Glucosamine and Chondroitin

By: Joel Hirschberg, MD Medical Director, Arthritis Education Program Eisenhower Medical Center

Osteoarthritis (OA) is the most common type of arthritis, affecting more than 21 million people in the United States. This degenerative condition, characterized by joint pain, stiffness and limited mobility, can occur in any joint, but generally affects the hands, knees, hips or spine.

Moderate pain can often be managed with over-the-counter pain relievers. More severe pain, however, must be managed with prescription medications. Some of these drugs, known as COX-2 Inhibitors, include Vioxx® and Celebrex®, the subject of recent controversy about their possible role in increasing cardiovascular risks.

Some OA patients are unable to take prescription drugs, or even over-the-counter medications, because of side effects or another medical condition. Growing numbers of these patients – and many others seeking a more "natural" treatment – are turning to the dietary supplements glucosamine and chondroitin sulfates for relief from the pain and stiffness of OA.

Glucosamine and chondroitin are natural substances found in the body. Glucosamine is a form of amino sugar believed to play a role in cartilage formation and repair. Chondroitin sulfates are part of a protein molecule that gives cartilage its elasticity.

Glucosamine (extracted from shellfish) and chondroitin (from animal cartilage) are being manufactured and widely marketed as effective natural remedies for OA.

So far, studies about the effectiveness of these supplements have been inconclusive. Complicating the matter is the fact that because dietary supplements – unlike prescription drugs – are not regulated by a federal agency, the amount and purity of the active ingredients can vary significantly, with some products containing less than 5 percent of the amount claimed on the label!

Fortunately, patients and health care practitioners should soon have a definitive answer about the effectiveness of glucosamine and chondroitin in the treatment of OA. The Glucosamine/Chondroitin Arthritis Intervention Trial (GAIT) study is in its final stage. It is the first United States multi-center trial to evaluate the efficacy, safety and side effects of the dietary supplements.The $14 million study, funded by the National Institutes of Health (NIH),was coordinated by the University of Utah School of Medicine.

Thirteen research centers across the country enrolled almost 1,600 patients with OA of the knee to evaluate the effectiveness of glucosamine and chondroitin sulfates. The primary measure was improvement in pain, with improvement in function as a secondary outcome. The study assessed the results of patients taking: glucosamine alone chondroitin sulfates alone glucosamine and chondroitin sulfates together Celebrex a placebo GAIT data are currently being analyzed and study results should be available by the end of this year.

"Complementary and alternative treatments are increasingly popular among consumers who are interested in other options to improving pain and achieving optimal health," notes William R. Harlan, MD, of the NIH's National Center for Complementary and Alternative Medicine. "Providing solid evidence on the benefits and safety of this treatment may help expand health care options for patients challenged with this condition." EVENTS Call 760-773-4535 for information. Reservations required. Annenberg Center for Health Sciences at Eisenhower. Osteoporosis – The Great Bone Robbery December 16, 1:30 to 3 p.m. Maria Greenwald, MD, Rheumatologist*; moderated by Joel Hirschberg,MD, Medical Director, Arthritis Education Program

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