

# SORTING OUT SUPPLEMENTS

## Products to Consider, Products to Avoid

by Mindy Hermann, MBA, RD



**Avocado-soy unsaponifiables**  
**Boswellia (Indian frankincense)**  
**Chondroitin sulfate**  
**Glucosamine**  
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**Bromelain**  
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**Aconite**  
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**Cat's claw**  
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**Colloidal silver**  
**Kombucha tea**  
**S-adenosylmethionine (SAME)**  
**Thunder god vine**

**D**ietary supplements may seem like an attractive option for arthritis relief. Most do not cause the same side effects as traditional arthritis medicines; in fact, some cause little if any discomfort. Supplements do not require a prescription and are easy to find at drugstores, health-food stores, and even regular grocery stores. They may also be cheaper than prescriptions (though supplements are often more expensive than the generic forms of drugs), and some people think supplements just feel "more natural." But do they work? The answer is a resounding maybe.

While most studies and experts on supplements and arthritis have concluded that supplements are generally not effective, you may find that certain products bring you relief. First, consider which type of arthritis you have. "Osteoarthritis and rheumatoid arthritis are two different types of diseases. Osteoarthritis results from years of wear and tear

on the joints, while rheumatoid arthritis is caused by an immune disorder that leads to inflammation, so a supplement that promises to lessen symptoms for one usually is not likely to help the other," says Christine Gerbstadt, MD, RD, a spokesperson for the Academy of Nutrition and Dietetics. That is why osteoarthritis (OA) supplements generally target cartilage, while rheumatoid arthritis (RA) supplements generally look to reduce inflammation and suppress the immune response.

The supplements reviewed here are listed according to the type of arthritis for which they are generally promoted, and then in alphabetical order.

## Supplements promoted for RA

The hallmark symptom of rheumatoid arthritis is inflammation. Many RA supplements are purported

to reduce inflammation, and some may. Others, however, may not. Many can also inhibit your blood's ability to clot.

**Curcumin.** Curcumin is the active compound in turmeric, a yellow spice popular in Indian cuisine. Curcumin has the ability to block several compounds that cause inflammation. In a recent study, RA activity decreased most among the study participants who took curcumin.

However, according to MedlinePlus, a Web site from the National Institutes of Health, there is not yet enough evidence to support curcumin's effects on RA symptoms. The site also warns that curcumin slows blood clotting and could increase bruising and bleeding if taken along with aspirin, ibuprofen (brand names Advil, Motrin IB), naproxen (Aleve), or other anti-inflammatory drugs that affect blood clotting. Curcumin's effect on bleeding and bruising increases if it is combined with botanical supplements that also interfere with clotting, such as ginkgo, ginkgo, or white willow bark.

**Fish oil.** Fish oil supplements, one of the most widely-studied kinds of supplements for the treatment of rheumatoid arthritis and its symptoms, are derived from fish that have a fair amount of fat in their flesh, including herring, mackerel, salmon, sardines, and white (albacore) tuna. Fish oil is rich in omega-3 fatty acids, a type of fat that reduces inflammation and appears to improve the symptoms of rheumatoid arthritis. In several studies, people taking fish oil supplements had less pain and soreness in their joints and were able to decrease their dosage of anti-inflammatory medicines. An added benefit of fish oil is that it may improve heart health.

Some people complain that fish oil supplements give them indigestion and cause them to have "fishy" burps. Fish oil also has the potential to "thin" the blood. If you are considering fish oil, talk to your doctor to find out whether it will interfere or interact with any of your current medicines.

**Gamma linolenic acid.** Gamma linolenic acid (GLA) is an omega-6 fatty acid found in supplements made from black currant oil, borage seed oil, or evening primrose oil. Proponents of GLA say that it reduces joint pain, stiffness, and swelling in people with rheumatoid arthritis. However, these oils may also contain other compounds, called unsaturated pyrrolizidine alkaloids, which harm the liver. Supplements with GLA also increase the risk of bleeding by slowing clotting, particularly in people who take anti-inflammatory drugs that may cause bleeding.

**Omega-3 fatty acids.** Fish oil is not the only source of omega-3 fatty acids. Omega-3 supplements can also be made from walnuts and flaxseed. Omega-3 fatty acids are best known for promoting heart health, but as discussed above, they are also com-

monly recommended for their anti-inflammatory benefits. A government-sponsored research review concluded that omega-3s help to lessen joint tenderness and also allow people with rheumatoid arthritis to use less medicine.

