

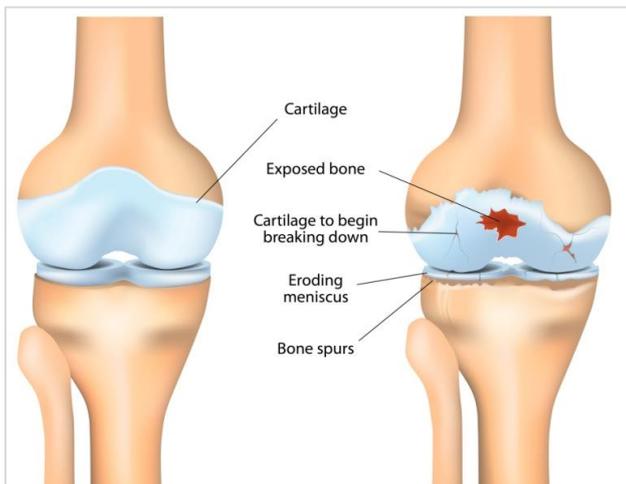


Glucosamine and chondroitin

Your questions answered

For many years the supplements glucosamine and chondroitin – both separately and combined – have been commonly used to treat [osteoarthritis \(OA\)](#). However, evidence has been conflicting regarding their effectiveness.

Now research concludes that they're ineffective for treating OA of the hip or knee. And in the case of glucosamine, it may have harmful side effects for people with a shellfish allergy or taking certain medicines.



Q. What is osteoarthritis?

A. Covering the ends of your bones is a thin layer of tissue called cartilage. It provides a slippery cushion that absorbs shocks, helps your joints move smoothly and prevents bones from rubbing against each other.

For people with osteoarthritis, this cushiony cartilage becomes brittle and breaks down. Some pieces of cartilage may even break away and float around inside the joint, causing inflammation and pain. The cartilage no longer has a smooth, even surface, so the joint becomes stiff and painful to move.

Osteoarthritis frequently affects weight-bearing joints, such as the [knees](#), [hips](#), [feet](#), and [spine](#). The joints of the [hands](#), including the [thumbs](#), are also commonly affected.

Q. What is glucosamine?

A. Glucosamine is a naturally occurring sugar found in your cartilage. One of the roles of glucosamine is to build and repair cartilage.

Glucosamine supplements come in two forms – glucosamine sulfate and glucosamine hydrochloride. They're typically made from crab, lobster or shrimp shells; however, synthetic forms are also available. Supplements come in tablet or liquid form, and are often combined with chondroitin.

Q. What is chondroitin?

A. Chondroitin is another natural substance found in cartilage. One of its jobs is to help draw water and nutrients into the cartilage, keeping it spongy and healthy.ⁱ Chondroitin supplements are available as chondroitin sulfate. They're made from cow or shark cartilage and are available in tablet, capsule or powder form.

Q. What's the evidence for their use?

A. When glucosamine and chondroitin first became available for treating osteoarthritis several research studies highlighted the benefits of this new, 'natural' treatment. They claimed that glucosamine and chondroitin provided pain relief for many people with osteoarthritis and improved their joint function.

However, the evidence for their use has been questioned. The earlier studies were generally small, low quality, and often funded by the manufacturer, leading to a high risk of bias.

More recent research trials have shown little or no benefit for their use.

Because of this lack of good-quality evidence, peak bodies such as the American College of Rheumatology (ACR),ⁱⁱ the Australian Rheumatology Association (ARA),ⁱⁱⁱ and the Royal Australian College of General Practitioners^{iv} recommend *against* using glucosamine and/or chondroitin to treat osteoarthritis.

Q. Are there risks or safety concerns associated with these supplements?

A. Glucosamine supplements are usually made of shellfish, so you shouldn't use them if you have a shellfish allergy. Glucosamine may adversely affect diabetes, cholesterol, and chemotherapy medicines. Before taking glucosamine, talk with your doctor or pharmacist for information.

Q. What are evidence-based treatments for osteoarthritis?

A. The good news is that there are other very effective treatments for osteoarthritis, including.

- Regular, consistent [exercise](#). This is one of the best things you can do if you have OA. It will help relieve your pain, improve the function of your joints and strengthen the muscles supporting your joints. Exercise has many other great health benefits, such as helping you maintain a healthy weight, get a good night's sleep and improve your mood. For OA, the best exercises are ones that you enjoy and can commit to doing regularly. This may include walking, strengthening exercises, tai chi, cycling and water exercise. Talk with a physio or exercise physiologist if you need help to start a new exercise program or to have an exercise program tailored to your needs.
- [Losing weight](#) will relieve your pain if you're overweight or obese. Losing about 10% of your body weight may decrease your pain by up to 50%.^v Your doctor or dietitian can advise you on safe weight-loss strategies if you need to lose weight.
- Mobility aids such as canes or walkers may be helpful for some people with hip and/or knee OA to help them get around safely and reduce pain in their weight-bearing joints.
- [Heat packs](#), when applied to a painful joint, can provide temporary pain relief.
- [Massage](#) may also provide temporary pain relief.
- [Medicines](#) may provide temporary pain relief and help you stay active. However, it's important to know that currently, there are no medicines that can affect the underlying disease process of OA. That's why exercise, weight management and other self-care strategies are vital.

Q. I'm taking glucosamine and/or chondroitin supplements, and they're working for me. Should I continue to take them?

A. If you've been taking these supplements for some time, haven't had any adverse side effects, and want to continue taking them, talk with your doctor or pharmacist for information and support.



Q. Where can I get more help?

A. Many people and support organisations can help you manage your musculoskeletal condition. They include:

- your doctor
- pharmacist
- Musculoskeletal Australia | msk.org.au | National Arthritis and Back Pain+ Help Line: 1800 263 265

Q. How can Musculoskeletal Australia help?

A. Our nurses are available for you to speak with about arthritis and other musculoskeletal conditions, diet, exercise, pain or any other musculoskeletal issues you have. You can contact them on weekdays between 9am-5pm. Phone 1800 263 265 or email helpline@msk.org.au. We also have a range of services – including free webinars – you can access on our [website](#).

More to explore

- [Allergies to seafood](#)
Healthdirect
- [Find a health professional](#)
Musculoskeletal Australia
- [Glucosamine and chondroitin for osteoarthritis](#)
National Center for Complementary and Integrative Health (NCCIH)
- [Glucosamine and chondroitin sulfate](#)
American Academy of Orthopaedic Surgeons
- [Glucosamine](#)
Australian Rheumatology Association
- [Guideline for the management of knee and hip osteoarthritis](#)
The Royal Australian College of General Practitioners

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References

ⁱ [The Royal Australian College of General Practitioners Guideline for the management of knee and hip osteoarthritis](#)

ⁱⁱ [American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee](#)

ⁱⁱⁱ [Australian Rheumatology Association and Arthritis Australia Statement regarding the use of glucosamine for the treatment of Osteoarthritis](#)

^{iv} [The Royal Australian College of General Practitioners Guideline for the management of knee and hip osteoarthritis](#)

^v [Arthritis Foundation, How fat affects osteoarthritis](#)

