

Osteoarthritis

What is Osteoarthritis?

Osteoarthritis (OA), or degenerative joint disease, is one of the oldest and most common types of arthritis. It is characterized by the breakdown of the joint's cartilage. Cartilage is the part of the joint that cushions the ends of bones. Cartilage breakdown causes bones to rub against each other, causing pain and loss of movement. Most commonly affecting middle-aged and older people, OA can range from very mild to very severe. It affects hands and weight-bearing joints such as knees, hips, feet and the back.

What Causes Osteoarthritis?

There are many factors that can cause OA. Primary osteoarthritis is mostly related to aging. With aging, the water content of the cartilage increases and the protein makeup of cartilage degenerates. Repetitive use of the joints over the years irritates and inflames the cartilage, causing joint pain and swelling. Eventually, cartilage begins to degenerate by flaking or forming tiny crevasses. In advanced cases, there is a total loss of the cartilage cushion between the bones of the joints. Loss of cartilage cushion causes friction between the bones, leading to pain and limitation of joint mobility. Inflammation of the cartilage can also stimulate new bone outgrowths (spurs) to form around the joints. Osteoarthritis occasionally can be found in multiple members of the same family, implying a heredity (genetic) basis for this condition.

Who Gets Osteoarthritis?

Osteoarthritis occurs more frequently as we age. Before age 45, osteoarthritis occurs more frequently in males. After age 55 years, it occurs more frequently in females. Obesity may lead to osteoarthritis of the knees. In addition, people with joint injuries due to sports, work-related activity or accidents may be at increased risk of developing OA. Secondary osteoarthritis is caused by another disease or condition. Conditions that can lead to secondary osteoarthritis include obesity, repeated trauma or surgery to the joint structures, abnormal joints at birth (congenital abnormalities), gout, diabetes and other hormone disorders.

What are the Symptoms of Osteoarthritis?

The most common symptom of osteoarthritis is pain in the affected joint(s) after repetitive use. Joint pain is usually worse later in the day. There can be swelling, warmth, and creaking of the affected joints. Pain and stiffness of the joints can also occur after long periods of inactivity. In severe osteoarthritis, complete loss of cartilage cushion causes friction between bones, causing pain at rest or pain with limited motion.



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Symptoms of osteoarthritis vary greatly from patient to patient. Some patients can be debilitated by their symptoms. On the other hand, others may have remarkably few symptoms in spite of dramatic degeneration of the joints apparent on x-rays. Symptoms also can be intermittent. It is not unusual for patients with osteoarthritis of the hands and knees to have years of pain-free intervals between symptoms

The Diagnosis of Osteoarthritis

There is no blood test for the diagnosis of osteoarthritis. Blood tests are performed to exclude diseases that can cause secondary osteoarthritis, as well as to exclude other arthritis conditions that can mimic osteoarthritis.

X-rays of the affected joints can suggest osteoarthritis. The common x-ray findings of osteoarthritis include loss of joint cartilage, narrowing of the joint space between adjacent bones, and bone spur formation. Simple x-ray testing can be very helpful to exclude other causes of pain in a particular joint as well as assist the decision-making as to when surgical intervention should be considered.

Medications

In many patients with osteoarthritis, mild pain relievers such as aspirin and acetaminophen may be sufficient treatment. Since acetaminophen has fewer gastrointestinal side effects than NSAIDs, especially among the elderly patients, acetaminophen is generally the preferred initial drug given to patients with osteoarthritis. Pain-relieving creams applied to the skin over the joints can provide relief of minor arthritis pain. NSAIDs are medications that are used to reduce pain and inflammation in the joints. The most common side effects of NSAIDs involve gastrointestinal distress, such as stomach upset, cramping, ulcer and even bleeding. The risk of these and other side effects increases in the elderly. Newer NSAIDs called Cox-2 inhibitors have been designed that have less toxicity to the stomach and bowels.

Recently, the food supplements glucosamine and chondroitin have been shown to relieve symptoms of pain and stiffness for some persons with osteoarthritis.

While oral cortisone is generally not used in treating osteoarthritis, when injected directly into the inflamed joints, it can rapidly decrease pain and restore function. Since repetitive cortisone injections can be harmful to the tissue and bones, they are reserved for patients with more pronounced symptoms.

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For persisting pain of severe osteoarthritis of the knee that does not respond to weight reduction, exercise or medications, a series of injections of hyaluronic acid (Synvisc, Hyalgan) into the joint can sometimes be helpful, especially if surgery is not being considered.

Treatment

Treatment of osteoarthritis focuses on decreasing pain and improving joint movement, and may include:

- Weight control to prevent extra stress on weight-bearing joints
- Joint protection to prevent strain or stress on painful joints
- Heat/cold therapy for temporary pain relief
- Exercises to keep joints flexible and improve muscle strength
- Many different medications are used to control pain, including corticosteroids and NSAIDs. Glucocorticoids injected into joints that are inflamed and not responsive to NSAIDs. For mild pain without inflammation, acetaminophen may be used.
- Surgery (sometimes) to relieve chronic pain in damaged joints

What is the outlook?

The goal of treatment in osteoarthritis is to reduce joint pain and inflammation while improving and maintaining joint function.