Omega-3 supplements from non-fish sources may also interact with medicines that lower blood pressure and blood thinners that reduce the ability of blood to clot, so be sure to discuss these and all supplements with your doctor.

## Supplements promoted for OA

Most supplements for osteoarthritis claim to repair or replace damaged or lost cartilage. However, many OA supplements are undertested and unproven. Stay skeptical: Supplements "supported by research" may only draw on a few small studies, or studies with flawed designs.

**Avocado-soy unsaponifiables.** Avocado-soy unsaponifiables (ASUs) are a combination of plant fats that are extracted and concentrated from avocado and soybean oils. Promoters of ASUs say that they rebuild cartilage, reduce pain and swelling, lubricate joints, and increase flexibility. These claims are supported by several studies showing that ASUs may improve joint function and lessen the need for pain medication. However, additional research is still needed to verify the effects of ASUs against OA.

**Boswellia (Indian frankincense).** The boswellia tree produces a fragrant resin that is rich in anti-inflammatory compounds. Boswellia is widely used in folk and Ayurvedic medicine, and a study published in 2008 found that 5-Loxin, a supplement made from boswellia, improved function and decreased pain in people with osteoarthritis of the knee. However, it has not been well-studied for the treatment of arthritis.

**Chondroitin sulfate.** Together with glucosamine (see below), chondroitin sulfate is one of the best known and most widely tested supplements for osteoarthritis. Chondroitin sulfate is a major structural component of cartilage, helping it retain moisture and keeping it strong. The chondroitin sulfate in supplements is the same as the chondroitin sulfate in cartilage. Promoters of chondroitin supplements say that they help these functions and also may lessen joint pain.

While early studies on chondroitin sulfate combined with glucosamine found that the two together worked better than traditional pain relievers to reduce joint pain, more recent findings have not been as positive. The National Institutes of Health recently funded the Glucosamine/Chondroitin Arthritis Intervention Trial (GAIT), a large-scale, six-month study,

## *Many supplements promoted for RA can inhibit your blood's ability to clot.*

to determine whether chondroitin sulfate by itself, glucosamine by itself, or the two together could reduce pain in people with arthritis of the knee. In addition to groups taking the supplements, researchers also put some study participants on celecoxib (brand name Celebrex), one in a class of NSAIDs (nonsteroidal anti-inflammatory drugs) called COX-2 inhibitors. Other participants were given a placebo.

On the whole, neither supplement by itself, nor the combination of the two, proved more effective than a placebo. A small group of subjects with moderate-to-severe pain had less discomfort when taking the glucosamine-chondroitin combination, but the supplements by themselves or in combination did not help people with mild pain.

**Glucosamine.** Glucosamine is the supplement people with OA use most. It is said to relieve pain, particularly in the knees and hips, and to rebuild cartilage. It is primarily available in three forms—glucosamine sulfate, glucosamine hydrochloride, and N-acetyl glucosamine—and is usually combined with chondroitin. Glucosamine is thought to work by reducing inflammation and stimulating cells to produce more cartilage. Studies on glucosamine supplements, however, have been inconsistent: Some people find that glucosamine helps relieve their pain and allows them to cut back on NSAIDs, while others experience no real difference.

Severe side effects from taking glucosamine are uncommon. However, even though reports of allergy symptoms are rare, people who are allergic to seafood should be cautious when considering glucosamine because it is often derived from the shells of shrimp, crab, and other shellfish. Though a derivative of glucose, glucosamine does not appear to cause blood glucose to rise. You may have heard that glucosamine can increase insulin resistance, which tends to raise blood glucose, but those findings have since been debunked. Each person is different, however, so people with diabetes should note any changes in their blood glucose levels and discuss any increases with their doctors.

**Methylsulfonylmethane.** Methylsulfonylmethane (MSM) is often combined with glucosamine and/or chondroitin in supplements for arthritis. A few studies suggest that MSM may help lessen pain, but not enough research has been done.

### Supplements promoted for both RA and OA

Some supplements promise to help both rheumatoid arthritis and osteoarthritis—but can they?

