Pain in the Knee

Understanding How The Knee Works

The knee is the largest joint in the body and is made up of three main parts:

*The lower end of the thigh bone, or femur
*The upper end of the shin bone, or tibia
*The kneecap, or patella

The thigh bone (femur) turns on the upper end of the shin bone (tibia), and the kneecap (patella) slides in a groove on the end of the thigh bone. Ligaments, which are bands of tissue, connect the thigh bone and the shin bone to help keep the knee joint steady. The quadriceps, the long muscles on the front of the thigh, help strengthen the knee. A smooth substance called articular cartilage covers the surface of the bones where they touch each other within the joint. This articular cartilage acts as a cushion between the bones. The rest of the surfaces of the knee joint are covered by a thin, smooth tissue liner called synovial membrane, which makes a small amount of fluid that acts as a lubricant.

Causes of Knee Pain

One of the most common causes of joint pain is arthritis. The most common types of arthritis are:

* Osteoarthritis (OA) sometimes called degenerative arthritis because it is a "wearing out" condition involving the breakdown of cartilage in the joints. When cartilage wears away, the bones rub against each other, causing pain and stiffness. OA usually occurs in people aged 50 years and older, and frequently in individuals with a family history of osteoarthritis.

* Rheumatoid Arthritis (RA) produces chemical changes in the joint space that cause it to become thickened and inflamed. In turn, the synovial fluid destroys cartilage. The end result is cartilage loss, pain, and stiffness. RA affects women about 3 times more often than men, and may affect other organs of the body.

* Post-traumatic Arthritis may develop after an injury to the joint in which the bone and cartilage do not heal properly. The joint is no longer smooth, and these irregularities lead to more wear on the joint surfaces.

Other causes of joint pain include avascular necrosis, which can result when bone is deprived of its normal blood supply (for example, after organ transplantation or long-term cortisone treatment), and deformity or direct injury to the joint. In some cases, joint pain is made worse by the fact that a person will avoid using a painful joint, weakening the muscles and making the joint even more difficult to move. What's causing your knee joint pain? Is getting relief through joint replacement an option for you? These are just some of the answers that an orthopaedic surgeon can provide. But first, it's a good idea to be sure you have information about joint replacement that will help you understand what the surgeon tells you.

Treating Knee Pain

What You Should Know About Knee Joint Replacement

"Joint Replacement" (the term orthopaedic surgeons use) is usually reserved for patients who have severe arthritic conditions. Most patients who have artificial knee joints are over 55 years of age, but the operation is being performed in greater numbers on younger patients thanks to new advances in artificial joint technology. Circumstances vary, but generally patients are considered for total joint replacement if:

* Functional limitations restrict not only work and recreation, but also the ordinary activities of daily living.

* Pain is not relieved by more conservative methods of treatment such as medications, physical therapy, or arthroscopy (cleaning the joint) by the use of a cane, and/or by restricting activities.

* Stiffness in the joint is significant.

*X-rays show advanced arthritis or other problems.

What Is Total Joint Replacement?

Total joint replacement is a surgical procedure in which certain parts of an arthritic or damaged joint, such as a knee joint, are removed and replaced with a prosthesis, or artificial joint. The artificial joint is designed to move just like a normal, healthy joint. In total knee replacement, the artificial joint is composed of metal and polyethylene to replace the diseased joint. The artificial joint is most commonly anchored into place with bone cement. In some applications, it is covered with a porous coating that allows bone tissue to grow into it.

Possible Complications of Surgery

Serious complications may occur with any surgical procedure. These include but are not limited to: problems with anesthesia, cardiovascular problems including heart attack, vascular problems including thrombus, bronchopulmonary problems including emboli, genitourinary problems, and gastrointestinal problems. Certain additional complications related to joint replacement surgery in particular may include but are not limited to: bleeding problems, blood clots in the legs and/or lungs, wound healing problems, damage to nerves and blood vessels, limb length discrepancy, bone