

HERBAL ANTI-INFLAMMATORY™



CLINICAL APPLICATIONS

- Anti-inflammatory
- Analgesic
- Antioxidant Support

Each of the ingredients in this exclusive formula is backed by years of use in traditional herbal medicine, as well as by published research in peer-reviewed journals. Boswellia serrata, white willow bark and bioflavonoids have all been shown to possess good anti-inflammatory and analgesic properties through the inhibition of COX-2 and 5-LOX enzymes. The proprietary bioflavonoid blend provides antioxidant protection against damage to soft tissue.

All 3rd Opinion Inc® Formulas Meet or Exceed cGMP quality Standards

DISCUSSION

Salicin (White Willow Bark; *Salix alba*) contains salicylates, tannins and flavonoids. Decoctions of the bark have been used to treat pain, fever and headaches for approximately 2000 years. The role of salicylates in inflammation and pain management is well-documented in medicine as white willow bark was the forerunner of aspirin.¹ In studies Willow bark extract strongly prevented PGE2 and cytokine release.² A 2007 systemic review of the literature found moderate evidence for short-term improvements in pain with daily doses standardized to 120 mg or 240 mg salicin.³

5•Loxin®, a standardized *Boswellia serrata* extract enriched to 30% 3-acetyl-11-keto-b-boswellic acid (AKBA), is ten times more concentrated than ordinary boswellia. *Boswellia* is an ayurvedic herb whose principle constituents boswellic acid and alpha-boswellic acid may maintain healthy leukotriene metabolism by reducing the activity of the enzyme 5-lipoxygenase.⁴ Matrix metalloproteinase (MMP), a class of enzymes that selectively hydrolyze peptide bonds and degrade structural proteins, play a crucial role in the degradation of joint tissues. 5•Loxin® shows significant inhibition against several MMP's. It prevents formation of human recombinant TNF α inducible MMPs, responsible for cartilage degradation and inflammatory mediators of apoptosis and adhesion molecules including VCAM-1 and ICAM-1.⁵ Various randomized, double-blind, placebo-controlled, crossover studies have demonstrated the efficacy of boswellia.^{6,7,8}

Metabolism of Salicin: An oral dose of salicin is rapidly and completely metabolized to mostly salicylic acid.⁹ After biotransformation to salicin in the GI tract, B-glucuronidase activity and hydrolysis convert salicin to saligenin. Saligenin is further converted to salicylic acid in the liver by the cytochrome P-450 system. After an oral dose (240 mg) was given to healthy volunteers, the T_{max} was less than two hours and C_{max} was 1.2 mg/L, respectively.¹⁰ Salicylic acid is eliminated in urine as salicyluric acid.¹⁰

Berr-X™, a bioflavonoid-rich cranberry/blueberry blend provides strong antioxidant support against damage to soft tissues. The bioflavonoids also may synergistically provide relief from minor pain by inhibiting cyclooxygenase, lipoxygenase and phospholipase.¹¹



Supplement Facts

Serving Size: 2 Capsules
Servings Per Container: 14

	Amount Per Serving	%Daily Value
Salicin (from 400 mg of white willow bark standardized to 30% salicin)	120 mg	**
Boswellia serrata extract (gum resin)† (standardized to contain 30% 3-acetyl-11-keto-boswellic acid (AKBA))	50 mg	**
Berr-X™* (from 40 mg of berry extract standardized to 30% polyphenols)	12 mg	**

* Proprietary Standardized Berry Blend.

** Daily Value not established.

Other Ingredients: Cellulose, Magnesium Stearate.

DOSING:

Effectiveness appears to be dependent upon dose and length of treatment with increasing pain relief at a higher dose and over a period of time. Generally, two capsules, two or more times a day have been reported to be effective. The European Monograph does not call for any restriction upon the duration of treatment with willow bark; however, there is not sufficient safety information regarding the daily use of boswellia without any breaks over periods longer than about 32 weeks.¹²

REFERENCES

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Additional References Available Upon Request

CONTRAINDICATIONS

Individuals sensitive to salicylates or taking any medication contraindicated with salicylates (eg guafenisin) should avoid Herbal Anti-Inflammatory™. No special warnings or precautions are required other than avoiding the extract during pregnancy and lactation as is recommended for all salicylic acid derivatives. Willow bark extract does not significantly affect platelet aggregation.¹³ However, the slight impact may have clinical relevance in patients who have impaired thrombocyte function (clotting ability).¹⁴ Avoid if allergic to any ingredient. Not tested in children.

*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.

