



Treatment of Knee and Hip Osteoarthritis in the Aging Athlete

If you have a chronically painful joint, you are not alone. More than 21 million Americans are affected by osteoarthritis which is also called degenerative joint disease. The beginning of osteoarthritis is thought to be trauma which damages the collagen articular (joint surface) cartilage meshwork of the joint and alters enzymatic activities in the joint. As time progresses the damaged tissue is restored, but it is not fully normal. Over the course of the next **15 years**, the damaged meshwork of collagen cartilage thins and the underlying bone thickens. It is at this point 15 years after trauma that **pain** begins. The joint in this painful stage has areas of healthy articular cartilage and areas of cracked or pitted cartilage. The final stage of osteoarthritis is characterized by disappearance of the articular cartilage, joint deformity, muscle weakness and chronic pain.

An osteoarthritic joint generally has pain, morning stiffness that improves with activity, and osteophytes and joint space narrowing on x-ray. Osteoarthritis is unusual under the age of 38 and is common after age 65. Risk factors for osteoarthritis are older age, family history, obesity, previous trauma and congenital defects.

Diagnosis of osteoarthritis is made by x-ray and physical exam. Doctors who usually make the diagnosis of osteoarthritis and prescribe treatment are family, orthopedic, rheumatology, or physiatrist physicians. A referral to a physical therapist is customary to learn about appropriate self care, activities, and home exercises. If the knee is involved the physical therapist or physician may prescribe an “unloader” brace.

Treatment begins with education in the chronic disease condition and teaching self management. It makes no sense to continue painful, damaging activities. Moderate exercise that is pain free to the joint is recommended to slow down the degenerative process of the condition. For example, athletes who are participating in an impact sport such as running are encouraged to modify their running program or to try hiking or biking.

Other treatments include medications. Medications are selected in the following order with the **most gentle effective medication** being the most appropriate beginning with 1) acetaminophen (Tylenol), 2) NSAIDS (such as aspirin, Advil, Aleve, Indocin, Clinoril and Feldene), 3) Coxy-2 inhibitors (such as Celebrix, Vioxx and Bextra), 4) corticosteroid injections into the joint, and 5) hyaluronan injections (used to increase joint fluid viscosity and cushioning effects). Research into drugs called chondroprotective agents is beginning. These drugs will protect joint cartilage from further damage and slow down the progression of damage to the joint. Glucosamine and chondroitin sulfate when used for several months by some people seem to relieve pain by improving the

joint. As always with medications, a physician needs to determine effective and safe dosages for you.

Surgically there are numerous techniques available depending upon the size of the degenerative area and which joint is involved. These include arthroscopic surgery, osteotomies to realign the long bones, and total joint replacements. Since joint replacements have a 10-15 year life, this technique is chosen with careful consideration of all factors. The rehabilitation after total joint replacement is critical in determining success. Physical Therapists at North Boulder Physical Therapy specialize in P. T. care of all stages of osteoarthritis.