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ESSENTIALS

# ONCE A DAY JOINT PLUS

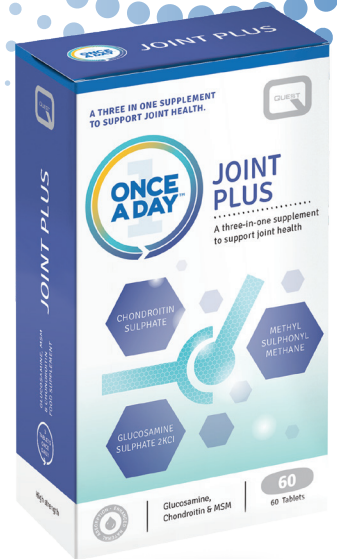
Glucosamine, Chondroitin & MSM

## Nutritional Information

One Tablet provides:

Glucosamine Sulphate KCl	500 mg
Methyl Sulphonyl Methane	500 mg
Chondroitin Sulphate	100 mg

Take two to three tablets daily with food. Swallow with water.



## SUMMARY

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- Contains 3 research based ingredients for the relief of joint pain.
- With MSM for a decrease in inflammation.
- Glucosamine and chondroitin for cartilage structural support.
- Recommended for people with joint conditions, physical workers and athletes.

## DESCRIPTION

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A powerful combination of glucosamine, chondroitin and MSM for the relief of pain and stiffness in joints. Glucosamine and chondroitin are key structural components of cartilage in the body. With time and overuse, the body needs to maintain the cartilage, particularly in areas of high stress such as the knees and hips (hyaline cartilage). This type of cartilage covers the bone in the joint and protects the bone from damage.

Glucosamine and chondroitin have been shown to help improve joint motility and function, and reduce stiffness and pain. Glucosamine provides the structural matrix for cartilage whilst chondroitin sulphate provides much of its resistance to compression acting as a lubricant or as a shock absorber. MSM is an organic sulphur compound and has anti-inflammatory and pain relieving properties. This combination is recommended for sufferers of degenerative joint conditions such as osteoarthritis or those who place extra strain on joints including manual or physical workers and athletes.

## HOW DOES JOINT PLUS SUPPORT THE HEALTH OF JOINTS?

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### Glucosamine

Glucosamine sulphate KCl is an amino sugar (amino acid attached to a sugar) and precursor to other amino acid-sugar and fat-sugar complexes (glycosylated proteins and lipids). It is used in the synthesis of the components found in cartilage including glycosaminoglycans, proteoglycans, and hyaluronic acid.

**Pain management:** Glucosamine is effective for pain management in osteoarthritis. A double blind clinical evaluation reported that glucosamine was more effective at relieving pain at the 8 week mark than ibuprofen<sup>1</sup>. This is due to a number of factors; one being its mild anti-inflammatory effect<sup>2</sup>, and secondly by slowing down of the progression of osteoarthritis<sup>3</sup> and the degradation of cartilage, providing a disease modifying therapeutic agent<sup>4</sup>.

**Cartilage:** Sulphate is required for the creation of cartilage glycosaminoglycan. There is an increase in synovial fluid sulphate with glucosamine sulphate supplementation, but not with sodium sulphate supplementation<sup>5</sup>, making glucosamine sulphate the preferred choice for arthritic patients.

### Chondroitin

Chondroitin sulphate is a glycosaminoglycan, found naturally in cartilage. It acts as a structure modulator and supplementation induces improvements in the interarticular space of osteoarthritis patients<sup>6</sup>.

**Increased mobility:** Chondroitin has been shown in studies to significantly reduce pain and increase mobility in patients with osteoarthritis<sup>7</sup>. Its capabilities are due to inflammation suppression (IL-1beta) and enhancing the gene expression of aggrecanase, a proteolytic enzyme<sup>8</sup>.

**Long term benefits:** The therapeutic benefits of chondroitin sulphate have been shown to last up to 3 months past the halting of supplementation<sup>9</sup>, demonstrating a change in structure rather than just inflammation.

### MSM

Methyl Sulfonyl Methane (MSM) is a naturally occurring sulphur compound and metabolite of dimethylsulfoxide (DMSO). MSM is used to decrease inflammation and to relieve pain in joints.

**Inflammation:** Placebo controlled trials confirm the benefits of MSM supplementation for pain relief and increased physical function in joints of osteoarthritis patients<sup>10</sup>. These benefits are due to a reduction in inflammation caused by the inhibition of the oxidative function of stimulated immune neutrophils<sup>11</sup>.

**Anti-inflammatory:** The benefits of MSM are intensified when combined with glucosamine where an overall reduction in pain, swelling and functional ability of joints is noted. The anti-inflammatory activity was more rapid when combined with glucosamine<sup>12</sup>.

## HOW SHOULD JOINT PLUS BE TAKEN?

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Take two to three tablets daily with food. Swallow with water.

## ARE THERE ANY PRECAUTIONS BEFORE OR WHILE TAKING JOINT PLUS?

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Joint Plus is intended exclusively for those wishing to support joint health and is not intended for use by:

- Children

Consult a qualified health care professional before taking if you are:

- Pregnant or breastfeeding
- Taking any medication
- Diabetic

## FEATURES

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- Combination of 3 potent ingredients in one tablet.
- For the relief of joint conditions such as osteoarthritis, for manual workers and athletes.

## HEALTH NEEDS

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JOINTS AND  
MUSCLES



SENIOR'S HEALTH

## SCIENTIFIC REFERENCES

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