

JOINT HEALTH

Joints are areas where two or more bones meet. They are made up of cartilage (connective tissue that covers the bones of joints, reducing friction), synovial membrane and fluid (to provide joint protection and lubrication), ligaments and tendons (bands of connective tissue that provide support and control movement) and bursas (fluid-filled sacs that provide cushion). Most joints are mobile, allowing skeletal movement.

Several scientific studies have demonstrated the joint-protective and supportive actions of certain supplements, including glucosamine, chondroitin, and MSM (methylsulfonylmethane). Glucosamine is an amino sugar that stimulates the synthesis of glycosaminoglycans, the major structural component of cartilage, and aids in replenishing joint fluid.¹

Chondroitin aids in maintaining the structural integrity of connective tissue, including cartilage. Chondroitin attracts fluid into cartilage, making it more shock-absorbent.² MSM is a natural source of sulfur which may have soothing properties and is needed for the synthesis and maintenance of cartilage.^{2,3}

Studies show that omega-3 fatty acids found in fish oil may promote joint health. Two of the acids contained in fish oil—eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA)—reduce the production of prostaglandins and leukotrienes. After several other small studies, a formal trial was launched in which some patients received fish oil capsules and others received a placebo. The researchers noted that after 14 weeks the patients taking fish oil reported a delay in the onset of fatigue. Clinical studies also indicate that omega-3 fatty acids help improve bone strength and the deposition of calcium into bones.⁴

1. University of Maryland Medical Center. Glucosamine. 2008. Available at: <http://www.umm.edu/altmed/articles/glucosamine-000306.htm> Accessed December 18, 2008.
2. Jellin JM, Gregory PJ, Batz F, Hitchens K, et al. Pharmacist's Letter/Prescriber's Letter Natural Medicines Comprehensive Database. 9th ed. Stockton, CA: Therapeutic Research Faculty; 2007.
3. University of Maryland Medical Center. Sulfur. 2007. Available at: <http://www.umm.edu/altmed/articles/sulfur-000328.htm> Accessed December 22, 2008.
4. University of Maryland Medical Center. Omega-3 Fatty Acids. 2009. Available at: <http://www.umm.edu/altmed/articles/omega-3-000316.htm> Accessed June 12, 2009.

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