

Coping with Osteoarthritis of the Knee – An Active Life is Part of the Solution

by Robert H. Wilson, M.D.



It's stiff, it's sore, and you can't kneel or get up from the floor. It hurts going downhill or walking stairs. It takes 10 minutes to get it going after sitting through a movie. It's tight by the end of the day, and it throbs at night, waking you when you roll over in bed. It won't bend or straighten all the way, and now you're going bow-legged. Despite periods when you don't think about every step you take, your knee is getting worse every year.

Chances are, you have osteoarthritis (OA) of the knee. Your physician will diagnose it by examining your knee, looking at a few x-rays, and listening to your story. Sometimes magnetic resonance imaging (MRI) is necessary to rule out other possibilities. If you've got it, you're not alone. So now what?

If you are my patient, there are two things I want you to know. First, people can have OA of the knee for many years and never have a single symptom. Second, even when signs and symptoms of OA exist, many people can control them well enough to continue to play and work hard on that knee. What is it in the arthritic knee that causes problems, and what is it that allows some bad knees to perform so well?

Inflammation Is the Culprit

Osteoarthritis is the wear and tear of cartilage that covers the ends of the bone in a joint. Most of the pain, soreness, stiffness, swelling, and secondary weakness of OA is the result of the inflammation that cartilage wear triggers. Even when cartilage wear is severe, control of inflammation can allow a joint to feel good and function well. Some people with OA, even severe OA, seem to have the natural ability to keep inflammation under control or feel very little discomfort even when inflammation exists. These are people who are generally physically active throughout their lives, have strength in their legs, and are at or near ideal body weight. People can have osteoarthritis of the knee for many years and never have a single symptom.

Therein lie the first secrets of controlling OA pain of the knee. Physical activity is crucial — but not just any activity. Once OA symptoms exist, knees do not tolerate new forms of impact-loading activity, such as running. Even extensive walking is often a problem, especially down inclines or stairs. So what's a body to do? Swimming or water aerobics are good ways to get exercise without further damaging your knees. But to improve the feel and function of arthritic knees, many people cycle.



Get Pedaling

Most arthritic knees will tolerate pedal pushing. I'm talking about any kind of bike — stationary bike (upright or recumbent), road bike, or trail bike; fat tires, skinny tires, or no tires. The seat needs to be the right distance away from the pedals. The fit must feel comfortable. People with balance problems should use stationary bikes. The gear or tension should be low enough to keep pedal speed between 60 and 90 revolutions per minute (rpm), although it is suitable to go slower if that seems too fast.

The more you bike, the more you will experience its amazing benefits. First, the strength you build by biking is exactly the strength you need to feel and function better in the knees. Second, biking uses the largest muscle groups in the body, which means you are getting great benefits for your heart and burning large amounts of calories. Once you get up to 30 minutes or more four or five days a week, cycling is a great way to control your weight. Third, getting out on a bike can give you great enjoyment. Fourth, training on a bike allows you to perform other activities (like hiking) more comfortably.



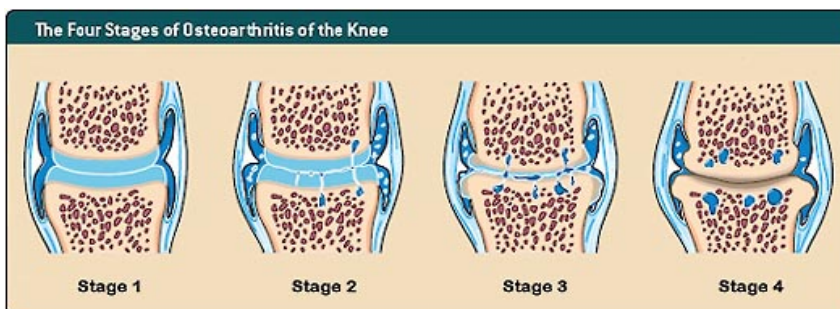
Dropping Pounds

If you are overweight, losing weight is important. Losing even 10 pounds can make a real difference in how your knees feel. Besides exercise, it is crucial to make a change in the way you eat. Start by eating four meals a day. People trying to lose weight usually try to skip meals — until they are so hungry they binge. Skipping meals slows down your metabolic rate, which means you are burning fewer calories no matter what you are doing. Learn to graze. Eat the right foods (you know what they are) in smaller amounts but on a more frequent basis.

What do you do if your knees hurt so much you can't get through the normal activities of life, much less ride a bike? You need to seek medical help.

A Little More Help

Start with Tylenol® and a good brand of glucosamine and chondroitin. Tylenol is a good painkiller for most people; it's safer for most than aspirin or the nonsteroidal anti-inflammatories (NSAIDs). Glucosamine and chondroitin did not appear terribly effective in a recent study, but because they have proven to be effective in veterinary medicine and individual human case reports, I think it's worth a try. *Consumer Reports* found that out of the hundreds of dietary supplements on the market, only 13 contained what they claimed. Take a full dose of one of these 13 products for three to six months, stop it for a few weeks, and then decide if it works for you.



Cross-sectional view of a synovial joint illustrates the four-stage progression of osteoarthritis as wear and tear erode articular cartilage between the bones.

If you need more help, add in aspirin or an NSAID, and take them only on a full stomach. Stop if they upset your stomach. Your physician might treat you with something to protect your stomach. Ask your physician to monitor for kidney and liver function after you take an NSAID for one month and then at least once a year after that. You may need an NSAID only on occasion, or less than a full daily dose. Take the lowest effective dose, and get off them when you don't need them. Full-dose, chronic use of NSAIDs and painkillers may be associated with faster progression of osteoarthritis in weight-bearing joints, as well as complications arising from the use of the medicines.

Injections: The Next Step

If oral medications are not working, injectable medication is often the next step. Cortisone injections can treat flare-ups of arthritic inflammation, and repeated hyaluronic acid (HA) injections can relieve arthritic knee pain for years in some patients. In combination with oral medication, both are often useful, but cortisone has to be used with caution. Too much cortisone can damage cartilage and other parts of the joint. If you have diabetes, a cortisone injection can raise your blood sugar, so we know there is some systemic effect. Treatment should be limited to once or twice per year. Cortisone works quickly but usually does not last for more than four to six weeks.



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HA injections are safer than cortisone and are often used repeatedly with no long-term adverse effects on the knee. A series of HA injections can have benefits lasting six months to a year or longer. HA is found in abundant supply in a normal, healthy knee. The knee with OA has an impaired ability to make HA, so it has a lower concentration than a normal knee. HA injections, also called viscosupplementation, are meant to improve the lubricating and cushioning properties of joint fluid, but they probably have other beneficial effects as well. Studies indicate that HA reduces pain in the knee, controls inflammation, and triggers the natural production of HA.

Several HA products are available, most of them derived from rooster comb. HA treatment is performed in a series of three to five weekly injections, depending on which product is used. Unlike cortisone, HA's benefits come about gradually, even after the last injection, and potentially last much longer. HA injections do not interfere with any metabolic processes or organ systems outside the knee, or with any medications you are taking.

Talk to Your Physician

If these forms of OA treatment do not control your knee pain adequately, you may be a candidate for knee surgery. That is a discussion for you and your physician. Consider joint replacement when you have tried nonsurgical treatment and your knee pain is still too great a hindrance to your activities of work, play, and daily living.

Even though cartilage wear and tear is not naturally reversible, millions of people live active, full, comfortable lives despite having OA of the knee. Successful treatment does not rely on one medication or a single intervention. Lifestyle changes, exercise, bracing, over-the-counter and prescription medications, injections, and various forms of surgery can — and should — be used in concert.