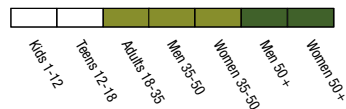




# Procosamine® II



ITEM# 131  
AUST L 77495

Every day your joints endure an enormous amount of stress from physical activity, including walking, lifting, and typing. Despite this heavy and constant use, we take our joints for granted and expect them to function trouble-free for several decades. The situation is worse for athletes and those who have high amounts of physical stress at work and at home. To help maintain healthy joints, USANA created **Procosamine® II**, a product with a blend of glucosamine, manganese, and vitamin C—the building blocks for healthy cartilage.

## Cartilage

Cartilage is the protective layer that cushions and lubricates joints. Over time, cartilage is gradually worn down due to normal physical activity. The body rebuilds the cartilage as it is worn and replaces shock-absorbing synovial fluid, so the joints are always protected. For various reasons, however, the production of new cartilage and synovial fluid can fall behind demand. Cartilage is rebuilt slowly if lesions to articular cartilage do not heal at the same rate as other tissue in the body, because of poor blood supply. If components of the substances used for cartilage repair are in short supply, recovery from damage is slowed even more.

## Glucosamine

Glucosamine, an aminosugar, is an important precursor in the biosynthesis of cartilage. Specifically, it is a building block of proteoglycans—protein molecules with a high content of bound carbohydrate. Proteoglycans and collagen compose the majority of the cartilage matrix. Proteoglycans are essential for healthy cartilage because they bind the water that lubricates and cushions the joint. When the articular cartilage degenerates, joint pain and osteoarthritis may result.

In addition to its role as a biochemical precursor, glucosamine is believed to play a role in regulating cartilage formation and normalising cartilage

metabolism by encouraging higher production of collagen and proteoglycans. Glucosamine also stimulates synovial production of hyaluronic acid, which is responsible for the lubricating and shock-absorbing properties of synovial fluid.

Numerous double-blind clinical studies have shown the efficacy of glucosamine supplements in maintaining healthy cartilage, healthy joints, and full range of motion in the short-term.<sup>28</sup> More recently, a three-year study was published showing that joint space increased in the glucosamine-treated group, while it continued to decrease in the placebo group indicating that the protective cartilage was better maintained in those who used glucosamine.<sup>9</sup> Additional studies have demonstrated that glucosamine, taken orally, is well-absorbed and diffuses into tissues, including the articular cartilage.<sup>10-12</sup>

## Turmeric Extract

Turmeric, the powdered root of the plant *Curcuma longa*, has long been used as a spice (such as in curry) and as a natural food colourant.<sup>13</sup> Turmeric contains curcumin and related compounds known as curcuminoids, which have significant antioxidant properties.<sup>14</sup>

## Manganese and Vitamin C

Optimal joint health also involves additional important ingredients. Manganese is required for enzymes involved in the biosynthesis of proteoglycans. Vitamin C is essential for the reactions necessary to collagen formation.

The combination of turmeric extract with glucosamine sulfate, manganese, and vitamin C represents a more comprehensive approach to joint health. Studies have shown that over the long term, glucosamine sulfate, vitamin C, and manganese help to maintain healthy cartilage. Glucosamine sulfate also promotes the incorporation of sulfur, a component of protein, into the cartilage matrix.

## Why Procosamine® II?

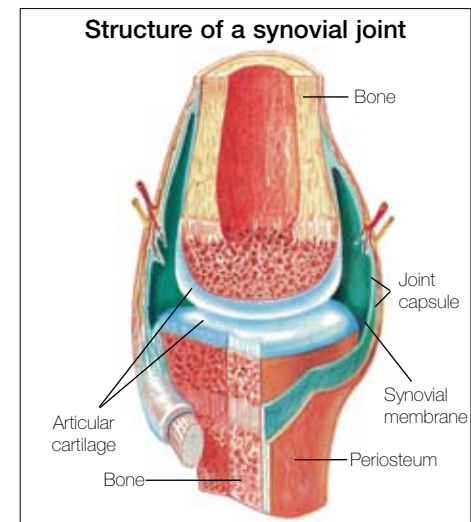
**Procosamine II** is USANA's formula for joint health. We incorporate a full 2000 mg per day of high-quality glucosamine sulfate. Then we combine this with turmeric extract, vitamin C, and manganese for comprehensive joint health.

**Procosamine II** is laboratory tested, potency guaranteed. Meets British Pharmacopoeia specifications for uniformity and disintegration where applicable.

## Using Procosamine® II

Take two (2) **Procosamine II** tablets, twice daily, preferably with meals.

EACH TABLET CONTAINS:	
GLUCOSAMINE SULFATE - POTASSIUM CHLORIDE COMPLEX	500 mg
CALCIUM ASCORBATE (EQUIV. 75 mg VITAMIN C)	91.5 mg
MANGANESE GLUCONATE (EQUIV. 1.25 mg MANGANESE)	11.4 mg
TURMERIC ( <i>CURCUMA LONGA</i> ) EXTRACT EQUIV. DRY ROOT	125 mg 6.25 g



## References

- Karzel K and Domenjot R, *Pharmacology*, 1971; 5:337-45.
- Pujalte JM, Llavore EP, Yescupidez FR, *Curr Med Res Opin*, 1980; 7:110-14.
- Lopes Vaz A, *Curr Med Res Opin*, 1982; 8:145-49.
- Müller-Fabender H, et al., *Osteoarth Cartilage*, 1994; 2:61-69.
- Crolle G, D'Este E, *Curr Med Res Opin*, 1980; 7:104-09.
- Dovanti A, Bignamini AA, Rovati AL, *Clin Therapeutics*, 1980; 3:266-72.
- Pujalte JM, Llavore EP, Yescupidez FR, *Curr Med Res Opin*, 1980; 7:110-14.
- Tapadinhas MJ, Rivera IC, Bignamini AA, *Pharmatherapeutica*, 1982; 3:157-68.
- Reginster JY, et al., *Lancet*, 2001; 357:251-56.
- Vaz AL, *Curr Med Res Opin*, 1982; 8:145-49.
- Fabender HM, et al., *Osteoarthr and Cartilage*, 1994; 2:61-69.
- D'Ambrosio E, et al., *Pharmatherapeutica*, 1981; 1:504.
- Stoner GD, Mukhtar H, *J Cell Biochem*, 1995; Suppl 22:168-80.
- Sreejayan R, *J Pharm Pharmacol*, 1994; 46:1013-16.

Contains 65 mg of Potassium per tablet. If you have kidney disease or are taking heart or blood pressure medicines, consult your doctor or pharmacist before use.

**Vitamin supplements should not replace a balanced diet.**

USE ONLY AS DIRECTED. ALWAYS READ THE LABEL.

IF SYMPTOMS PERSIST SEE YOUR DOCTOR OR HEALTH CARE PROFESSIONAL.

Derived from seafood.



Optimizers  
Micronutrition

## Procosamine® II

- Provides high-potency glucosamine sulfate (2,000 mg/daily dose) to help maintain optimal joint health
- Formulated with vitamin C and manganese, nutrients key to joint health
- Contains turmeric extract

