

SCIENTIFIC AND CLINICAL STUDIES:

Reduce Joint Pain: Numotoid® contains pain reducing agents that can block pain responses in nerve fibers. It helps to rebuild cartilage in order to stop the painful deterioration and swelling of the joints.

Reduce Joint Inflammation: Numotoid® reduces inflammation through increasing blood flow to improve the exchange of nutrients, reduce muscle spasms and promote healing. It also contains natural, safe COX 2 inhibitors.

Promotes Joint Lubrication: Numotoid® works to increase the joint's water holding capacity in order to prevent cartilage breakdown, improve lubrication and increase the elasticity of the cartilage.

Strengthens Connective Tissue: Numotoid's special formula continually promotes the generation of new healthy cells to replace old ones. Protects connective tissue and improves the joints' ability to absorb shock. The result is an increase in mobility and joint integrity.

It is designed to relieve pain fast, return mobility and then continue to repair the damage that has caused the pain.

Numerous medical studies indicate that turmeric has significant anti-inflammatory action, primarily due to its active constituent, curcumin. Curcumin also has potent antioxidant action and histamine-lowering effects, both of which may contribute to its anti-inflammatory activity.

Curcumin

Curcumin reduces cholesterol by interfering with intestinal cholesterol uptake, increasing the conversion of cholesterol into bile acids, and increasing the excretion of bile acids. (*International Journal of Vitamin Nutritional Research* 61:364-9 1991)

Curcumin prevents abnormal blood clot formation by interfering with the formation of thromboxanes, the promoters of platelet aggregation. Curcumin increases levels of prostacyclin, the body's natural inhibitor of abnormal platelet aggregation. (*Arzneim Forsh* 36:715-7 1986)

When 500 mg. a day of curcumin was given to ten volunteers, there was a 29% increase in beneficial HDL cholesterol after only 7 days. Total cholesterol was reduced by 11.6% and lipid peroxidation was by 33%. (*Indian Journal of Physiology* 36(4):273-275 1992)

Other Benefits of Curcumin

Curcumin neutralizes dietary carcinogens and has been shown to inhibit cancer at the initiation, promotion, and progression stages of development.

Curcumin is a potent antioxidant and has been shown to be an inhibitor of HIV replication via several different mechanisms.

Unlike FDA-approved drugs, curcumin may protect against liver damage caused by viral hepatitis.

The anti-inflammatory properties of the curcuminoids have been demonstrated in a number of *in vitro* and in some animal studies. These substances are widely used in India and Indonesia for various inflammatory conditions. *In vitro*, curcumin inhibits the production of such pro-inflammatory cytokines as tumor necrosis factor-alpha (TNF-alpha), interleukin-1 beta (IL-1 beta) and interleukin-8, among other anti-inflammatory actions. *Cancer Res.* 1999; 59:597-601

Turmeric is an herb used externally for the treatment of injuries of the muscles and joints. Turmeric is used in the Chinese and Indian systems of medicine for its well-documented anti-inflammatory properties. It has been used for centuries in Ayurvedic medicine as a treatment for inflammatory disorders including arthritis. The studies described here were undertaken to determine the *in vivo* efficacy of well-characterized curcuminoid-containing turmeric extracts in the prevention or treatment of arthritis using streptococcal cell wall (SCW)-induced arthritis, a well-described animal model of rheumatoid arthritis. An essential oil-depleted turmeric fraction containing 41% of the three major curcuminoids was efficacious in preventing joint inflammation. A commercial sample containing 94% of the three major curcuminoids was more potent in preventing arthritis than the essential oil-depleted turmeric fraction when compared by total curcuminoid dose per body weight. *J Nat Prod.* 2006 Mar; 69(3):351-5.

Few large-scale human trials have been completed, hundreds of experiments conducted by researchers around the globe have demonstrated curcumin's ability to halt or prevent certain types of cancer, stop inflammation, improve cardiovascular health, prevent cataracts, kill or inhibit the toxic effects of certain microbes including fungi and dangerous parasites, and protect, at least in the laboratory, against the damaging effects of heterocyclic amines (potentially carcinogenic compounds found in some cooked foods). As one investigative team declared: "[Curcumin] has been proven to exhibit remarkable anticarcinogenic, anti-inflammatory, and antioxidant properties.

Administration of curcumin is a promising approach in the treatment of kidney disease. *British journal of pharmacology*, 2000, Vol 129, Iss 2, pp 231-234

According to University of Chicago scientists, curcumin inhibits a cancer-provoking bacteria (*H. pylori*) associated with gastric and colon cancer (Magad GB, *Anticancer Res.* 2002 Nov-Dec; 22(6C):4179-81).

Curcumin inhibits angiogenesis, i.e. formation of new blood vessels, which tumors use to nourish themselves as they spread (*Mol Med* 1998 Jun; 4(6):376-83). As an anti-inflammatory, turmeric triggers heat-shock stress response (*Wiki Online Encyclopedia for heat-shock*).

Turmeric compares with soy, licorice, red clover, and thyme in binding to progesterone and estrogen receptors in breast cancer cells (*Proc Soc Exp Biol Med* 1998 Mar; 217(3):369-78).

Curcumin "inhibits proliferation of a variety of B lymphoma cells" (*Clin Immunol* 1999 Nov; 93(2):152-61). Boswellia is an herb effective for soothing aching joints when applied externally. Boswellia's healing properties are recorded in Ayurvedic (ancient Indian traditional medicine) medical literature dating back thousands of years. Boswellia works similarly to nonsteroidal anti-inflammatory compounds without the side effects. It is effective in treating rheumatoid arthritis, osteoarthritis, low back pain, and inflamed muscles. Additionally, it stimulates repair by increasing circulation to the joints. Boswellia have unique Polyarthritis, Rheumatoid arthritis (RA), Psoriasis, urticaria, cystic fibrosis, multiple sclerosis, and liver cirrhosis properties.

Boswellia, a natural COX-2 inhibitor, it has been proven to be clinically effective in the treatment of rheumatoid arthritis and osteoarthritis. Boswellic acids have been shown to promote increased blood supply to the joints, and to exert natural anti-inflammatory properties. Benefits include reduction in joint swelling and increased mobility.

Antioxidants in green tea may prevent and reduce the severity of rheumatoid arthritis (*1999 April 13 issue of the Proceedings of the National Academy of Sciences*).

Some intriguing information was presented at the *Society of Critical Care Medicine in January 2002* on how green tea may help decrease inflammation.

Green tea contains a type of polyphenol known as epigallocatechin-3 gallate, or EGCG, that inhibits the expression of the interleukin-8 gene. This is a key gene involved in the arthritis-inflammatory response. In these findings, researchers theorized that "more may be better" when it comes to green tea reducing the inflammatory response as EGCG short-circuits the process that leads to inflammation.

Numotoid® ingredients are traditionally in use to add comfort to joints and enable to lead a happy life.