

RheumaShield™

Joint Support

DESCRIPTION

RheumaShield™ from Douglas Laboratories® contains 10 mg of native, undenatured type II collagen (UC II™) from chicken sternum cartilage.

FUNCTIONS

UC-II™ is a patented form of undenatured type II collagen. Collagen is a fibrous protein secreted by connective tissue and is the prime structural component of skin, bones and joints. It represents close to 25% of all the body's protein. Although about 15 types of collagen have been found in various parts of the body, the fibrillar type II collagen is distributed primarily in articular cartilage, i.e. cartilage associated with joints. UC-II™ is from cartilage that has been sterilized without substantially altering its chemical or molecular structure. This type of collagen preparation has been shown to maintain the healthy structure and function of articular joints that are damaged by inflammatory conditions such as rheumatoid arthritis, an autoimmune disease.

Rheumatoid arthritis occurs when one's own immune system, primarily T cells, attacks itself, i.e. the type II and IX collagen as well as proteoglycans in its articular joint cartilage. The result of this autoimmune attack is painful and disabling inflammation and destruction of the structure and function of cartilage in articular joints. Rheumatoid arthritis is associated with substantial morbidity and premature mortality from comorbid diseases.

Studies have shown that oral administration of native, i.e. undenatured, type II collagen significantly improves rheumatoid arthritis, by a mechanism known as oral tolerance. Oral tolerance is a state of anergy or hyporesponsiveness that follows the exogenous administration of antigen to the peripheral immune system via the gut. Animal studies of experimental autoimmune diseases such as collagen-induced arthritis, insulin-dependent diabetes, and experimental autoimmune encephalomyelitis have demonstrated the effectiveness of oral tolerance.

The size of the antigen dose determines the mechanism of

oral tolerance. In response to a low oral dose of antigen, Peyer's patches, gut specific lymphoid tissue specialized to

respond to antigens entering the body from the intestine, are thought to activate regulatory T-cells to produce inhibitory cytokines, e.g. interleukin 4, interleukin 10 and transforming growth factor beta, and thus reduce the severity of the debilitating tissue inflammation and destruction. Some of the activated T-cells may also migrate to the site of joint inflammation and suppress, via their secreted cytokines, disease inducing T-helper cells (Th1), i.e. bystander suppression. Other studies have also suggested that oral antigen induction of interferon gamma may contribute to oral tolerance by decreasing T-cell migration to peripheral sites of inflammation. High doses of antigen elicit clonal deletion and anergy.

A double blind, placebo-controlled study of 60 patients with severe, active rheumatoid arthritis showed that treatment for three months with type II collagen (0.1 to 0.5 mg/d) reduced the number of tender and swollen joints, with no evident side effects and complete remission in four subjects. Another recent double-blind clinical study with a very low dose of type II collagen, 0.25 mg/d, showed an improvement in response rate to treatment. Clinical remission was observed in two of the treatment patients.

A recent multicenter, double-blind, placebo-controlled trial of 274 rheumatoid arthritis patients tested the efficacy of four doses of type II collagen: 0.020, 0.1, 0.5, and 2.5 mg. Of the 83% of patients completing the 24 week trial, the 0.02 mg group showed a significant increase in response rate by one of the criteria used. Another placebo-controlled double-blind study of the effect of oral collagen type II upon rheumatoid arthritis showed that 10 mg dose per day of collagen reduced anti-collagen II antibody titer more effectively than a 1 mg/d dose in those with a clinical response. This suggests that antibody titer reduction may be useful in identifying effective responders to oral tolerance treatment.

RheumaShield™ is a synergistic combination of UC II™ in a proprietary blend of Devil's Claw and Bromelain formulated for optimum joint support.

INDICATIONS

RheumaShield™ may be a useful dietary supplement for individuals who wish to support the structure and function of their body's joints.

(continued on reverse)

FORMULA (#8503)

Each Capsule Contains:

UC-II™ 10 mg

Undenatured (native), Type II collagen

In a 25 mg proprietary blend of Standardized Devil's Claw extract and Bromelain.

SUGGESTED USE

Adults take 1 capsule before bed, not with food, or as directed by a physician.

SIDE EFFECTS

No adverse effects have been reported.

STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

REFERENCES

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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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