



## Chondroitin

Stock #1811-5 (60 capsules)

Osteoarthritis, also known as degenerative joint disease, is the most common type of arthritis and is typically seen in the elderly. In America alone, over 40 million people suffer from osteoarthritis, 80% of which are over 50. This deteriorating condition is more often seen in men under 45; however, after age 45, women are 10 times more likely to develop it than men.<sup>1</sup>

Osteoarthritis is believed to result from the body's inability to manufacture nutrients essential for maintaining the health of joint cartilage and its proper function. This condition most often affects the weight-bearing joints, such as the knees and hips, as well as the joints of the hands. Cartilage deterioration is succeeded by hardening and formation of bone spurs in the joint margins, causing pain, deformity, and limited range of motion. Early warning signs of osteoarthritis can be as subtle as joint stiffness in the mornings; however, as the conditions worsens, individuals suffer increasing pain when moving affected joints—prolonged activity exacerbates the pain, while rest relieves it.<sup>1</sup>

Glycosaminoglycans (GAGs), also referred to as mucopolysaccharides, constitute the primary structural components of joint cartilage, along with collagen and water. Chondroitin sulfate is one of the main GAGs. In fact, according to a study published in *Clinical Experiments in Rheumatology*, individuals suffering from joint deterioration and arthritis exhibit lower levels of chondroitin sulfate than those without the condition. The body naturally manufactures small amounts of chondroitin sulfate for the purpose of drawing and maintaining fluids within joint cartilage. These fluids provide essential nutrients which protect cartilage from being destroyed by certain enzymes.<sup>2,3</sup>

Chondroitin sulfate supplementation helps stimulate joint repair by promoting the production of substances required for healthy joint function, and by reducing pain and inflammation. Studies indicate chondroitin sulfate provides anti-inflammatory effects within joints, inhibits enzymes known to destroy cartilage, and acts as a governing agent for cartilage metabolism. Chondroitin sulfate also facilitates the circulation of fluids to the joints, thus enhancing and maintaining elasticity and ease-of-movement.<sup>4,5</sup>

According to research published in *Herbs For Health*, various clinical studies have shown that both chondroitin injections and oral supplements are effective in relieving the pain and inflammation associated with osteoarthritis, as well as improving joint function and mobility and reversing joint degeneration, as observed by radiographs. Observed reversal of degeneration included increases in the quantity and volume of joint connective matrix and synovial fluids. European studies have confirmed the effectiveness of chondroitin sulfate supplementation for repairing damaged cartilage. Furthermore, chondroitin sulfate may also help osteoarthritis patients by improving cartilage function.<sup>1,2,3,6</sup>

NSP's Chondroitin contains 300mg of chondroitin sulfate in each preservative-free capsule.

### References:

- 1 Murray, Michael T. *Encyclopedia of Nutritional Supplements*. Rocklin, CA: Prima Publishing, 1996.
- 2 *Amazing Medicine The Drug Companies Don't Want You To Discover*, Tempe, AZ: University Medical Research Publishers, 1993.
- 3 Emerich, M. and Bertani, E. "Arthritis Remedies Debated." *Herbs For Health*; Vol. 2, No. 6.
- 4 Conte, A., et al. "Biochemical and Pharmacokinetic Aspects of Oral Treatment with Chondroitin Sulfate." *Arzneim Forsch*; 1995, 45 (3), 918-925.
- 5 Healthplus Nutrition Database: SDI, Inc., 1994.
- 6 "Chondroitin Sulfate." *The Healthy Cell News*. Young, AZ: ALV Publishers Inc., 1997.