



NUJOINT 900 Glucosamine/Chondroitin 500Mg/400Mg Caplet

INDICATED CLAIMS

- Helps to relieve joint pain Associated with osteoarthritis.
- Helps to relieve pain Associated with osteoarthritis of the knee.
- Helps to protect against the deterioration of cartilage.
- A factor in Maintaining healthy cartilage and / or joint health.

GENERAL INFORMATION

Glucosamine is an amino monosaccharide found in chitin, glycoproteins and glycosaminoglycans (formerly known as mucopolysaccharides) such as hyaluronic acid and heparin sulfate. Glucosamine is also known as 2-amino-2-deoxyglucose, 2-amino-2-deoxy-beta-D-glucopyranose and chitosamine; Glucosamine is available commercially as a nutritional supplement in three forms: glucosamine hydrochloride or glucosamine HCl, glucosamine sulfate and N-acetyl glucosamine.

The glucosamine used in supplements is typically derived from marine exoskeletons. Synthetic glucosamine is also available. Chondroitin sulfate belongs to a family of heteropolysaccharides called glycosaminoglycans or GAGs. Glycosaminoglycans were formerly known as mucopolysaccharides. GAGs in the form of proteoglycans comprise the ground substance in the extracellular matrix of connective tissue. Chondroitin sulfate is made up of linear repeating units containing D-glucosamine and D-glucuronic acid. Chondroitin sulfate is found in humans in cartilage, bone, cornea, skin and the arterial wall. This type of chondroitin sulfate is sometimes referred to as chondroitin sulfate A or galactosaminoglucuronoglycan sulfate.

Chondroitin sulfate C, primarily found in fish and shark cartilage, but also in humans, is also made up of linear repeating units of D-galactosamine and D-glucuronic acid.

For Accidental Overdose (such as child ingesting formula)

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Chondroitin sulfate C is sometimes called chondroitin 6-sulfate. Chondroitin sulfate B is also known as dermatan sulfate. It is abundant in skin and is also found in heart valves, tendons and arterial walls.

The source of chondroitin sulfate used in nutritional supplements includes the cartilaginous rings of bovine trachea and pork byproducts (ears and snout). Shark cartilage and whale septum cartilage have also been used to obtain chondroitin sulfate. Chondroitin sulfate supplements are usually isomeric mixtures of chondroitin sulfate A (chondroitin 4-sulfate) and chondroitin sulfate C (chondroitin 6-sulfate).

The Possible actions of orally administered chondroitin sulfate include promotion and maintenance of the structure and function of cartilage (referred to as chondroprotection), pain relief of osteoarthritic joints and anti-inflammatory activity.

Some early studies indicated significant efficacy. Recently, however, large studies have emerged that call much of the prior positive evidence into some degree of question. Some contend, however, that when the "propel" form of glucosamine is used good results are obtained. Older studies are analyzed first below, followed by summaries of the more recent, less positive work and an explanation of the ensuing and ongoing controversy.

Two meta-analyses dating back some years reported that glucosamine is useful in the treatment of osteoarthritis. One of these meta-analyses included all double-blind, placebo-controlled trials that lasted four weeks or longer. This meta-analysis also included trials that studied the effects of chondroitin sulfate

PHARMACOKINETICS

About 90% of glucosamine administered orally as a glucosamine salt gets absorbed in the small intestine, and from there it is transported via the portal circulation to the liver. It appears that a significant fraction of the ingested glucosamine is catabolized by first-pass metabolism in the liver. Free glucosamine is not detected in the serum after oral intake, and it is not presently known how much of an ingested dose is taken up in the joints in humans

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Pharmacokinetics of orally administered chondroitin sulfate Absorption appears to occur from the stomach and small intestine. There is also an indication that some chondroitin sulfate, after absorption, does enter the joint space.

NuJoint 900 formulated with glucosamine sulfate and Chondroitin sulfate for more additive effect.

NUJOINT 900 Glucosamine/Chondroitin 500Mg/400Mg Caplet

Product information

Available as 100 caplets

Each caplet contains:

Glucosamine sulfate 500mg (glucosamine sulfate potassium chloride, from exoskeleton of shrimp)

Chondroitin sulfate 400mg (chondroitin sulfate derived from cartilage of bovine)

Non-medicinal ingredients: Microcrystalline cellulose, Dicalcium phosphates dehydrate, M magnesium Stearate, Hydroxylpropyl methylcellulose, Carnuba Wax and purified water.

Directions for use: take 1 caplet 3 times a day with food or as directed by a health care practitioner.

Benefits:

- Reduces severity of joint and bone pain associated with osteoarthritis
- Helps to relieve the pain associated with osteoarthritis
- Factor in the building of healthy cartilage
- Protects against the deterioration of healthy cartilage
- Effective in reducing joint pain
- A safe, effective alternative to non-steroidal anti-inflammatory drugs

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CONTRAINDICATIONS

Known hypersensitivity to glucosamine and Chondroitin sulfate-containing product

WARNINGS AND PRECAUTIONS

Glucosamine may increase insulin resistance. Glucosamine increases insulin resistance in normal and experimentally diabetic animals. In these animals, intravenous glucostlmine significantly decreases the rate of glucose uptake in skeletal muscle. In animals given oral glucosamine, this is not observed.

Those with type 2 diabetes and those who are overweight and have problems with glucose tolerance should have their blood sugars carefully monitored if they use glucosamine supplements. Because of insufficient safety data, children, pregnant women and nursing mothers should avoid using glucosamine.

About Chondroitin Because of insufficient safety data, children, pregnant women and nursing mothers should avoid using chondroitin sulfate. Because of the theoretical possibility that chondroitin sulfate may have antithrombotic activity, those taking warfarin and those with hemophilia should exercise caution in its use. Those who need to restrict their salt intake should, if they use chondroitin sulfate, use salt-free preparations.

ADVERSE REACTIONS

Side effects that have been reported are mainly mild gastrointestinal complaints such as heartburn, epigastric distress and diarrhea. No allergic reactions have been reported including sulfa-allergic reactions to glucosamine sulfate.

About Chondroitin Side effects that have been reported are mostly of the mild gastrointestinal variety, such as epigastric distress, nausea and diarrhea. No sulfa-allergic reactions or other allergic reactions have yet been reported.

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INTERACTIONS

Glucosamine may increase insulin resistance and consequently affect glucose tolerance. Diabetics who, under medical advisement, decide to use glucosamine supplements will need to monitor their blood glucose and may need to adjust the doses of the medications they take to control blood glucose. This needs to be done under medical supervision. No other drug, nutritional supplement, food or herb interaction is known.

About Chondroitin There are no known drug, nutrient, food or herb interactions. Chitosan may form complexes with chondroitin sulfate decreasing its absorption. Therefore, chondroitin sulfate should not be used concomitantly with chitosan.

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