



Glucosamine

Stock #903-4 (60 capsules)

Glucosamine occurs naturally in the body to stimulate the production of connective tissue—the primary ingredient which makes up cartilage—in the joints. In some people, production of glucosamine slows with age, leaving cartilage unable to retain water and function as a shock absorber. This inability to create glucosamine is considered a major factor in the development of osteoporosis. Many double-blind studies have found glucosamine provides significantly greater results than commonly prescribed arthritis drugs. In fact, glucosamine supplements are not only successful as a natural analgesic (pain-reliever), but also may actually aid the body in repairing arthritic joints by promoting the growth of new cartilage. Glucosamine has no known toxicity.

A double-blind clinical trial, published in *Current Medical Research and Opinion*, demonstrated that glucosamine provided significant pain relief for unilateral osteoarthritis of the knee. The study, which lasted 8 weeks, compared those taking glucosamine (1.5 grams glucosamine sulfate daily) with individuals given ibuprofen (1.2 grams ibuprofen daily).

Although pain relief was more quickly realized by the ibuprofen group during the first 2 weeks, by week the end of the study, those taking glucosamine had significantly less pain than the ibuprofen-users.

An Italian study determined glucosamine treatment for inflammatory disorders proved 10-30 times better than treatment with a leading drug (indocin), due to the drug's extremely high toxicity (1,000-4,000 times greater than glucosamine). Inflammatory disorders, such as osteoarthritis, often require long-term treatment making toxicity an essential factor to be considered. Drugs normally provide only symptomatic relief and often encourage the disease process. In contrast, glucosamine actually promotes healing and repair of the joint material, focusing on the cause of osteoarthritis, as well as relieving pain and symptoms safely and without adverse side effects. Glucosamine also shows no contraindications or negative interactions with other drugs. In rare instances, glucosamine may cause some degree of gastrointestinal upset, nausea or heartburn, but is easily remedied by taking the supplement with a meal.

Benefits from taking glucosamine are reported to be cumulative, providing greater results the longer taken. As mentioned above, glucosamine is not like an anti-inflammatory or pain-killing drug that works immediately—glucosamine often takes longer to work, but has been shown to produce significantly better results than conventional drug therapy. Once substantial relief has been achieved, many people have been able to cut the dosage to half. Others, if continuing pain-free after one month at half-dosage, have been able to discontinue using glucosamine altogether.

According to research published in *Drug Research*, glucosamine is completely ionized in the stomach (pH 1-3) in the presence of hydrochloric acid, making it an easily absorbable and bioavailable substance. Research also shows that since the sulfate ions in glucosamine sulfate are also quickly dissolved in the presence of stomach acid, both forms of glucosamine supplements—glucosamine sulfate and glucosamine hydrochloride—should offer equally effective results. Individuals avoiding unnecessary intake of sodium may wish to use the hydrochloride version of glucosamine, as the sulfate form is comprised of as much as 26% sodium.

Although more studies using glucosamine sulfate are available than those using glucosamine hydrochloride (primarily because the majority of studies conducted thus far used the sulfate form of glucosamine originally available from the pharmaceutical companies for testing)—one study, published in *Pharmacological Research Communications* found that glucosamine hydrochloride enhanced proline synthesis—an important component of cartilage production—and sulfur incorporation by cartilage. Sulfur is found in highest concentrations in the joints, hair, nails, and skin, and is necessary for collagen synthesis—collagen is the primary component of connective tissue formation, necessary for building strong bones. Thus, glucosamine hydrochloride helps draw sulfur already present in the body into the cartilage to be used to maintain and repair connective tissues.

Each capsule of Glucosamine contains:

Glucosamine hydrochloride - 400mg
Uña de gato (cat's claw) - 50mg

Cat's claw contains numerous health-promoting substances, including polyphenols, triterpenes, and the plant sterols beta-sitosterol, campesterol, and stigmasterol, which contribute to cat's claw's anti-inflammatory, antioxidant, antitumor, and antiviral activity. Cat's claw also contains proanthocyanidins, powerful antioxidants which prevent free radical damage, strengthen the cardiovascular system, reduce inflammation and swelling, and protect collagen from damage. Cat's claw is a popular treatment for arthritis.