



glucosamine **OSTEOACTIV** plus Chondroitin Capsule

Helps promote joint flexibility and mobility



100 Vegetable-based Capsules

Active Ingredients :

Each capsule contains -
Glucosamine Sulfate Sodium Chloride 314.0mg
(equivalent to 250mg of Glucosamine Sulfate)
Chondroitin Sulfate Sodium 220.1mg
(equivalent to 200mg of Chondroitin Sulfate)

Descriptions :

Clear transparent, vegetable-based capsule containing off-white coloured fine powder.

Pharmacology :

Glucosamine and Chondroitin are substances found naturally in the body. Glucosamine is an amino monosaccharide found in chitin, glycoproteins and glycosaminoglycans such as hyaluronic acid and heparin sulfate. It stimulates the production of glycosaminoglycans and proteoglycans, two essential building blocks of cartilage. Glucosamine plays an important role in the production, maintenance, and repair of cartilage, the white, smooth, rubber-like padding that covers the ends of bones and prevents them from rubbing against each other painfully as we move. It has some innate anti-inflammatory properties, independent of prostaglandin synthesis. Glucosamine also helps to form ligaments, tendons, and nails. Osteoarthritis involves a progressive degeneration of cartilage glycosaminoglycans [GAGs]. The theory behind taking Glucosamine, which are critical to the synthesis of GAGs, is that by flooding the system with them the production of these GAGs will be stimulated. As a result, there would be cartilage regeneration and joint repair.

About 90% of Glucosamine administered orally as a Glucosamine salt gets absorbed from 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. Following oral administration, Glucosamine Sulphate is rapidly desulfated and metabolized to smaller molecules and ultimately to carbon dioxide, water, and urea.

Glucosamine is not protein-bound but rather incorporates into plasma proteins (primarily globulins).

About 10% of the oral administered dose is excreted in the urine and approximately 11% is excreted in the feces as unabsorbed drug. Also, Glucosamine is partly eliminated as carbon dioxide in expired air via lung. Glucosamine incorporated into plasma proteins has an elimination half-life of around 68 hours after oral administration.

Chondroitin is an acid mucopolysaccharide that is a constituent of most cartilaginous tissues. Chondroitin is given orally in reactive arthritides such as gonococcal arthritis and is sometimes given in combination with Glucosamine for its supposed chondroprotective action in bone, joint and connective tissue disorders. Preliminary evidence suggests that Chondroitin reduces the pain of osteoarthritis in the knee compared with placebo and improve joint mobility.

Studies have shown that Chondroitin Sulfate bioavailability ranges from 15 to 24%. Some 10% of the absorbed fraction is in the form of Chondroitin Sulfate, the other 90% appearing as depolymerised derivatives with a lower molecular weight, suggesting that Chondroitin Sulfate is subjected to extensive first-pass metabolism. Peak blood concentrations are reached about 4 hours after oral administration. Chondroitin Sulfate has a half-life of 5 to 15 hours, is eliminated primarily via the kidneys.

Indication :

As adjuvant therapy for osteoarthritis.

Dosage and Administration :

Initial :

Take 2 capsules three times daily before food.

The initial therapy should be taken for at least 3 months (or as directed by healthcare professional) before noticing improvement.

Maintenance :

Take 2 capsules twice daily before food.

Following the initial 3 months therapy, dose can be increased or decreased based on individual response. It is important to continue taking the product for long-term maintenance of healthy joint and its flexibility.

Symptoms and Treatments of Overdose :

No cases of accidental overdose are known or have been reported.

Contraindications :

Not suitable for people with known hypersensitivity to Glucosamine or Chondroitin.

Contraindicated in patients allergic to shellfish.

Precautions :

Glucosamine Sulphate is a causal therapy and the therapeutic effect is only seen after 1 week. Therefore, it is advisable to include an anti-inflammatory drug (in case of severe pains) during the first few days of treatment with Glucosamine.

Caution should be taken for people with diabetes, impaired liver or kidney functions.

This product contains Glucosamine derived from seafood and Chondroitin from bovine source.

Use in Pregnancy and Lactation :

During pregnancy and lactation, Glucosamine and

Chondroitin should not be taken unless advised by the doctor. Administration during the first trimester of pregnancy must be avoided.

Interactions with Other Medicaments :

The use of Glucosamine Sulfate with oral hypoglycaemic agent (metformin, tolbutamide, rosiglitazone) may reduce the effectiveness of oral hypoglycaemic agent.

No interactions between Chondroitin Sulfate and other medicaments have been reported.

Undesirable Effects :

Cardiovascular: Peripheral oedema, tachycardia were reported in a few patients following larger clinical trials investigating oral administration in osteoarthritis. Causal relationship has not been established.

Central nervous system: Drowsiness, headache, insomnia have been observed rarely during therapy (less than 1%).

Gastrointestinal: Nausea, vomiting, diarrhoea, dyspepsia or epigastric pain, constipation, heartburn and anorexia have been described rarely during oral therapy with Glucosamine.

Skin: Skin reactions such as erythema and pruritus have been reported with therapeutic administration of Glucosamine.

Storage :

Store below 25°C. Protect from light and moisture. Keep container tightly closed. Keep out of reach of children.

Shelf Life :

3 years from the date of manufacture.

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