

# Joinflex-M

Native Type II collagen, Glucosamine sulfate,  
*Boswellia serrata* & Boron

## COMPOSITION

**Joinflex-M Tablet:** Each tablet contains Native type II collagen 20 mg, Glucosamine sulfate 750 mg (as Glucosamine sulfate potassium chloride), *Boswellia serrata* 50 mg & Boron (as Calcium fructoborate) 0.75 mg.

## PHARMACOLOGY

**Native type II collagen:** Native type II collagen is a nutritional supplement derived from chicken sternum cartilage using a patented, low-temperature, non-enzymatic manufacturing process that preserves the natural triple helix molecular configuration and its biological activity. Native Type II collagen has a unique mechanism of action. Native type II collagen molecules contain active binding sites called epitopes which trigger the process of oral tolerization. Through oral tolerization process, active epitopes of Native type II collagen interact with Peyer's patches (lymphoid tissue) of small intestine, and it transforms T-cells into T regulatory cells. T regulatory cells then migrate to joint area and secrete anti-inflammatory mediators (cytokines), including the transforming growth factor-beta (TGF-beta) and interleukin 10 (IL-10). Thus it reduces joint inflammation and promotes cartilage repair. According to ORSI (osteoarthritis research society international), oral administration of Native type II collagen diminished deterioration of articular cartilage of osteoarthritis(OA).

**Glucosamine sulfate:** Glucosamine sulfate is a natural supplement. It is a sugar protein that helps build cartilage. Glucosamine, a normal constituent of glycosaminoglycans in cartilage matrix and synovial fluid, could have various pharmacological actions in articular cartilage and joint tissues.

***Boswellia serrata:*** This plant extract promotes joint health by inhibiting inflammatory factors such as the 5-lipoxygenase (5-LOX) enzyme and leukotriene B4, which affect aging joints. Extract of *Boswellia serrata* have been clinically studied for osteoarthritis, joint function & joint pain. *Boswellia* reduces cartilage damage in arthritis and improves signs of joint discomfort in just 8 weeks. It is a promising alternative to NSAIDs.

**Boron (Calcium Fructoborate):** It is a patented complex of calcium, fructose & boron found naturally in fresh and dried fruits, vegetables and herbs. Calcium fructoborate significantly reduces the C-reactive protein in humans. This unique plant-mineral complex is contributing to bone health by controlling the inflammation associated with loss of bone mineral density.

## INDICATIONS

- Osteoarthritis & Rheumatoid arthritis
- Difficulties in flexibility & mobility
- Joint pain & inflammation
- Joint discomfort & stiffness (knee extension)
- Impaired Joint function
- Deficiency of calcium & minerals

## DOSAGE & ADMINISTRATION

Orally 1 tablet twice daily after meal or as directed by the physician.

## CONTRAINDICATIONS

Contraindicated in patients with known hypersensitivity to chicken, egg & shellfish.

## WARNING & PRECAUTIONS

In the presence of Glucosamine, diabetic patients are advised to monitor blood glucose levels regularly. No special studies were confirmed in patients with renal or hepatic insufficiency. However, administration to these patients with severe renal or hepatic insufficiency should be under appropriate medical supervision.

## SIDE EFFECTS

The most common adverse reactions associated with treatment with glucosamine are nausea, abdominal pain, indigestion, constipation, and diarrhea. *Boswellia* may increase side effects of other drugs, including antidepressants, anti-anxiety medications, ibuprofen and immunosuppressant.

## USE IN PREGNANCY & LACTATION

Not recommended during pregnancy and lactation.

## USE IN CHILDREN & ADOLESCENTS

Safety and effectiveness in children patients below 12 years of age have not been established.

## DRUG INTERACTIONS

There have been no reports of significant drug Interactions of Native type II collagen, *Boswellia serrata*, Glucosamine sulfate, Calcium fructoborate. But in case of Glucosamine sulfate & *Boswellia serrata* there is a chance of drug interaction with blood thinner medications (e.g warfarin, heparin).

## OVERDOSE

The signs and symptoms of overdose include nausea, vomiting, diarrhea, constipation and abdominal discomfort.

## STORAGE

Store below 30° C temperature & in dry place, protected from light. Keep out of the reach of children.

## PACKING

**Joinflex-M Tablet:** Each box contains 30 tablets in Alu-Alu blister strip.