

## Don't Let Arthritis Slow You Down

By Dr. James Meschino

Arthritis is a collection of diseases - more than 100, in fact - characterized by joint pain and other troubling symptoms. Rheumatoid arthritis (RA) can be particularly problematic because current scientific thinking views RA as an autoimmune disease, whereby the body's immune system actually attacks its own tissues as if it were a foreign invader. Fortunately, science also suggests there are natural ways to deal with the pain and mobility limitations of RA without having to rely exclusively on drugs.

Rheumatoid arthritis (RA) is a chronic condition that causes joint pain and loss of mobility. Approximately 3 percent of the population is affected, with women outnumbering men by approximately three to one. In more severe cases RA can lead to health complications such as eye inflammation, neurological problems, inflamed blood vessels, disorders of the lymph system, and even cardiac issues.



Several important clinical trials suggest supplementing with antioxidant vitamins and minerals, specifically vitamin E, vitamin C and selenium, can help manage RA. In many cases, the need for anti-inflammatory drugs (which are commonly prescribed to arthritis patients) can be significantly reduced and sometimes eliminated when antioxidant supplementation is co-administered. This is important because long-term use of anti-inflammatory drugs is associated with many adverse and life-threatening side effects. As such, any safe and effective treatment that reduces the need to take these

medications is worth considering.

### **Vitamin E**

Vitamin E has been shown to modulate the activity of two important enzymes (called cyclooxygenase and lipoxygenase) that contribute to inflammation. One study tested vitamin E supplementation against the anti-inflammatory drug diclofenac sodium in hospitalized RA patients. Patients were administered 400 mg of natural vitamin E, three times daily, or the standard anti-inflammatory dosage of diclofenac sodium. After three weeks of treatment, both groups showed the same significant degree of improvement with respect to joint stiffness, improved grip strength, and pain reduction. Duration of morning stiffness was reduced in the vitamin E group from 90 to 68 minutes compared with 68 to 30 minutes in the diclofenac group. Both physicians and patients considered both interventions to be similarly effective, and indicated that the use of vitamin E in these cases could help to reduce the incidence of serious side effects associated with the use of anti-inflammatory drugs.

Other clinical studies using vitamin E as a treatment for RA have shown more modest improvement; however, even these researchers concluded that vitamin E's small but significant pain-relieving effect justifies using this vitamin as a complement to standard anti-inflammatory treatment.

### **Vitamin C**

In regards to Vitamin C and rheumatoid arthritis, a few studies show that RA patients tend to have low blood levels and white blood cell levels of vitamin C. It is known that white blood cells use vitamin C at a faster rate when fighting an infection and that vitamin C modulates the activity of cyclooxygenase and lipoxygenase enzymes within white blood cells in a similar manner as vitamin E. Animal studies suggest that vitamin C reduces inflammation and swelling, and contributes to greater pain tolerance in animals with arthritis. These findings are encouraging for RA patients, particularly if continuing research proves that this benefit applies to humans as well.

### **Selenium**

The mineral selenium also participates as an antioxidant by activating the enzyme glutathione peroxidase. In this role, selenium attaches to four different sites on the glutathione peroxidase enzyme, thereby activating its antioxidant capabilities. Patients with rheumatoid arthritis have been shown to have lower blood levels of selenium. In an important 1997 study, patients given 200 micrograms of selenium daily for three months

reported fewer tender and swollen joints, and less morning stiffness. They also required lower doses of anti-inflammatory medication than patients in the control group (who weren't taking daily selenium).

### **Medication Isn't the Only Answer**

The administration of the antioxidant vitamins E and C, as well as the mineral selenium, to patients suffering from rheumatoid arthritis represents a scientifically sound complementary intervention that has been shown to enhance the reduction of joint pain, swelling and tenderness in clinical and experimental studies. Some of the biological mechanisms through which these antioxidants act to reduce the synthesis of inflammatory mediators within the joint synovial tissues have been documented.

It is important to note that the doses of these micronutrients associated with reduction of RA signs and symptoms are at levels well beyond what an individual can derive from food alone. Therefore, supplementation of these nutrients is required to achieve the desired results in RA cases. As a precautionary note, vitamin E intake above 400 IU per day may potentiate the effects of anticoagulant drugs (coumadin, warfarin, Plavix, aspirin), and possibly lead to a bleeding disorder. However, aside from this potential adverse side effect, there are few other instances where antioxidant supplementation (at the above noted dosages) is of concern or contraindicated. Of course, always talk to your doctor first so the two of you can outline an appropriate strategy for reducing your RA symptoms without having to rely exclusively on medication.

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### **Ideal Food Sources of Vitamin C, Vitamin E and Selenium**

#### **High in Vitamin C**

- Citrus fruits
- Bell peppers



#### **High in Vitamin E**

- Wheat germ oil
- Nuts and seeds
- Green leafy vegetables



### **High in Selenium**

- Nuts (especially Brazil nuts)
- Tuna and various other fish
- Wheat flour



### **High in All Three**

- Spinach
- Broccoli
- Mustard greens/seeds

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