**Bromelain.** Bromelain is a combination of enzymes taken from the stems of pineapples. Though known for their anti-inflammatory effects, the enzymes in bromelain can cause upset stomach, and Dr. Gerbstadt points out that it is nearly impossible for the active compounds in a bromelain supplement to reach the area of inflammation in the body because they do not circulate through the bloodstream intact. Bromelain should be avoided by anyone with an allergy or sensitivity to pineapple, wheat, celery, carrots, fennel, grass pollen, cypress pollen, or papain.

**Ginger.** Ginger is often recommended for people with arthritis because it contains anti-inflammatory compounds. Its efficacy as a treatment for rheumatoid arthritis or osteoarthritis has not yet been proven. Some people who take ginger, especially powdered forms, complain of heartburn, nausea, and other kinds of stomach discomfort.

**White willow bark.** The active ingredient in aspirin was originally harvested from the bark and leaves of willow trees, so it's no surprise that white willow bark is promoted as a supplement for the pain and swelling in arthritis. While some studies suggest a benefit, the research conducted so far has been of poor quality and is not yet scientifically conclusive.

### Supplements to avoid

Some supplements promoted for arthritis may have harmful side effects and should be avoided:

**Arnica.** Arnica is promoted as an anti-inflammatory and immune system booster. It is thought to be safe when applied to the skin, but is toxic if taken orally.

**Aconite.** Proponents of aconite say that it reduces inflammation, and relieves the symptoms of rheumatoid arthritis and gout. However, it is toxic to the heart and nervous system.

**Autumn crocus.** The prescription drug derived from this plant, colchicine, is used to treat the joint pain caused by gout. The active compound, however, is not appropriate for arthritis pain.

**Cat's claw.** Cat's claw is made from the bark of a woody vine found in the Amazon. Small studies suggest that it may help with OA and RA. However, cat's claw can cause nausea, headaches, dizziness, and vomiting, and may affect blood pressure control.

**Chaparral.** Some Native American tribes have traditionally used chaparral as a remedy for arthritis and other ailments. Although briefly used commercially as a preservative, chaparral was removed from the FDA's "Generally Recognized as Safe" (GRAS) list in 1968. The FDA urged the removal of chaparral products in 1992 and reviewed 13 cases of liver damage

associated with chaparral between 1992 and 1994. Chaparral is also associated with an increased risk of kidney failure.

**Colloidal silver.** Colloidal silver is actively promoted on the Internet as a treatment for rheumatoid arthritis. It is highly unsafe and can permanently turn the skin bluish-gray.

**Kombucha tea.** Made from cultures of yeasts and bacteria, kombucha tea is recommended to relieve joint pain. However, its effects have not been studied. Home-brewed kombucha has been linked to rare, but serious, potential side effects, although these links have not been proven. It may also be contaminated with harmful bacteria and other microorganisms.

**S-adenosylmethionine (SAME).** SAME is a supplemental form of a compound naturally produced in the body. Several studies have found that SAME supplements increase the cells that produce and thicken cartilage and also reduce osteoarthritis pain, though it may take weeks for noticeable effects to emerge.

Some researchers say that SAME is safe, but it has been linked to numerous side effects, including anxiety, insomnia, mood changes, nausea and vomiting, mania, and diarrhea. It also interacts with several prescription medicines.

**Thunder god vine.** Thunder god vine refers to a traditional Chinese medicine derived from the plant's root. Some promote it as an immune response suppressant and anti-inflammatory for people with autoimmune diseases, such as rheumatoid arthritis and lupus. The numerous side effects associated with thunder god vine include upset stomach, headache, changes in male fertility, and decreased bone density in women. Except for the root, all parts of the plant, including the skin of the root, are extremely poisonous and can be deadly. Improperly prepared thunder god vine supplements could contain these poisonous parts of the plant.

## The bottom line

In January 2012, the Drug and Therapeutics Bulletin of the *British Medical Journal* (BMJ) released a review of herbal products purported to treat osteoarthritis. It cautioned readers that most supplements have not been proven to work and could interfere with prescription medicines. You may find that certain supplements relieve your symptoms and allow you to cut back on other medicines. But don't expect miracles, and always consult your doctor or medical team before starting a supplement so that you can continue to manage your arthritis safely and effectively. □

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