

## Frequently Asked Questions about Osteoarthritis of the Knee

Osteoarthritis of the knee (OA Knee) is one of the five leading causes of disability among elderly men and women. The risk for disability from OA Knee is as great as that from cardiovascular disease. Here are some frequently asked questions about OA Knee.

### What causes OA Knee?

OA Knee usually occurs in knees that have experienced trauma, infection or injury. A smooth, slippery, fibrous connective tissue called articular cartilage acts as a protective cushion between bones. Arthritis develops as the cartilage begins to deteriorate or is lost. As the articular cartilage is lost, the joint space between the bones narrows. This is an early symptom of OA Knee and is easily seen on X-rays.

As the disease progresses, the cartilage thins, becoming grooved and fragmented. The surrounding bones react by becoming thicker. They start to grow outward and form spurs. The synovium (a membrane that produces a thick fluid that helps nourish the cartilage and keep it slippery) becomes inflamed and thickened. It may produce extra fluid, often known as "water on the knee," that causes additional swelling.

Over a period of years, the joint slowly changes. In severe cases, when the articular cartilage is gone, the thickened bone ends rub against each other and wear away. This results in a deformity of the joint. Normal activity becomes painful and difficult.

### What factors increase the risk of developing OA Knee?

Several factors may increase the risk of developing osteoarthritis of the knee.

- **Heredity:** There is some evidence that genetic mutations may make an individual more likely to develop OA.
- **Weight:** Weight increases pressure on joints such as the knee.
- **Age:** The ability of cartilage to heal itself decreases as people age.
- **Gender:** Women who are older than 50 years of age are more likely to develop OA Knee than men.
- **Trauma:** Previous injury to the knee, including sports injuries, can lead to OA Knee.

- **Repetitive stress injuries:** These are usually associated with certain occupations, particularly those that involve kneeling or squatting, walking more than two miles a day, or lifting at least 55 pounds regularly. In addition, occupations such as assembly line worker, computer keyboard operator, performing artist, shipyard or dock worker, miner and carpet or floor layer have shown higher incidence of OA Knee.
- **High impact sports:** Elite players in soccer, long-distance running and tennis have an increased risk of developing OA Knee.
- **Other illnesses:** Repeated episodes of gout or septic arthritis, metabolic disorders and some congenital conditions can also increase your risk of developing OA Knee.
- Other risk factors are being investigated, including the impact of vitamins C and D, poor posture or bone alignment, poor aerobic fitness and muscle weakness.

### **How is OA Knee diagnosed?**

OA Knee can be diagnosed in two ways: patient-reported symptoms such as pain or disability or actual physical signs, such as the changes in the joint seen on X-rays. In most cases, both pathology and patient-reported symptoms are present. An evaluation of OA Knee includes a complete history and physical examination. The examination should cover:

- The involved limb
- The spine
- The blood and nervous system
- The joints on either side of the knee, particularly the hip joint, which can also cause knee pain
- Posture
- Gait

### **How is OA Knee treated?**

Initial treatment is generally directed at pain management. OA Knee pain may have different causes, depending on the individual and the stage of the disease. Thus, treatment is tailored to the individual.

A wide range of treatment options is available. You and your doctor should decide together on the course of treatment that's right for you. In general, treatment options fall into five major groups:

- **Health and behavior modifications**, such as patient education, physical therapy, exercise, weight loss, and bracing
- **Drug therapies**, including simple pain relievers such as aspirin or nonsteroidal anti-inflammatory drugs, COX-2 specific inhibitors, opiates and stronger drugs for patients who do not respond to other drugs or treatments, and glucosamine and/or chondroitin sulfate
- **Intra-articular treatments**, including corticosteroid injections or injections of hyaluronic acid (viscosupplementation)
- **Surgery**, including arthroscopy, osteotomy, and arthroplasty (joint replacement)
- **Experimental/alternative treatments** such as acupuncture, magnetic pulse therapy, vitamin regimes and topical pain relievers

*This information is based on the "Improving Musculoskeletal Care in America" Project of the Council on Research, Evidence-based Practice Committee, and Department of Research and Scientific Affairs, American Academy of Orthopaedic Surgeons. The material presented is for educational purposes only and is not intended to present the only, or necessarily best, method or procedure for the medical situations discussed.*

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