antioxidant support for soft tissues. Bioflavonoids are thought to act synergistically to inhibit cyclooxygenases, lipoxygenases, and phospholipases, ultimately supporting healthy eicosanoid metabolism and favorable cytokine balance.^{*[13,14]}

*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 Capsules
Servings Per Container: 60

	Amount Per Serving	%Daily Value
Salicin (from white willow extract (<i>Salix alba</i>)(bark))	120 mg	**
<i>Boswellia serrata</i> extract (gum resin) (30% 3-O-Acetyl-11-keto- β -Boswellic acid [AKBA])(5-LOXIN [®])	50 mg	**
High ORAC Berry Blend (strawberries, escobillo, blueberries, cranberries, grape extract, pomegranate extract)(whole fruit)($>4,000$ TE/g)($>25\%$ total polyphenols)($>10\%$ anthocyanins)($>5,000$ ppm ellagic acid)(BerryVin [™])	40 mg	**

** Daily Value not established.

Other Ingredients: HPMC (capsule), tricalcium phosphate, microcrystalline cellulose, stearic acid, magnesium stearate, calcium silicate, and silica.

5-LOXIN[®] is a registered trademark of PL Thomas - Laila Nutra, LLC and is used under license. International Patents Pending.

BerryVin[™] is a trademark of Cyvex Nutrition, Inc.

Directions

Take two capsules twice daily, or as directed by your healthcare practitioner.

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

References

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Does Not Contain

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

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