

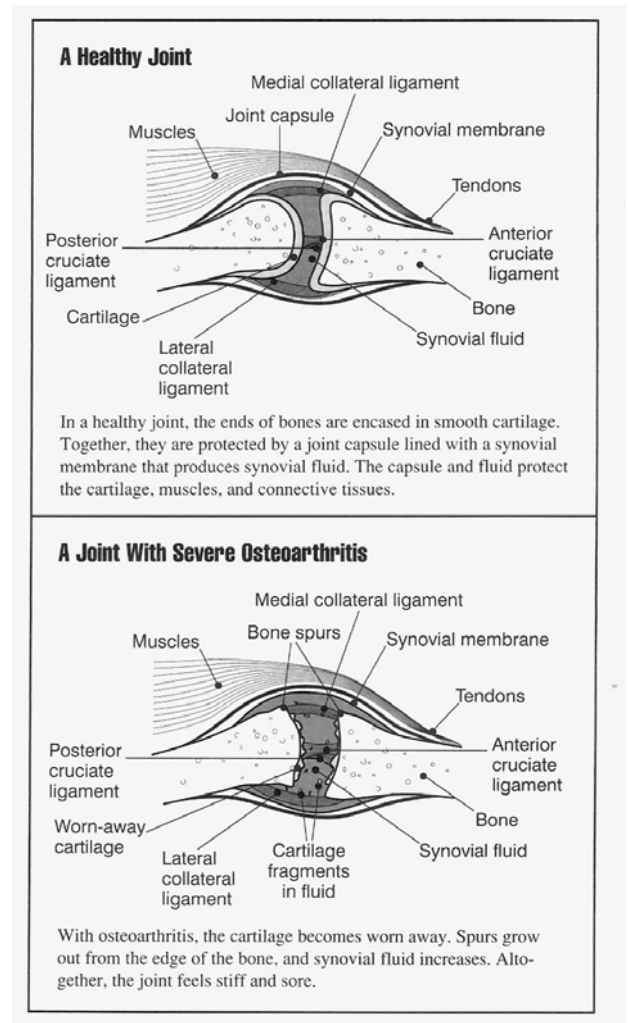


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OSTEOARTHRITIS OF THE KNEE

The following is designed to present an overview of Osteoarthritis of the Knee so that you may better understand what it is, how it can be treated, and what to expect.

Osteoarthritis is the most common type of the many kinds of arthritic diagnoses which affect joints. Fortunately, it is frequently the most easily managed. Osteoarthritis, sometimes called degenerative arthritis or osteoarthritis is caused by the breakdown of the surface which lines the ends of the bones inside joints. This surface on the end of the bone is a type of cartilage called articular cartilage which is a very resilient tissue. There are basically two types of cartilage inside the knee joint. The first type of cartilage is called the meniscus (meniscal cartilage) which forms two C-shaped structures which act as the bushings or shock absorbers located between the thigh bone and the leg bone at the knee joint. The second type of cartilage, articular cartilage, acts like tread on the ends of the bone, and is usually involved with degenerative arthritis. You are probably familiar with this because if you take a chicken joint and open it up, this is the glistening, smooth white substance on the ends of the bone. This is the articular cartilage (tread) which is involved with the arthritic process. The degeneration of articular cartilage (joint tread) is a part of the aging process. Nearly 90% of all people over the age of sixty show some signs of osteoarthritis. Although there is no cure for osteoarthritis, with physical therapy, anti-inflammatory medications, and in some cases surgery, it can be managed allowing the patient to live a more comfortable and active life.



The cause of osteoarthritis is not completely known but is associated with the breakdown of the articular cartilage that covers the gliding surfaces of the bones in certain joints. Injury to the joint can also be a known cause. In certain joints, normally smooth articular cartilage (tread) becomes roughened and pitted. Exactly why the articular cartilage begins to break down and the normally sliding surfaces become pitted and irregular is not known, but it is felt to be a time-related degenerative process in nature and occurs along with degeneration of the other body tissues which is all part of the aging process. Again, do not confuse osteoarthritis with rheumatoid arthritis or any of the other inflammatory types of arthritis, such as, lupus, ankylosing spondylitis, and other

diseased which attack the lining of the knee joint which subsequently attacks the joint surfaces. Osteoarthritis is purely and simply a degenerative phenomenon secondary to trauma and/or normal use over the period of years.

The symptoms of osteoarthritis vary greatly. For many people, it is only a minor, temporary nuisance which can be relieved with an occasional aspirin. For others, it can be a very uncomfortable and painful existence. Activities of daily living and even sleeping can be difficult. Some people have more severe symptoms than others and, in fact, the x-rays are not a good indicator of how much the patient is suffering. There is, therefore, great variation in the amount of discomfort experienced in individuals

Treatment goals have to be individualized for each individual patient. Osteoarthritis cannot be cured and the degenerative process cannot be stopped. However, a balanced treatment program can reduce pain and improve joint function and allow the patient to live a more active and pleasurable life. Arthritis does not only affect the knee joint, it affects most joints in the body. The knee and hip are two of the most significantly and frequently involved joints.

