



Benefits of ORALLY ADMINISTERED Chondroitin Sulfate

The ground-breaking work regarding chondroitin sulfate and nutrition of the disc is a textbook by Cole, Ghosh and Taylor titled The Biochemistry of the Disc. The following studies add to this.

50 patients with osteodegenerative arthritis of the knee were given 800 to 1200 mg of chondroitin sulfate daily or 500 mg of pain medication. At 3 months, a biopsy of each showed repair of the patients taking chondroitin sulfate.

(Pepitone VR: Chondroprotection with chondroitin sulfate.
Drugs in Experimental and Clinical Research 1991; 17(1):3-7)

Chondroitin is undersulfated in the posterior annulus and nucleus in degenerative disc disease. The SO₄ is negative radical for Donnan Equilibrium.

(Hutton et al: Analysis of chondroitin sulfate in lumbar intervertebral discs at two different stages of degeneration as assessed by discogram. J of Spinal Disorders 1997; 10(1))
*(See article on **SULFATE'S IMPORTANCE FOR CARTILAGE METABOLISM.**)*

120 patients with osteodegenerative arthritis of the hip and knee were given chondroitin sulfate or placebo. At 3 months, the chondroitin sulfate patients reported pain relief. It was taken morning and evening. Results were reported in 2 to 8 weeks.

(Olivero U et al: Effects of treatment with matrix on elderly people with chronic articular degeneration.
Drugs in Experimental and Clinical Research 1991; 17(1):45-51)

A six month trial of 800 mg of chondroitin sulfate versus placebo was set up in 80 patients with osteoarthritis of the knee. Patients taking CS reported reduced pain medication use and walked faster.

(Bucci L, Poor G: Efficacy and tolerability of oral chondroitin sulfate as a symptomatic slow-acting drug for osteoarthritis in the treatment of knee osteoarthritis.
Osteoarthritis and Cartilage 1998; 6(A):31-6)

24 patients with osteoarthritis were give 800 mg chondroitin sulfate a day for 10 days. Joint aspiration then showed

1. decreased phospholipase A₂,
2. increased hyaluronic acid concentration, and
3. decreased collagen enzyme breakdown.

Oral chondroitin sulfate reaches target tissues in less than 2 weeks.

(Ronca F: Anti-inflammatory activity of chondroitin sulfate.
Osteoarthritis and Cartilage 1998; 68(A):14-21)

42 patients with osteoarthritis of the knee were given 800 mg CS a day. Chondroitin patients showed less pain, better mobility and stabilization of the joint space narrowing. Placebo patients progressed in their degeneration.

(Uebelhart : Effects of oral chondroitin sulfate on the progression of knee

osteoarthritis: a pilot study. *Osteoarthritis and Cartilage* 1998; 6(A):39-46)

Glycosaminoglycan is chondroprotective if aspirin and NSAIDS are minimal. Oral administration is best as serum level is constant with GAG (glycosaminoglycan).

(Bucci LR: Reversal of osteoarthritis by nutritional intervention.
ACA Journal of Chiropractic 1990)

30 patients with low back pain (mean age of 51 years) were given chondroitin sulfate (a drug called Structum) orally by the dose of 1 gram per day for 24 weeks. 73% of patients showed relief and improvement in spinal function. CS is now included in the treatment of low back pain as a chondroprotective drug.

(Shostak NA et al: Low back pain in spinal osteochondrosis: experience of treatment with chondroprotective drug. (article is in Russian).
Terapevtichjeskil Arkhiv 2002; 74(2):67-69)

Researchers tested Structum (drug name in Russia for orally taken chondroitin sulfate) to test clinical response and tolerance in patients with low back pain and comorbid cardiovascular disease. Structum significantly relieved pain intensity, spinal motility, increased exercise tolerance. 71% of patients reported excellent and good responses to Structum. 92% reported good tolerance to Structum. The effects lasted for 3 months post care. Arterial pressure went down noticeably too. Structum is highly effective in the treatment of low back pain.

(Mazurov VI, belyaeva IB: Structum in combined treatment of low back pain syndrome. (article is in Russian).
Terapevtichjeskil Arkhiv 2004; 76(8):68-71)