

OSTEOARTHRITIS

What is Osteoarthritis?

Osteoarthritis (OA) is the most common form of arthritis. Known as the “wear and tear” type of arthritis, OA is chronic, degenerative condition characterized by the breakdown of the joint’s cartilage. Articular cartilage is the part of the joint that cushions the ends of bones and allows for easy joint movement. It differs from the two C shaped shock absorbers known as “menisci”. The breakdown of cartilage causes “bone-on-bone” rubbing, resulting in stiffness, pain, and loss of motion in the joint. Osteoarthritis is also known as degenerative joint disease. OA of the knee and hip is the most common cause of arthritis related disability in the U.S. It most commonly affects middle-aged and older people, with most people developing it after age 45. The cause of OA is not completely understood and there is no cure. Many factors play a role in whether or not you get OA, including age, obesity, injury or overuse and genetics.

There are several stages of osteoarthritis:

1. Cartilage loses its elasticity and becomes vulnerable to damage.
2. Wearing away of the cartilage causes change to the underlying bone, resulting in bony growths called spurs, that develop at the joint.
3. Bits of bone or cartilage float freely in the joint “loose bodies” (“joint mice”).
4. The joint lining, or synovium, becomes inflamed due to cartilage breakdown.

Changes in the cartilage and bones of the joint lead to pain, swelling, and reduced function. OA most commonly occurs in the weight bearing joints of the hips, knees and lower back.

If you suspect that you have arthritis, it is important to get a correct diagnosis and begin early treatment. There are other conditions, such as rheumatoid arthritis, that have different treatment plans. It is important that you are being treated properly for your form of arthritis.

What are the symptoms of arthritis?

Most often OA develops gradually. It may start as joint soreness or stiffness. Some people’s OA may never get worse than that. Others may see their OA progress to a point where the pain is unbearable, and they have difficulty walking and sleeping. The most common signs and symptoms of OA are:

1. Joint soreness.
2. Stiffness after periods of rest.
3. Morning stiffness, which does not last very long.
4. Joint pain that is worse in the evening after a day of activity.
5. Loss of coordination and posture due to pain and stiffness.
6. Development over time of a “boed” or “knock knee” limb alignment
7. Joint swelling, particularly after activities

If OA is in the knees, you may experience pain when moving the knee, grating or “catching” when moving the knee, pain walking up and down stairs and weakened thigh muscles.

What causes osteoarthritis?

Although there is no single known cause of OA, there are several risk factors that are known. Knowing how to control these risk factors can help you minimize or eliminate your risk of getting OA. Below are the risk factors for OA.

Age. Since “wear and tear” plays a role in the development of OA, the older you are, the more you have used your joints. This does not mean that OA is inevitable.

Obesity. Increased body weight is a huge factor in the development of OA, particularly in your knees. For each pound of body weight that you gain, you add 3 pounds of pressure on your knees. Since weight gain gradually increases the load on joints, the weight you gain over a decade or decades, plays a big role in determining if you will develop OA.

Injury or overuse. Athletes and people who have jobs that require doing repetitive motion, have a higher risk of developing OA due to injury and increased stress on certain joints. OA also develops later in life where bones have been fractured or surgery has occurred.

Genetics or heredity. It is becoming clearer through research that genetics plays a role in the development of OA. Inherited abnormalities of bones that affect the size and shape of joints can lead to OA. For example, a bowlegged person is more likely to develop OA. Just because you may have any inherited traits, does not mean that you are going to develop OA.

Muscle weakness. Studies of the muscles of the knee show that weakness of these muscles can contribute to OA and that strengthening these muscles can minimize your risk.

How is osteoarthritis diagnosed?

Early diagnosis and treatment are important in controlling OA. Your doctor will take a thorough history, perform a physical examination and obtain X-rays to make the diagnosis. Weight bearing films of for example the knee may demonstrate arthritis which might not be observed with non-weight bearing x rays. A well trained orthopedic physician should be able to make the diagnosis in the office setting. Generally, no MRI is required to diagnose OA.

How is osteoarthritis treated?

The goals of a treatment plan for OA include controlling pain and mechanical symptoms, improving your ability to function in activities of daily living and slowing the disease’s progress. A typical treatment plan will include 1)exercise, 2)weight control, 3)physical therapy and 4)medications. A variety of medications may be considered by your doctor.

Non-steroidal anti-inflammatory drugs (NSAID's) reduce inflammation, swelling and pain. Examples of NSAID's are aspirin, ibuprofen, Aleve and Advil just to name a few. Cox-2 drugs, such as Celebrex, are a type of NSAID that is much less likely to cause stomach irritation a side effect more commonly associated with traditional NSAID's. **Cortisone** injections may be helpful if oral medications are not effective. Cortisone is a steroid that is injected into the joint for fast, targeted relief. **Viscosupplementation** may be considered to "lubricate" the joint, thus, relieving symptoms. This involves receiving three to five injections over a period of three to five weeks. Examples of these types of supplements include Synvisc and Hyalgan. Glucosamine and chondroitin may be used as an over-the-counter supplement to help relieve symptoms. These are not drugs, but rather supplements of beneficial substances that are found within our joints. Your physician will determine which combination of treatment options will work best for you.

In situations where patients may have a deformity (bowing, excess knock knee alignment) due to asymmetric wear (think of your tires being out of alignment!)

In severe cases of OA, when the treatment options listed above don't work, surgical options may be indicated.

What types of surgeries are available for osteoarthritis?

There are a wide variety of surgical options available for OA. The type of surgery you may need depends on the location and degree of OA. Generally speaking, arthroscopic surgery is not very effective for patients with OA. Osteotomies are bone cutting procedures that can re-align arthritic areas of joints to a healthier part of the joint. Osteotomies are salvage procedures that can buy someone 5-15 years before they may require joint replacement. Joint replacement surgery is reserved for those who are at a point where there is no other predictably beneficial alternative. Joint replacements are designed to eliminate the pain and mechanical symptoms of OA. They generally can last 15-20 years. As always, you should consult your orthopedic surgeon to discuss all surgical options available to you.