

LE Magazine October 1999

PRODUCTS

The Life Extension Foundation regularly profiles and evaluates important new products on the market, often making them available directly to you, as well as to Foundation members at a discount via the Life Extension Buyers Club.

Arthritis

...the Facts

New factors have been identified in the pathology of both common forms of arthritis/ osteoarthritis and rheumatoid arthritis. This research has enabled scientists to develop novel natural therapies that work along multiple pathways not taken into account by FDA-approved drugs. These botanical extracts and natural agents have an extraordinary safety profile and a long track record of clinical success in Europe.

The Life Extension Foundation has combined all this new technology into one breakthrough formulation called The ArthroPro System. ArthroPro provides the nutrients shown to alleviate arthritis by:



Suppressing Tumor Necrosis Factor a (TNF-a)

Tumor necrosis factor-a (TNF-a) and another inflammatory cytokine called interleukin-1b (IL-1b) have been recently identified as factors in the destruction of cartilage in both osteo and rheumatoid arthritis. Studies show that the blockade of these aberrant immune factors can produce therapeutic results. Nettle leaf has been shown to reduce the levels of TNF-a and IL-1b. Nettle also inhibits the genetic transcription factor that activates TNF-a in synovial tissue.

A placebo-controlled human trial showed that leaves of the nettle exhibited a potent effect in lowering TNF-a levels in arthritis patients. Another study compared the effects of 200 mg of a NSAID drug with 50 mg of the NSAID in combination with nettle leaf on arthritis patients. Total joint scores improved in both groups by approximately 70%. The addition of nettle extract made possible a 75% dose reduction of the toxic NSAID, while still retaining the same anti-inflammatory effect with reduced side effects.

Anti-arthritic drugs are being developed to suppress TNF-a, but similar effects can be obtained today using the safe nettle leaf. ease note that nettle leaf extract contains different phyto-chemicals than the nettle root extract used to treat benign prostate disease.

Inhibiting COX-2

The most popular prescription drug in the United States works by suppressing the pro-inflammatory enzyme cyclooxygenase-2 (COX-2). Cyclooxygenase and lipoxygenase cause the formation of prostaglandin E2 and leukotriene B4, two pro-inflammatory agents that stimulate other enzymes to degrade cartilage in the joint. Nettle leaf extract contains a variety of natural cyclooxygenase and lipooxygenase inhibitors. While COX-2 inhibition can be obtained from either nettle leaf extract or FDA-approved drugs, only nettle has been shown to also interfere with the TNF-a and IL-1b activation of cartilage destroying enzymes. Nettle leaf has a long tradition of use as a safe adjuvant remedy in the treatment of arthritis in Germany.

The pharmacologically active components of the ginger root have also been shown to inhibit the cyclooxygenase and lipoxygenase pathways. This results in a suppression of the production of pro-inflammatory prostaglandins, thromboxane and leukotrienes, just as the NSAIDs do, but without the side effects. In one experimental arthritis study, rats given ginger oil had less than half the inflammation compared to the controls.

Suppressing leukotrienes

Aspirin has been shown to have a lowering effect on some pro-inflammatory factors, but it can also increase the joint-destroying leukotriene (LTB4) cytokine, which is a major inflammation promoting agent. A study compared the effect on pro-inflammatory substances of aspirin alone with a combination of low-dose aspirin and fish oil. The results showed that the combination of fish oil and low-dose aspirin has significantly more favorable effects than the aspirin alone. The pro-inflammatory LTB4 increased 19% when aspirin was taken by itself, but decreased 69% after intake of aspirin and fish oil together. The combination of low-dose aspirin and moderate intake of fish oil is thus a potent weapon in the regulation of pro-inflammatory leukotrienes.

Preventing the formation of prostaglandin E₂

Omega-3 oils have been shown to suppress the production of prostaglandin E₂ (PGE₂), which contributes to arthritis by degrading collagen needed for the cartilage that lines the joints. PGE₂ is also a pro-inflammatory prostaglandin that contributes to the arthritis inflammatory cascade. A large number of studies have confirmed the usefulness of omega-3 oils in relieving tender joints and morning stiffness, in some cases eliminating the need for NSAID medication. One study found that patients consuming fish oil were able to significantly reduce their NSAID dose compared with a control group. Of 12 published placebo-controlled studies using fish oil to treat arthritis, a decrease in joint tenderness is the most common outcome reported.

Protecting the cartilage matrix

Glucosamine is a naturally occurring substance in the body, synthesized by chondrocytes for the purpose of producing joint cartilage. In osteoarthritis, this synthesis is defective and supplementation with glucosamine has proven to be useful. The body uses supplemented glucosamine to synthesize the proteoglycans and the water-binding glycosaminoglycans in the cartilage matrix. In addition to providing raw material, the presence of glucosamine seems to stimulate the chondrocytes in their production of these substances. Glucosamine also inhibits certain enzymes which destroy the cartilage, e.g. collagenase and phospholipase. By blocking pathogenic mechanisms that lead to articular degeneration, glucosamine delays the progression of the disease and relieves symptoms even for weeks after termination of the treatment.

Many studies confirm the efficacy of glucosamine. One study showed that glucosamine relieved the symptoms as effectively as ibuprofen, and was significantly better tolerated than ibuprofen. The safety of glucosamine can easily be explained by the fact that it is a substance normally used by the body. As with most natural remedies the therapeutic effect of glucosamine does not come immediately, and usually takes some weeks to appear (1-8 weeks). Once achieved, it tends to persist for a notable time even after discontinuation of the treatment.

Chondroitin sulfate is a major component of cartilage. Like glucosamine, chondroitin sulphate attracts water into the cartilage matrix and stimulates the production of cartilage. Likewise, it has the ability to prevent enzymes from dissolving cartilage. Although the absorption of chondroitin sulfate is much lower than that of glucosamine (10-15% versus 90-98%), recent studies have shown very good results from long-term treatment with chondroitin sulfate, reducing pain and increasing range of motion. Glucosamine alone or in combination with chondroitin sulfate has the ability to repair and improve joint function in addition to providing pain relief.

Glucosamine is extensively used as a drug for osteoarthritis in Europe, and it has been readily available in health food stores in the United States for many years. Chondroitin sulfate is often combined with glucosamine because of the synergistic effects these two cartilage-protecting nutrients have shown. Fish oil supplements are popular to prevent cardiovascular disease, but some arthritis patients find it difficult to use fish oil because of gastric upset. Pharmaceutical nettle leaf, salicin and ginger oil extracts are not widely sold in the United States. For the first time, all of these cartilage-protecting and anti-inflammatory nutrients, including enterically-coated fish oil capsules, have been put together in one convenient formula.

For information about the complete arthritis formula described above [Click Here](#).

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