glucosamine sulphate for the majority of patients with osteoarthritis of the knee, particularly early in the disease when you would normally consider paracetamol or other NSAIDs.

Anti-catabolic effect

Collagenase, a key enzyme in the destruction of osteoarthritic cartilage, is inhibited by glucosamine. Further, phospholipase A_2, an activator of collagenase, is also inhibited by glucosamine. Both of these effects result in the complete suppression of collagenase activity (Lequesne et al., 1994).

Further in vivo investigations have confirmed that glucosamine has anti-inflammatory effect and chondroprotective effect by preserving the metabolic activity of chondrocytes (Rottapharm, 2009).

Safety Overview

Glucosamine is a well-known supplement and has been recommended for many years by practitioners for the treatment of osteoarthritis and used by osteoarthritis patients. This was further popularized by the publication of a book optimistically titled 'The arthritis cure' in the 1990s (McColl, 2004). It has proven to be of acceptable safety profile with demonstrated therapeutic value.

Adverse effects of glucosamine include allergy (in patients who have shellfish allergy and take forms extracted from shellfish), dyspepsia, fatigue, insomnia, headache, photosensitivity, and nail changes may occur.

However, the following restrictions should be considered when administering glucosamine: