

RHEUMATOID ARTHRITIS



Rheumatoid arthritis (RA) is a degenerative autoimmune disease in which the joints are attacked by an abnormal immune response and slowly destroyed. The first symptoms typically appear between the ages of 25 and 50, although it can occur at any age, even childhood (juvenile RA). Unlike osteoarthritis (OA), RA is a systemic disease. It can affect organ systems throughout the body, not just the joints. Problems associated with RA include inflamed blood vessels, heart attack, neuropathy, lung complications, and others.

The earliest signs of RA are tiny injuries to the synovial membrane and an increase in the number of synovial cells. At this point, long before symptoms are experienced, there is evidence of immune cell penetration into the synovial membrane. Over time, the immune response continues to gain momentum and inflict damage on the synovial membrane. This entire process is characterized by inflammation. Mast cells, which secrete pro-inflammatory cytokines, migrate into the synovium, along with by-products of other immune cells, including lymphocytes, macrophages, and fibroblasts. The result is an increase in cytokines, which is responsible for the symptoms of RA. The exact mechanism of bone and cartilage destruction during RA is not completely understood. One theory suggests that the pro-inflammatory cytokines interleukin-1 and tumor necrosis factor-alpha (TNF-alpha) stimulate the production of enzymes that degrade cartilage and inhibit the production of new cartilage and also contribute to the local demineralization of bone by activating osteoclasts (cells that break down bone).

RA symptoms are caused by chemical messengers called cytokines. It is thought that the release of interleukin-1, TNF-alpha, and interleukin-6 into the circulation system may account for systemic symptoms such as malaise and fatigue. In fact, these symptoms, along with weakness and vague musculoskeletal symptoms, are often the first indication of any disease. They may last for weeks or months, during which time a diagnosis may be difficult to make. It is not until specific, joint-related symptoms appear that RA is diagnosed.

A definitive diagnosis of RA is usually made by identifying the characteristic symptoms of the disease. The disease is usually obvious within one to two years of its onset. To diagnose the disease, four of the following seven criteria are required:

- Morning stiffness lasting one hour before improvement
- Swelling and joint effusion in at least three different joints out of 14 specifically identified joints
- Swelling of wrist or finger joints specifically
- Symmetric swelling involving the same joint on both sides of the body
- Rheumatoid nodules
- Rheumatoid factors in the blood
- Typical changes seen in x-rays, including erosions or decalcification in involved joints.

MANAGEMENT OF RHEUMATOID ARTHRITIS

The value of nutrients is well known when it comes to arthritis. Even conventional textbooks recommend that people with arthritis consume a diet rich in natural anti-inflammatories, antioxidants, and joint-supporting nutrients while avoiding pro-inflammatory foods that are high in sugar and saturated and trans-fatty acids. Some people also find relief by avoiding foods that contain gluten, such as wheat, rye, oats, and barley. Antiglutin antibodies have been found in many people with RA.

Effective arthritis treatment includes the protection of the cartilage and synovial fluid in the joint against further destruction. In addition, it is important to stimulate anabolic restoration of joint cartilage and synovial fluid. Chondroprotective agents are compounds the body produces to regenerate cartilage and maintain healthy joint function. Chondroprotective agents protect and restore joint cartilage by a variety of mechanisms: They enhance development of chondrocytes, enhance the synthesis of synovial fluid, and inhibit free radical damage to proteins and joint cartilage degradation by autoimmune processes.

WHERE SCIENCE MEETS NUTRITION®

These statements have not been evaluated by the U.S Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

Copyright© 2007 NutriLab, LLC, a division of Stella Pharmaceutical Company Inc. All Rights Reserved.

P.O. Box 895, 260 Docks Corner Road, Dayton, NJ 08810 Tel: 800-379-9979 Fax: 800-379-6374 www.customvite.com

RHEUMATOID ARTHRITIS



RHEUMATOID ARTHRITIS PROTOCOL

The following is a list of supplements that include natural anti-inflammatories, antioxidants, chondroprotective agents, various minerals and amino acids that can be used as a supplemental program for patients with rheumatoid arthritis. These supplements can help alleviate some of the pain, discomfort and swelling associated with RA.

SUPPLEMENT	DOSAGE
Vitamin C	1000 mg
Vitamin E	400 IU
Thiamin (Vitamin B1)	50 mg
Riboflavin (Vitamin B2)	50 mg
Niacin (Niacinamide) (Vitamin B3)	50 mg
Pantothenic Acid (Vitamin B5)	50 mg
Pyridoxine Hydrochloride (Vitamin B6)	50 mg
Methylcobolamin (Vitamin B12)	200 mcg
Magnesium	600 mg
Zinc	25 mg
Selenium	200 mcg
Copper	2 mg
Ginger	100 mg
Grape Seed Extract	300 mg
Turmeric	500 mg
Borage Oil	2000 mg
Co-Enzyme Q10	100 mg
Fish Oil	2000 mg
Boswellia	400 mg
Arginine	2000 mg
Carnitine	1000 mg
N-acetylcysteine (NAC)	600 mg
Citrus Bioflavonoids	300 mg
Glucosamine HCl	500 mg
Lipoic Acid	300 mg
Quercetin	500 mg
Methylsulfonylmethane (MSM)	3000 mg

RECOMMENDATIONS

The supplements in the listed protocol are a general recommendation with an average dosage. By using the CustomVite program, our team of nutritionists have the ability to customize each supplement (or even add/delete) to a patients' unique nutritional requirements. Dosages can be adjusted accordingly to help improve your patients overall nutritional status. This recommendation does not take into account drug-nutrient interactions. By having the patient provide us with their current prescriptions and supplements through our Lifestyle and Medical History Questionnaire, we can cross reference their information to determine if there are any interactions for their personalized formulation.

WHERE SCIENCE MEETS NUTRITION®

www.medicinenet.com/rheumatoid_arthritis/article.htm

Fish oil may ease arthritis pain. (April 2008) v13 i4 p.1-3. *Nutraceuticals International*, 13, 4. p. 1-3.

Heiberg, T, Kvien, T, Mowinckel, P, Aletaha, D, Smolen, J, & Hagen, K (July 2008). Identification of disease activity and health status cut-off points for the symptom state acceptable patients with rheumatoid arthritis. *Annals of the Rheumatic Diseases*, 67, 7. p.967(5).

Madden, J. (July 2, 2008). Managing patients with resistant rheumatoid arthritis. *Nursing Standard*, 22, 43. p.51(8).