Since there are over 100 different types of arthritis, sometimes a complete medical evaluation is needed to confirm or rule out the diagnosis of osteoarthritis. Osteoarthritis is by far the most common type of arthritis and can usually be diagnosed from your symptoms, physical examination, joint involvement and x-ray. Once the diagnosis is made, we can devise a treatment program for your care. Your evaluation includes your telling us about your pain. We will then conduct a physical examination of your affected joints, and x-rays will then be taken. X-rays show the change in joint structure. The articular cartilage or tread cannot be seen directly but its breakdown shows up on x-rays as a narrowing of the gap between the bones. When the read wears totally off the end of the bones, there is a bone-on-bone contact. This is usually a rather painful situation. With degenerative arthritis, there can be increased deposition of bone about the joint which will show up on x-rays as spurs. Likewise, bone can be reabsorbed and this will show up as degenerative cysts. These spurs and cysts are benign and related to the degenerative process and, in and of themselves, are not sources of pain.

Occasionally, blood tests are necessary to be sure that other types of arthritis, such as rheumatoid arthritis and gout are not present. In addition, if you have an excess amount of fluid in the knee joint, some of your joint fluid may need to be drawn off and this can be sent for evaluation under the microscope as well as chemical analysis of the fluid which can help differentiate osteoarthritis from other types of arthritis.

Once you are seen and evaluated, treatment of your condition will be undertaken. Treatment for arthritis initially begins with either aspirin or a nonsteroidal anti-inflammatory medication. Aspirin is an effective anti-pain and anti-inflammatory agent alone; however, the aspirin has to be taken at a certain dosage and frequently to slow proper blood levels to build up. If it is not taken routinely and at the proper dosage, the appropriate blood levels will not build up and it will not work as well as it should. Do not vary the recommended dosage. In recent years, newer medications have been made available for the treatment of pain and inflammation of osteoarthritis. All of them have similar chemical make-up and most, like aspirin, can cause irritation of the stomach. Your symptoms and the state of your arthritic process will influence the type of anti-inflammatory medication

which we will recommend for you. Some people are unable to tolerate some of the anti-inflammatories because of side effects but can take others without much difficulty. A different nonsteroidal anti-inflammatory medication may work well for one of your friends but not work for you. The proper medication will be prescribed to you and tailored to your particular condition. If the anti-inflammatory medications do not give you any significant relief or if you are suffering and having a marked amount of pain and discomfort in your knee, a cortisone injection into the knee may be recommended. When injected directly into the inflamed joint, these cortisone injections usually decrease the swelling of the soft tissues and reduce the accompanying pain. Cortisone can accelerate the generation of the arthritic joint if given on a regular basis over a prolonged period of time. Injections of cortisone should only be used for the relief of occasional problem pain. Fortunately, in many cases, relief of symptoms from a cortisone injection may last for several months following a single injection.

In addition, it is very important with arthritis to maintain the proper body weight. Certainly, being overweight places a significant stress on your joints, particularly the lower body joints which transmit body weight to the ground. Getting down to your proper weight frequently does make the symptoms much less marked and, in addition, can potentially keep you from having to undergo surgery.

Physical therapy is also an important treatment modality. We feel that by strengthening the muscles around the knee, you can improve the general “health” of your knee. In addition, other physical therapy modalities might be helpful in relieving your pain.

If pain or discomfort persists despite an appropriate conservative treatment program, surgery may be helpful. There are several different operative procedures which can be performed for osteoarthritis.

The first alternative is arthroscopic joint debridement and shaving of the roughened joint surfaces as well as dealing with possible degenerative cartilage tears in the knee at the same time. This operative procedure can be performed in those individuals who do not have markedly advanced degenerative changes present. For the ones with more advanced degenerative changes present, larger surgical procedures will be necessary. In the younger individuals who have arthritis predominantly on only one side of the knee joint, an operation known as an osteotomy can be performed. This is where the leg bone is cut and realigned to allow transmission of forces across the good side of the knee. This is an operation that is useful in younger individuals with arthritic knees. If the arthritis involves the entirety of the knee joint, an osteotomy would not be successful. The only other alternative in an older individual would be a total knee replacement. With the development of synthetic materials, total joint replacement surgery has become a practical solution to advanced osteoarthritis. Although the majority of today’s replacements are for the hip and knee, replacements for other joints, such as, fingers, toes, wrists, elbows, shoulders, and ankles are currently being developed. Do not expect a new joint to perform as well as the one Mother Nature provided. Total knee replacement involves retreading the joint surface with metal and plastic implants. This is done as a last resort in the treatment of your knee condition when all conservative modes have failed. This operation is done primarily to relieve pain and discomfort and improve function. The results have been gratifying, although there are some significant complications which can occur in a relatively small percentage of patients.

The goal with osteoarthritis is to treat each patient individually consisting initially of conservative treatment and if that fails, proceed with surgery selectively tailored to each individual's situation. In summary, many people with osteoarthritis lead normal and active lives. Medication and physical therapy can help reduce pain and restore movement to stiff joints, If necessary, surgery can be used to improve function of the joints and to decrease pain and discomfort and improve the quality of life. Although osteoarthritis cannot be cured, its symptoms can be managed and the patient can often enjoy a more useful and active lifestyle.



The information contained in this patient education packet is intended to help you and your families/caretakers better understand a particular diagnosis and/or the treatment options available. If you have any questions after reading this, please don't hesitate to contact Dr. Longobardi's office at 201.343.1717 for a further explanation or you can also go to www.universityorthopaedic.com and click on Patient Education to gather more information. Thank you.