

# OSTEOARTHRITIS OF THE KNEE

Osteoarthritis, sometimes called degenerative arthritis, is caused by breakdown of the articular cartilage on the ends of the bones inside the joints. When the cartilage wears totally off the end of the bones, there is bone-on-bone contact. This is usually rather painful.

Articular cartilage is the slick white substance that covers the end of the bones and joints and is abnormal or worn in patients with arthritis. If you take a chicken joint and pull it apart, there is a glistening white substance on the ends of the bone. This is an example of articular cartilage.

The cause of osteoarthritis is not completely known. Exactly why the articular cartilage begins to breakdown and the normally sliding surfaces become pitted and irregular is not known, but is if felt to be degenerative in nature and occurs along with degeneration of other body tissues, which is all part of the ageing process. Nearly 90% of all people over the age of sixty years show some signs of osteoarthritis.

Injury to the joint can be a cause.

Arthritis doesn't 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.

Do not confuse osteoarthritis with rheumatoid arthritis or any of the other inflammatory types of arthritis such as lupus, ankylosing spondylitis and other diseases which attack the lining of the knee joint, which subsequently attacks the joint surfaces.

The symptoms of osteoarthritis vary greatly. For many people, it is only a minor temporary nuisance which can be relieved with medication. 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, x-rays alone 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.

Because there are over one hundred different types of arthritis, sometimes a complete medical evaluation is needed. Osteoarthritis is by far the most common type of arthritis and can usually be diagnosed from your symptoms, physical examination, joint involvement and x-rays. The articular cartilage cannot be seen directly but its breakdown shows up on x-rays as a narrowing of the gap between the bones.

Also, with degenerative arthritic changes, there can be increased deposition of bone about the joint which will show up as spurs. Sometimes bone can be reabsorbed and this will show up as degenerative cysts. Both spurs and cysts can be frequently seen on x-rays around the joint. These spurs and cysts are benign and are related to the degenerative process.

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 for chemical analysis of the fluid, which can help differentiate osteoarthritis from other types of arthritis.

Treatment goals have to be individualised for each patient. Osteoarthritis cannot be cured and the degenerative process cannot be stopped. However, a balanced



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treatment program can reduce pain and improve joint function. This allows the patient to live a more active and pleasurable life.

In recent years, new medications have been made available for the treatment of pain and inflammation of osteoarthritis. All of them have a similar chemical make up and can cause irritation to the stomach. Your symptoms and the start of your arthritic process will influence the type of anti-inflammatory medication 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 non-steroidal anti-inflammatory medication may work well for one of your friends but not work for you. The proper medication will be prescribed for you and tailored to your particular condition.

Physiotherapy is also important in the treatment of arthritis. By strengthening the muscles around the knee, you can improve the general "health" of your knee.

In addition, it is very important to maintain an appropriate body weight. Certainly, being overweight places significant stress on your joints. Keeping your weight at an acceptable level frequently makes the symptoms much less marked and in addition, can potentially avoid the possibility of surgery.

If pain or discomfort persists despite an appropriate conservative treatment program, surgery may be helpful. There are several different operative procedures which may 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 patients who don't have markedly advanced degenerative changes present. For the ones with more advanced degenerative changes present, larger surgical procedures will be necessary.

In younger individuals who have arthritis predominantly only on 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. If the arthritis involves the entirety of the knee joint, an osteotomy would not be successful.

The only other alternative in an older patient would be a total knee replacement. With the development of synthetic materials, total joint replacement surgery has become a practical solution to advanced osteoarthritis. Total knee replacements are very successful, however they do involve major surgery.

Another type of surgery is a "unicompartmental arthroplasty". This involves replacing the side of the joint that is arthritic. It is less traumatic than a total knee replacement, and has an easier recovery, but they are not suitable for most people.

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 methods 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 physiotherapy can help reduce pain and restore movement to stiff joints. If necessary, surgery can be used to improve function of the joints, 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.