Glucosamine and Chondroitin

ARTHRITIS INFORMATION SHEET

This sheet has been written to provide general information about glucosamine and chondroitin for people with arthritis. This sheet includes information about the effectiveness of these supplements and the possible risks.

Introduction

Research is mixed on whether glucosamine and chondroitin are effective for arthritis. There have been some claims that these supplements can help reduce pain in people living with osteoarthritis (OA). However, high-quality studies show little or no benefit. There are no claims for the effectiveness of glucosamine and chondroitin in other types of arthritis.

What is glucosamine?

Glucosamine is a sugar naturally produced by the body of cartilage. Cartilage covers and protects the ends of the bones, allowing bones to move smoothly against each other. Glucosamine supplements come in two forms – glucosamine sulfate and glucosamine hydrochloride. Glucosamine supplements are usually made from crab, lobster or shrimp shells, although some supplements are made from a plant form of glucosamine. They are available as tablets or liquid and often in combination with chondroitin.

What is chondroitin?

Chondroitin is also a natural substance found in the body and in cartilage. It is believed that it helps to draw water and nutrients into the cartilage, keeping it spongy and healthy. Chondroitin is available as chondroitin sulfate supplements, which are made from bovine (cow) or shark cartilage.

Why are these supplements supposed to help arthritis?

It is thought that taking glucosamine and/or chondroitin supplements may relieve pain and prevent or slow the breakdown of cartilage in OA. However, high-quality studies show little or no benefit. Note, most of the studies have looked only at OA of the knee, with very few studies of other joints (for example, hips, hands, back).

What does the research say?

While there have been some claims that glucosamine and chondroitin, either together or separately, can help to reduce pain in people living with OA, these claims are now being questioned. Evidence around the effectiveness of these supplements has always been mixed. However, recent reviews of this evidence now suggest that studies that show positive results may be of low quality and unreliable. Higher quality, independent studies suggest that glucosamine and chondroitin are no better than placebos (fake pills) at reducing pain or slowing the impacts of OA. As a result of this, while glucosamine and chondroitin remain safe for most people, many doctors no longer recommend these supplements as a way of managing arthritis.

To date, there is no evidence that these supplements are effective for any other forms of arthritis.

Summary

While the evidence for whether glucosamine and chondroitin will help your arthritis is low, these supplements are considered safe for most people to try. If you want to try these supplements, talk to your doctor or pharmacist about whether they are safe for you.

What is the recommended dose?

- Glucosamine sulfate: 1500mg per day
- Glucosamine hydrochloride: 1500mg per day (note, glucosamine sulfate is suggested to be more effective)
- Chondroitin sulfate: 800 - 1000mg per day

Different brands contain different amounts of glucosamine and chondroitin. Read the label carefully to see how many tablets you need to take to get the right dose, or ask your pharmacist for advice.

What are the possible risks?

- **Shellfish allergy:** most glucosamine supplements are made from shellfish, although some made from non-shellfish sources are now available.
- **Bleeding:** people taking the blood thinning medicine warfarin should talk to their doctor before starting, stopping or changing their dose of glucosamine or chondroitin. These supplements may interact with warfarin and make the blood less likely to clot or increase the risk of bleeding.
- **Diabetes:** glucosamine is a type of sugar so check with your doctor before taking glucosamine if you have diabetes.
- **Pregnant or breastfeeding women:** there have not been enough long-term studies to clearly say that glucosamine is safe for a developing baby. Pregnant women should talk to their doctor before taking glucosamine.
- **Other side effects:** upset stomach (for example, diarrhoea), headaches, and skin reactions.

Talk to your doctor or pharmacist about whether you should be trying these medications, whether they are safe for you and, if you decide to try them, make sure you get the right dose.

CONTACT YOUR LOCAL ARTHRITIS OFFICE FOR MORE INFORMATION SHEETS ON ARTHRITIS.

High-quality evidence shows little or no benefit from glucosamine or chondroitin for OA. If you want to try these supplements, talk to your doctor or pharmacist about whether they are safe for you.

FOR MORE INFORMATION

Websites:

Arthritis Australia **www.ArthritisAustralia.com.au**

Australian Rheumatology Association – information about medicines and seeing a rheumatologist **www.rheumatology.org.au**

Versus Arthritis (UK) **www.versusarthritis.org**

Arthritis Foundation (US) **www.arthritis.org**

American College of Rheumatology **www.rheumatology.org**

The Royal Australian College of General Practitioners **www.racgp.org.au**

Guideline for the management of knee and hip osteoarthritis

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