

Chondroitin ineffective for pain relief in severe knee osteoarthritis

Clinical question Is chondroitin sulphate effective for pain relief or for preventing progression of osteoarthritis of the knee in patients with severe disease?

Bottom line After two years of treatment, chondroitin sulphate had no effect on comfort in patients with severe degenerative arthritis of the knee. Compared with placebo, however, it appears that chondroitin may have a small protective effect on the joint. The clinical relevance of this effect is not known.

Synopsis Patients between the ages of 40 and 85 years with clinically symptomatic knee osteoarthritis (OA) according to American College of Rheumatology criteria were eligible to participate in this study unless they had severe changes on x-ray (severely narrowed joint space with sclerosis of subchondral bone). The authors excluded patients with secondary OA and those with the most severe symptoms. The patients were randomly assigned (concealed allocation) to receive 800mg chondroitins 4 and 6 sulphate (n=150) or placebo (n=150) for two years. The main outcomes, assessed via intention to treat, were radiographic progression and symptom relief as measured by the WOMAC Index (Western Ontario and

McMaster Universities Osteoarthritis Index). Participants and study personnel did not know to which group the patients were assigned until the conclusion of the study. Even though only 219 patients of the 300 (73 per cent) completed the two-year study, the researchers carried forward the last observation (a debatable approach) and did an x-ray at the time of dropping out. At the end of two years, the patients taking chondroitin experienced no change in their joint space width from baseline; the patients taking placebo had narrowing of their joint space by an average 0.14mm (\pm 0.57mm; P=0.04). So it looks as if chondroitin may protect the joint from further deterioration. It had no effect, however, on pain.

Level of evidence 1b (individual randomised controlled trial with narrow confidence interval).

Reference Michel BA, Stucki G, Frey D, et al. Chondroitins 4 and 6 sulfate in osteoarthritis of the knee: a randomized, controlled trial. *Arthritis and Rheumatism* 2005;52:779–86.

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