

FACT SHEET

Glucosamine

Several research groups have looked carefully at the effects of supplementing cartilage tissue with glucosamine sulphate, in some cases in treating animals. In other cases the work was done in vitro, meaning out of the body, in laboratory conditions. Still other research papers report work done on human subjects which did not take the form of clinical trials, but which was experimental.

These have been designed to observe the absorption, distribution and effects of glucosamine sulphate in the human body. These studies have generally confirmed rather convincingly that in cartilage tissues exposed to exogenous glucosamine sulphate, the degradation of proteoglycans is inhibited or the synthesis of new proteoglycans increased. Obviously then, this is the biochemistry that lies beyond an improvement of cartilage status in the joints when glucosamine sulphate is used.

This implies that administered glucosamine can be transformed into galactosamine for insertion into chondroitin and keratan sulphates. It may perhaps also imply that the sulphate of glucosamine sulphate can contribute to the sulphate content of chondroitin and keratan sulphates in the cartilage matrix.

Studies have also shown that in patients under treatment with non-steroidal anti-inflammatory drugs glucosamine sulphate considerably diminishes the dose of drug that is required to benefit the symptoms. This happens even though glucosamine sulphate is not an anti-inflammatory agent itself.

In human studies it was shown that some 90% of the orally administered compound was absorbed. In some ways this route even appeared preferable to intravenous or intramuscular injection because, although the plasma levels raised more slowly in oral administration, beneficial levels were maintained for longer.

How glucosamine helps: clinical trials

A good many clinical trials have been conducted on human degenerative joint disease in Portugal, Italy and Germany. Conditions studied have been variously termed by the authors, osteoarthritis, osteoarthrosis, arthrosis, gonarthrosis etc. The term "arthrosis" is really a general term for diseased joints.

The greater number of such trials has been conducted using oral administration of the glucosamine sulphate. That is useful from the standpoint of anyone who wants to self administer this compound or of any non-medically qualified therapist who wants to prescribe it. The fact, already noted, that about 90% of oral glucosamine sulphate is absorbed is also very favourable to oral administration.

The researchers have used various yardsticks of improvement. However the most commonly monitored symptoms are pain at rest, pain during active movement, pain during passive movement, joint tenderness, joint swelling restricted function, and time to walk 20 metres. Another parameter sometimes recorded was the number of the patients who started the trial who became symptom-free during the treatment period.

In some instances the supplement was assessed in respect of its ability to moderate the required dose of non-steroidal anti-inflammatory drug. Patient numbers in the individual trials varied between 20 and 1208. Many, though not all, were conducted on a double blind basis. In the largest study, that of Tapadinhas, involving 252 doctors in Portugal, the therapeutic efficacy was rated as "good" in 59% of the patients and as "sufficient" in a further 36%. Hence this left only 5% who showed no improvement. In the Giordano study, see below, 80% of the patients were reported as responding favourably. Since the administration route was oral this is an extremely positive indicator for anyone contemplating possible self-administration of glucosamine sulphate.

The daily intake of orally administered glucosamine sulphate was usually 1500mg, split into 3 equal doses per day. All the listed trials demonstrated convincing benefit from glucosamine sulphate compared with placebo capsule. Even more remarkably, in those trials where glucosamine was compared alongside conventional anti-inflammatory drugs, the glucosamine sulphate was generally the treatment of choice.

Some findings of this kind really make one wonder why supplements are not much more widely used in place of drugs. It is hard to see any logical grounds why the medical profession does not replace its non-steroidal anti-inflammatory drugs (NSA's) with glucosamine

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sulphate. Unfortunately, the situation smacks of unwarranted and illogical preference for using synthetic drugs, in spite of their disadvantages.

How can Naturediet help?

Naturediet Senior/Lite, as with all Naturediet products, contains vitamins and minerals that are known to benefit the mobility of the joints. It also assists with weight loss. It is important to maintain a healthy weight as this will put less pressure on the joints.

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