

## **Osteoarthritis (Degenerative Joint Disease)**

Osteoarthritis, also known as "wear and tear" arthritis, occurs when the cartilage that cushions and protects the ends of your bones gradually wears away. This leads to pain and stiffness that worsens over time, making it difficult to do daily activities.

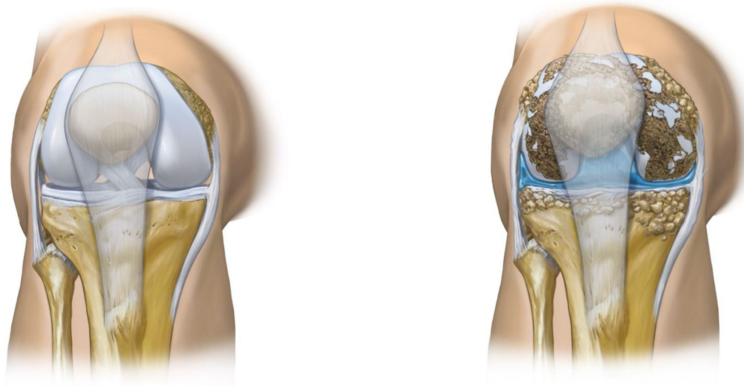
Osteoarthritis is the most common form of arthritis. It develops slowly and most often occurs during middle age.

Although there is no cure for osteoarthritis, there are many treatment options available to help manage pain and keep people staying active.

### **Anatomy**

A joint is where the ends of two or more bones meet. The knee joint, for example, is formed between the bones of the lower leg (the tibia and the fibula) and the thighbone (the femur). The hip joint is where the top of the thighbone (femoral head) meets a concave portion of the pelvis (the acetabulum).

A healthy joint glides easily without pain because a smooth, elastic tissue called articular cartilage covers the ends of the bones that make up the joint.



Left: Healthy Knee. Cartilage provides cushion between the bones

Right: Osteoarthritis. Cartilage has thinned and deteriorated allowing bone to rub against bone

### **Cause**

With osteoarthritis, the articular cartilage that covers the ends of bones in the joints gradually wears away. Where there was once smooth articular cartilage that allowed the bones to glide easily against each other when the joint bent and straightened, there is now a frayed, rough surface. Joint motion along this exposed surface is painful.

Osteoarthritis usually develops after many years of use. It affects people who are middle-aged or older. Other risk factors for osteoarthritis include obesity, previous injury to the affected joint, and family history of osteoarthritis.

### **Symptoms**

Osteoarthritis can affect any joint in the body including the joints of the spine. Symptoms may range from mild to disabling.

A joint affected by osteoarthritis may be painful and inflamed. Without cartilage, bones rub directly against each other as the joint moves. This causes the pain and



inflammation. Pain or a dull ache develops gradually over time. Pain may be worse in the morning and feel better with activity. Vigorous activity may cause pain to flare up.

The joint may stiffen and look swollen, enlarged or "out of joint." A bump may develop over the joint.

Joint movements such as bending, straightening and rotation may become more difficult and loss of motion may follow.

Loose fragments of cartilage can interfere with the smooth motion of a joint. The joint may lock or "stick. It may creak, click, snap, or make a grinding noise (crepitus). An arthritic joint may weaken and weight bearing joints such as a knee or ankle may buckle and give way.

Although osteoarthritis cannot be cured, early diagnosis and treatment can help maintain joint mobility, relieve pain and improve function.

## Treatment

### ***Nonsurgical Treatment***

Early, nonsurgical treatment can help maintain joint mobility, improve strength, and relieve pain. Most treatment programs combine lifestyle modifications, medication, and physical therapy.

- **Lifestyle Changes:** Your doctor may recommend rest or a change in activities to avoid provoking osteoarthritis pain. It may mean switching from high-impact activities (such as aerobics, running, jumping, or competitive sports) to low-impact exercises (such as stretching, walking, swimming, or cycling). A weight loss program may be recommended, if needed, particularly if osteoarthritis affects weight-bearing joints (such as the knee, hip, spine, or ankle)
- **Medications:** Non-steroidal anti-inflammatory drugs can help reduce inflammation. Sometimes, your doctor may recommend strong anti-inflammatory agents called corticosteroids, which are injected directly into the joint. Corticosteroids provide short term relief of pain and swelling.
- **Physical therapy.** A balanced fitness program, physical therapy, and/or occupational therapy may improve flexibility, increase range of motion, reduce pain, and strengthen the joint. Supportive or assistive devices (such as a brace, splint, elastic bandage, cane, crutches, or walker) may be needed.

### ***Surgical Treatment***

If early treatments do not stop the pain or if they lose their effectiveness, surgery may be considered. The decision to treat surgically depends upon the age and activity level of the patient, the condition of the affected joint, and the extent to which osteoarthritis has progressed. Surgical options for osteoarthritis include arthroscopy, osteotomy, joint fusion, and joint replacement.

