

## Loosen Up

## Surefire solutions for easing joint pain

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BY LISA TURNER

▶ A BODY'S ONLY AS GOOD as the joints that move it. Just ask the Tin Man from Oz. Yet more than 40 million Americans suffer from arthritis, and millions more experience other types of joint pain. The culprits can include everything from autoimmune disorders to chronic overuse, but, says Fred Pescatore, MD, president-elect of the Inter-

national and American Association of Clinical Nutritionists, "the common denominator behind joint pain is inflammation." Lower that, he says, and you'll lower the pain. Along with anti-inflammatory foods, such as omega-3 fatty acids and the spice turmeric, several supplements can help your joints feel like new.

D-ribose, malic acid, and magnesium. "A major component of what people consider arthritis pain comes from the shortening of the small muscles and not from the joints themselves," says Jacob Teitelbaum, MD, medical director of the Fibromyalgia and Fatigue Centers and author of From Fatigued to Fantastic! (Penguin/Avery, 2007) and Pain Free 1-2-3: A Proven Program to Get You Pain Free! (Penguin/Avery, 2007). For the muscles to lengthen, they need to relax. And that requires energy. "A key, but underappreciated, factor in physiology is that it takes much more energy for muscles to relax than to contract," Teitelbaum explains. When taken in a combination formula, "d-ribose, malic acid, and

magnesium all dramatically increase the body's energy production, consequently promoting relaxation." Early research is exciting, but you need all three supplements to get

the effect. "It's like building a house," says Teitelbaum. "Ribose is the lumber, malic acid the hammers, and magnesium the workers. You need all three of them for the house to go up, and you need all of these supplements to make energy." Typical dosage: 5 grams of ribose, at least

600 mg of malic acid, and 40 mg of magnesium, three times a day for three to four weeks, and then go to twice a day. Cut back the dose of magnesium if it loosens your stools too much.

orite, naturally produced in the body, promotes the structure and function of cartilage in the joints. Some studies have found glucosamine relieves pain and improves movement just as effectively as ibuprofen and other nonsteroidal anti-inflammatories (NSAIDS) without their side effects, which include bleeding and ulcers in the gastrointestinal tract. Glucosamine supplements are usually derived from chitin, present in crab,

lobster, and shrimp shells. Animal lovers rejoice, though: A vegan version, made from a mold called Aspergillus niger, recently became available as well. You can buy glucosamine in three forms: glu-

cosamine hydrochloride, N-acetyl glucosamine, and glucosamine sulfate. The sulfate form contains sulfur, thought to strengthen collagen in joints, so it's usually the preferred form for treating joint pain. Typical dosage: 1,500 mg daily in divided doses.



In clinical studies, arnica equals, if not surpasses, ibuprofen in relieving osteoarthritis pain.

- Chondroitin sulfate, also found naturally in the body, gives cartilage its elasticity. Although some studies show chondroitin alleviates osteoarthritis pain, results are mixed. "Chondroitin has a much better effect on decreasing inflammation when you combine it with glucosamine and MSM," says Vishal Verma, DC, a chiropractor in Fairfax, Virginia, specializing in neuromuscular and skeletal disorders. Supplementsderived from animal tracheas and shark cartilage-are sold alone or in combination with glucosamine and/or other joint-health ingredients. Typical dosage: 1,200 mg per day, in divided doses.
- MSM (methylsulfonylmethane). Researchers believe the sulfur in MSM, found in fruits, vegetables, grains, and

some herbs, and in trace amounts in humans, helps maintain healthy, flexible ligaments. A recent study, published in the journal Osteoarthritis and Cartilage, for example, found that 3 grams of MSM twice a day relieved pain and improved physical function in people with osteoarthritis. You can buy MSM in powder, tablet, or capsule form (all equally effective). It appears to work even better in combination with glucosamine and chondroitin. Typical dosage: 1 to 3 grams daily, in divided doses.

Arnica, derived from the Arnica montana plant and long used in folk medicine to treat bruises, sprains, swelling, and muscle aches, rivals topical ibuprofen in relieving arthritis pain. In a recent study of people with osteoarthritis of the hands, those who used topical arnica gel three times a day reported equal reduction in pain and improvement in hand function as those who used topical ibuprofen. Other studies have obtained similar results when using arnica gel for osteoarthritis of the knee. Topical arnica comes in creams, gels, ointments, and sprays and may be combined with tea tree, calendula, or other herbal compounds thought to reduce pain. Typical dosage: Apply a thin layer three or four times a day; you can also try homeopathic arnica pellets or tablets for added relief.

Green Tea. Widely touted for its high antioxidant content, green tea may also reduce joint damage and inflammation. Research presented in April at the Experimental Biology 2007 conference in Washington, DC, suggests that a compound in green tea called epigallocatechin gallate (EGCG) inhibits the production of compounds that trigger inflammation and joint damage in people with rheumatoid arthritis. Previous research also supports green tea's effectiveness at reducing the incidence and



Drink green tea regularly, and your joints will thank you.

severity of rheumatoid arthritis. Typical dosage: 300 to 400 mg of green tea extract per day, or three to four cups of green tea, for those not sensitive to caffeine. AM

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Our recipe: find natural, tasty ingredients and don't mess them up.

