

## Welcome to the: Orthopaedic Opinion Online Website

The website for the answer to all your Orthopaedic Questions

- **Orthopaedic Opinion Online** is a website designed to provide information to patients who have orthopaedic and musculoskeletal problems and are undergoing treatment.
- **Patient information** is provided in the form of downloadable information sheets.
- **Orthopaedic advice** and second opinions can be provided by our expert internationally renowned Consultant Orthopaedic Surgeons.
- **Online review** of patients' X rays or MRI scans can also be provided and any proposed treatment plans reviewed.
- **Book a clinical consultation** with one of our internationally renowned consultant orthopaedic surgeons in Bristol or London.
- **Orthopaedic reports** can be provided for Injury or Accident Claims and Medical Negligence claims.

**This Patient Information Sheet is provided by Orthopaedic Opinion Online**

## Glucosamine and Chondroitin

Glucosamine and chondroitin have been shown to have some beneficial effects on osteoarthritic joints, and so may be worth trying if you have this kind of joint problem. You can try this type of product by clicking on the image for this liquid form of glucosamine, said to have a much faster and more complete uptake than capsules.

[Osteoarthritis \(OA\)](#) is the most widespread type of arthritis, a degenerative condition of the joints. Acute inflammation is uncommon in OA and it is mostly a "wear-and-tear" disease involving degeneration of joint cartilage and the formation of bony spurs in various joints. Joint trauma, repetitive joint stresses in jobs, and obesity are risk factors. OA is very common over 60 years of age, but not always troublesome. You will have seen advertising and promotion of glucosamine and chondroitin as a treatment for OA.

### What are these substances?

**Glucosamine**, an amino sugar, is a natural substance made by your body, an essential building block of joint cartilage, ligaments, bones and blood vessels, and is thought to promote the formation and repair of cartilage.

**Chondroitin**, a carbohydrate, is a natural cartilage component linked to levels of water retention and elasticity and to the inhibition of enzymes that break down cartilage. Both compounds are manufactured by the body. You can buy both these dietary supplements as tablets from your local health food shop or chemist and they are often taken together.

### Research

Glucosamine may stimulate the production of cartilage-building proteins and chondroitin may inhibit the production of cartilage-destroying enzymes and fight inflammation. The shells of shellfish are the source of glucosamine, while chondroitin supplements are extracted from the cartilage of cows.

Studies on people have shown that both may relieve arthritic pain and stiffness with fewer side effects than conventional arthritis drugs. However, there is no evidence to suggest that they are as effective as conventional drug therapies. The manufacture and distribution of these drugs is not restricted or regulated in the same exacting way conventional drugs are. The nature of the active ingredient and effectiveness or indeed concentration of the active compound in each of the available products varies widely.

We don't really know as there isn't any convincing evidence that glucosamine or chondroitin help to ease the symptoms of osteoarthritis. There is some weak evidence that glucosamine, or a combination of glucosamine and chondroitin, might be helpful and no evidence that taking chondroitin on its own is helpful. Glucosamine may help by reducing pain and stiffness rather like a non steroidal anti-inflammatory drug (NSAID). Some trials have shown that glucosamine, or glucosamine plus chondroitin, can help to control the symptoms of osteoarthritis. However, these trials have faults in them which make the results unreliable. So it is difficult to be sure whether these treatments work or not.

### Products

In the US, glucosamine and chondroitin products are marketed as “dietary supplements”. Glucosamine is available in many forms, including glucosamine sulfate, glucosamine hydrochloride (HCl), and N-acetylglucosamine (NAG), and have various other contents. However, there appears to be no conclusive evidence that one form is better than another.

### Safety

No serious side effects from either glucosamine or chondroitin have been found in the trials to date.

### Links:

Go to [Best Treatments](#) and [Clinical Evidence](#) and put “glucosamine” or “chondroitin” into the search boxes. Both these useful sites give reference lists to the medical evidence. [ConsumerLab](#) is a very useful site, with analysis of all the evidence and also of the products. Some products don't have any of the substance in them that they claim to have! If you'd like to think about the issues and make an informed decision, the **US Food and Drug Administration Centre for Food Safety and Applied Nutrition** has issued a document [Tips for the Savvy Supplement User: Making Informed Decisions And Evaluating Information](#) which may be of interest.

### Links:

[Arthritis Care](#) [www.arthritiscare.org.uk](http://www.arthritiscare.org.uk)

[Complementary Medicine Association](#) [www.the-cma.org.uk](http://www.the-cma.org.uk)

[National Ankylosing Spondylitis Society](#) [www.nass.co.uk](http://www.nass.co.uk)

Ankylosing Spondylitis is one of the commonest arthritic diseases, especially amongst young men. Although not usually severely disabling, it can have a big effect on a person's life.

[National Osteoporosis Society](#) [www.nos.org.uk](http://www.nos.org.uk)

[Arthritis Research Campaign](#) [www.arc.org.uk](http://www.arc.org.uk) The ARC is the fourth largest medical charity in the UK and had an annual income of £26m in 2001-2. It funds research into all the different kinds of arthritis and provides information for professionals and the public.

[Arthritis Researchalot.com](#). Resource site for everything to do with arthritis. Full of newsletters, articles, links and other resources - ALL FREE - in one easy to navigate site to save time and money.

[Arthritis Resources. Comprehensive information](#). A comprehensive site devoted to arthritis and degenerative joint disease. [www.arthritis.edu.com](http://www.arthritis.edu.com)

[www.allaboutarthritis.com](http://www.allaboutarthritis.com)

[www.orthogate.org/patient-education/knee/viscosupplementation-for-osteoarthritis-of-the-knee.html](http://www.orthogate.org/patient-education/knee/viscosupplementation-for-osteoarthritis-of-the-knee.html)

[www.hss.edu](http://www.hss.edu)

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