



Q & A

Glucosamine, Chondroitin and Joint Health

Q. What is GAIT?

- A. The Glucosamine/chondroitin Arthritis Intervention Trial (GAIT) was a clinical trial sponsored by the National Institutes of Health (NIH) that demonstrated promising benefits for osteoarthritis patients. Results of the GAIT study appear in the Feb. 23 issue of the *New England Journal of Medicine* (NEJM).

Q. What was the study design?

- A. The six month trial involved nearly 1,500 osteoarthritis patients who were given 1,500 mg/day of glucosamine hydrochloride and/or 1,200 mg/day chondroitin sulfate vs. 200 mg/day of the common prescription pain medication celecoxib or placebo. The trial is being continued to also determine longer-term results.

Q. What did the study find?

- A. GAIT showed that the combined use of glucosamine and chondroitin supplements provided significant pain relief in those who need it most—those coping with moderate-to-severe joint pain due to osteoarthritis. Osteoarthritis—a chronic condition known as the “wear-and-tear” kind of arthritis—afflicts 21 million Americans each year, a large percentage of whom suffer moderate-to-severe knee and joint pain.

Q. Can these supplements also help in preventing osteoarthritis?

- A. Although this study focused on pain management rather than prevention, there is a good deal of other published research that suggests glucosamine and chondroitin may also similarly help others at risk for osteoarthritis or those who are experiencing joint discomfort. Further research is needed to conclusively determine whether glucosamine and chondroitin reduce the risk of developing osteoarthritis in those who are at risk.

Q. Is this the first study to show positive results for glucosamine and chondroitin?

- A. No. In fact, these new findings are supported by the vast majority of more than 50 published clinical trials that have demonstrated the safety and benefit of the two supplements. There is a growing body of scientific evidence showing that the two supplements can safely alleviate pain from osteoarthritis.

Q. Does this mean that people should stop taking prescription drugs for arthritis?

- A. No. While the scientific evidence indicates that glucosamine and chondroitin can provide pain relief at a level similar to that of certain drugs, consumers should not stop or reduce using current prescribed or recommended medications without talking to their doctor first.

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Q. Who should take glucosamine and chondroitin?

- A. The weight of the scientific research shows promising results for use of glucosamine and chondroitin by people who want to safely alleviate joint discomfort and maintain joint health, including those with osteoarthritis and those at risk, such as the elderly and athletes.

Q. What is glucosamine and chondroitin?

- A. Both are substances found naturally in the body. Glucosamine is a form of amino sugar that is believed to play a role in cartilage formation and repair. Chondroitin sulfate is part of a large protein molecule (proteoglycan) that gives cartilage elasticity. Both products are sold, either alone or in combination, as dietary supplements.

Q. What dose should I take, and when can I expect to feel relief from discomfort?

- A. The dosages that have been most widely studied include 1500 mg per day of glucosamine and 1200 mg per day chondroitin, either alone or in combination. As a dietary supplement, glucosamine is available in both the sulfate and hydrochloride forms. Both have been shown to be safe and effective in clinical trials. The GAIT study used the hydrochloride form of glucosamine. In general, these supplements tend to act in a manner distinct from traditional analgesics (pain reducers). Rather than simply masking the pain, these supplements help to either restore or reduce the degradation of joint cartilage. This process takes a significantly longer amount of time (weeks to months vs. hours to days for traditional pain products). Therefore, glucosamine and chondroitin users need to exercise patience and allow a sufficient amount of time for the supplements to act.

Q. Are these products regulated?

- A. All dietary supplements, including glucosamine and chondroitin, are regulated as a category of food by the Food and Drug Administration. In addition, the Federal Trade Commission regulates the industry's advertising practices to protect consumers from fraudulent claims and create a fair competitive environment for businesses.

Q. How many people have arthritis?

- A. Sixty-six million Americans—nearly one in 3 adults—have various forms of arthritis, the leading cause of disability among Americans over age 15, according to the Arthritis Foundation. Of these, 21 million suffer from osteoarthritis.

Q. What is osteoarthritis?

- A. Osteoarthritis is a type of arthritis that is caused by the breakdown and eventual loss of the cartilage of one or more joints. Cartilage is a protein substance that serves as a "cushion" between the bones of the joints. Osteoarthritis is also known as degenerative arthritis. Those at highest risk for osteoarthritis include the elderly, over-weight or obese individuals, post-menopausal women and those participating in high-impact exercises.

Q. Where should people go to get more information?

- A. A good place to start is the web site of the Arthritis Foundation, which is also encouraged by the recent findings: www.arthritis.org. The Council for Responsible Nutrition also has information on our web site: www.crn.org.