

## Osteoarthritis FAQ's

1. **What is osteoarthritis?** Osteoarthritis (OA) is a common disorder that affects the joints and is caused by a loss of cartilage. Cartilage is the covering over the ends of bones that serve to provide a smooth gliding surface. When this cartilage surface is lost or destroyed, the underlying bone becomes exposed. As the disease progresses, more cartilage is lost and eventually bone rubs against bone within the joint. The disease is generally progressive and often results in pain, deformity, and stiffness. These problems can have a major impact on the quality of life and activity level of affected individuals. Osteoarthritis affects over 27 million individuals in the United States alone.
  - a. **What causes osteoarthritis?** The cause of osteoarthritis is often unclear, but several factors often contribute. Factors contributing to the development of osteoarthritis include obesity, genetics, trauma/ injury, instability, and age. The global rise in obesity has been correlated with a significant rise in the frequency of arthritis, particularly in the knee joint. Genetics clearly plays a role and has been correlated with osteoarthritis especially in the joints of the hand and wrist. Trauma and injury can result in damage to the cartilage and poor alignment of the bones that can contribute to the development of osteoarthritis. Instability of the joints related to injured ligaments or weakness can also lead to cartilage loss and ultimately osteoarthritis. Finally, age has been associated with osteoarthritis. Although the frequency of OA increases with age, it does not occur in all individuals and should not be considered inevitable.
  - b. **Are there other forms of arthritis?** Although osteoarthritis is the most common form of arthritis, there are many other forms. Rheumatologists and orthopedic surgeons study and treat the spectrum of arthritic problems including osteoarthritis and rheumatoid arthritis. In general terms, osteoarthritis results in loss of cartilage due to mechanical overload or poor underlying cartilage that is not capable of withstanding normal loads and wears out prematurely. Rheumatoid arthritis (RA), in contrast, is the most common form of inflammatory arthritis. In individuals with RA, the body's own immune system and the joint lining (synovium) for unclear reasons destroy the joints cartilage (an autoimmune reaction). In general, both RA and OA are progressive problems that can result in cartilage loss, joint deformity, stiffness, and pain.
  - c. **What are the symptoms of osteoarthritis?** Individuals with osteoarthritis generally complain of pain related to activity. As the disease progresses, the pain can be present at rest and at night. Additional symptoms often include joint stiffness and deformity often limiting the individuals function and quality of life. The rate of progression is variable. In some individuals, osteoarthritis progresses slowly and can be managed for years with non-operative care. In other cases, OA can progress rapidly and cause severe pain sometimes prompting the need for surgery when other measures fail to control the symptoms.
  - d. **How is OA diagnosed?** If an individual is experiencing joint pain, it is important for them to discuss these complaints with their doctor. A careful history, physical exam, and x-rays of the affected joint are the main ways to make an accurate diagnosis of OA. Treatment will be based on the stage of the disease (how far it has progressed) and the severity and duration of symptoms (how bad and how long it has hurt).

## 2. What are non-surgical treatment options for arthritis of the hip and knee?

- a. **Medications.** Pain relievers are usually the first choice of therapy for osteoarthritis of the hip and knee. Simple pain relievers, such as acetaminophen (Tylenol), are available without a prescription and can be effective in reducing pain. Non-steroidal anti-inflammatory medications can include “over-the-counter” medications aspirin, ibuprofen (Motrin or Advil), or naproxen (Aleve) to help reduce pain and swelling in the joint. More potent type of pain relievers are prescription strength non-steroidal anti-inflammatory drugs or NSAIDs.
- b. **Injections.** Cortisone injections can provide pain relief and reduce inflammation. They can be very useful if there is significant swelling, but are not very helpful if the arthritis affects the joint mechanics. The duration of pain relief from the injection is variable. There is a limit to how many can be given per year. Viscosupplementation is a treatment in which hyaluronic acid (HA) is injected into the joint. It can help joints to work properly by acting like a lubricant. There are several different types, given in various treatment regimes. Due to anatomy around the hip joint, injections into the hip are more complicated and therefore less frequently prescribed. Examples of such medications include Synvisc, Orthovisc, Supartz, Hyalgan, etc. The medical literature is unclear on how effective viscosupplementation is in the treatment of arthritis.
- c. **Role of weight loss.** Many people with osteoarthritis are overweight. Simple weight loss can reduce stress on weight bearing joints, such as the hip or knee. Based upon the physics of the hip and knee joints, patients put 3 to 5 times their body weight across these joint throughout the day, especially during stair climbing and getting in and out of a chair. Therefore, every ten pounds of extra weight that the patients are carrying can result in fifty pounds of weight across the hip and knees with weight bearing. Therefore, losing weight can result in reduced pain and increased function, particularly in walking.
- d. **Role of exercise.** Exercises can help increase range of motion and flexibility as well as help strengthen the muscles in the legs. Exercise is often effective in reducing pain and improving function. Your physician or a physical therapist can help develop an individualized exercise program that meets your needs and lifestyle. Unfortunately, in the setting of advanced arthritis (bone-on-bone) exercises can sometime increase pain in the hip and knee joints. And therefore every exercise program should be individualized.
- e. **Role of braces and splints.** Braces may be helpful in knee arthritis if the arthritis is centered on one side or the other. A brace can assist with stability and function. Braces are not for everyone and they can be difficult to fit for certain people.
- f. **Role of PT.** Physical therapy to strengthen the muscles around the joint may help absorb some of the shock imparted to the joint. Physical therapy can help to reduce the pain, swelling, and stiffness of osteoarthritis, and it can help improve joint function. It can also make it easier for you to walk, bend, kneel, squat, and sit. Some patients, however, find PT painful similar to exercise.
- g. **Role of alternatives.** Examples of alternative therapies include the use of acupuncture and magnetic pulse therapy. Acupuncture uses fine needles to stimulate specific body areas to relieve pain or temporarily numb an area. It is used in many parts of the world and evidence suggests that it can help ease the pain of arthritis. Magnetic pulse therapy is painless and works by applying a pulsed signal to the knee, which is placed in an electromagnetic field. Data on how effective these treatments are is inconclusive.