

# OSTEOARTHRITIS

by M. Squires

Did you ever eat Rice Krispies as a little kid? There was magic in the bowl as suddenly your cereal exploded with a Snap! Crackle! Pop! You couldn't wait to pour on the milk! Years later, that same snap, crackle and pop loses its appeal when it's your joints, not your cereal, making the "magic." You bend to pick up a dropped object and your knees creak as you straighten up. A flex of your wrist and you hear a crackle. Sometimes you know when it's going to rain before the weatherman! You can't possibly be old enough to have arthritis, can you?

Where's the magic in that?



## Where's the Magic?

Approximately 70 million Americans have one of the more than 100 forms of arthritis or related diseases, according to the Arthritis Foundation. The most prevalent form of arthritis, osteoarthritis, affects 20.7 million of us over the age of 45. Osteoarthritis (OA) affects the young as well, but in general is considered a degenerative, aging disease. It's often referred to as degenerative joint disease (DJD). Due to mechanical wear and tear, a trauma or an accident, normal cartilage that cushions joints suffers damage. As the cushion erodes, bone hits bone, causing pain, inflammation and further erosion occurs, classically in the hips, spine, knees and fingers. By the time we're 60, OA will show up on x-rays, although only about 30% will have active symptoms. In fact, before you decide your popping is OA, your doctor will take x-rays or CT scan to confirm the diagnosis.

Can you prevent OA? While age is a major contributor, even the Arthritis Foundation<sup>1</sup> agrees that OA is "not an inevitable part of aging". Other factors that increase risk include genetics (especially in the hands), obesity (stress on weight bearing hip and knee joints), repetitive stress to joints (typically athletics, certain jobs) and trauma from a fall or accident that affects collagen production and repair. By reducing your risks, you can alter your path and not end up sounding like you belong in a cereal bowl!

### The Fast Magic

As with other disorders, there are seemingly magic bullets that stop the pain and inflammation of OA faster than the speed of natural therapies. The standards are aspirin or other nonsteroidal anti-inflammatory drugs (NSAIDs) such as Indocin and Naprosyn. Although NSAIDs effectively reduce symptoms, they do not repair the problem and often add more of their own, namely, potential GI bleeds and kidney/liver damage with long term use. Some research suggests NSAIDs may interfere with cartilage repair, leading to further joint disability and destruction. In one study of 186 arthritis patients, 58 patients on Indocin had more rapid hip destruction than those not on an NSAID. Another type of popular NSAIDs are Cox-2 inhibitors like Celebrex and Vioxx<sup>®1</sup>. Analgesics and oral or injectable corticosteroids may also be used therapeutically. But there's nothing "magical" in these bullets; they do not help the body naturally repair itself, nor reverse or stop the disease process.

<sup>1</sup>Vioxx<sup>®</sup> was pulled from the market in late 2004 due to increased heart attacks.

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## Osteoarthritis *continued*



### The Un-Magic Way

It's not magic nor fast, but it's safer: the old-fashioned way, helping the body heal itself by giving it the components it needs to do so.

Researcher reviews on herbal and nutrition therapy for OA show natural options offering “good results” in light of the chronicity and cost of OA, coupled with the toxicity of drug therapy. Diet considerations include omitting members of the nightshade family (tomatoes, peppers, eggplant and tobacco) to reduce inflammatory symptoms. Certain nutritional supplements by their very nature assist the cellular healing process by fighting oxidative damage to collagen. Vitamin C is critical to collagen synthesis and thus a vital nutrient to OA in daily doses of at least 1,000 to 3,000 mg per day. Vitamin E at 600 IU per day provides antioxidant protection and stabilizes cartilage membranes. Methionine, an amino acid, taken at 250 mg in four divided doses, offered better symptomatic relief than Ibuprofen. Other herbal supplements that aid in the anti-inflammatory process include flaxseed and fish oils, yucca, devil's claw, bromelain, rosemary, avocado, soy and sea cucumber. The most studied and recognized natural supplement for OA therapy by researchers is glucosamine sulfate (GS).



### Glucosamine's Role

Glucosamine is a simple amino sugar, which occurs naturally in cells and is an important precursor in the growth and repair of cartilage, a form of connective tissue. As a precursor, GS actually stimulates the body to repair itself by setting off a chain of biochemical reactions that encourages collagen growth, the principle component of connective tissue. Glucosamine also makes up 50% of the synovial fluid of the joints, thus supplying the lubricant to keep joints moving freely.

Over 20 double-blind, placebo-controlled studies prove the efficacy of glucosamine sulfate in humans, as well as many more in animal studies. Research shows that GS protects existing connective tissue by inhibiting the processes, which can cause further damage. Supplementing with GS actually restored damaged knee cartilage and subsequent joint function in another study. Researchers look at joint space narrowing and thickness of collagen as markers of disease progression or reversal. Two randomized placebo-controlled, double-blind studies on GS 1500 mg taken daily conclude “oral GS may act as a disease modifying agent in patients with mild to moderate OA of the knees”. If GS helps the most painful form (knee OA), it'll work in other joints as well.

Compared to most NSAIDs, GS is low dosing, only three capsules per day is needed to maintain a consistent therapeutic level for repair and protection of connective tissues. Research reviewers also note that the sulfate form of glucosamine is the preferable form. GS achieves a 95-98% absorption rate. Although GS contains no pain relieving

properties, when it is taken over a continuous period (8 weeks in one study), it actually relieved symptoms better than NSAIDs. In addition, aspirin and NSAIDs were unable to offer the benefits glucosamine does in the way of joint protection and restoration of cartilage. Another caveat from reviewers: GS works better when taken consistently, 1500 mg a day, and it may take longer—anywhere from four weeks to 3 months—to feel symptomatic relief in terms of decreased pain and increased mobility.

Thus, while you might feel better faster by decreasing symptoms with “magic” bullets, you may want to opt for the “old-fashioned” way. Glucosamine sulfate offers a natural way to relieve the symptoms of destruction of OA by improving collagen repair and at the same time healing the underlying conditions that cause OA, often reversing the disease process. Now, wouldn't you call that magic?

## Osteoarthritis: Just the Facts

- ◆ Affects 20.7 million Americans
- ◆ Mostly after age 45
- ◆ More women affected than men
- ◆ Adds up to 7 million doctor visits per year
- ◆ Knee OA is as disabling as cardiovascular disease (except stroke)
- ◆ A reported 80% have limited activity & mobility
- ◆ Costs the U.S. economy nearly \$125 billion per year in direct expenses, lost wages & production

*Caution: There are conflicting studies regarding the effect of GS on blood sugar. Please consult with your personal health care provider if you suspect or have blood sugar problems or diabetes before using supplements containing GS.*

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References available on request from health care providers.

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