### Foot and Ankle Conditions and Treatments





#### **OSTEOARTHRITIS**

# What is osteoarthritis (OA)?

OA is a chronic degenerative disease of the joints. OA is the most common type of arthritis, the most common joint disorder in America, and the leading cause of disability. It's often referred to as "wearand-tear" arthritis because it frequently affects the hands, hips and knees; however, it can affect any joint in the body, including the neck, low back and big toe. OA negatively impacts quality of life both physically and mentally.

OA used to be considered to be a wearing out of the joints with age. However, today we know this is a joint disease.

# How does OA damage the joints?

As the disease gradually progresses, it breaks down the cartilage at the ends of bones in a joint (called articular cartilage), and over time it worsens, damaging the underlying bone as well.

Articular cartilage is the slippery covering at the ends of bones. It provides smooth movement in the joint and acts as a shock absorber. As OA progresses, the cartilage breaks and cracks, bones change shape, and bone spurs form, causing painful, swollen joints and restricted movements. Once the cartilage degenerates, it cannot grow back.

#### What are symptoms of OA?

- Painful aching joints during and after activity and at the end of the day
- Joint stiffness first thing in the morning and after resting
- · Joint inflammation and swelling
- Reduced range of motion, which may improve with exercise or activity
- · Joint instability

#### What are risk factors for OA?

- Post-traumatic OA caused by an injury to the joint years after the inciting injury
- Repetitive occupational and sports overuse
- Genetics: 30-65% of OA is genetically determined
- Older age: however, 35% of OA in the knee begins as early as age 30!
- Gender: women are affected more often than men, especially after age 50
- Obesity: being overweight puts more stress on the joints, and fat cells promote inflammation
- Weak muscles can result in poor joint alignment, which can cause abnormal wear and tear on the joint
- Race: African Americans are more likely to develop OA of the knee and hip. Asians are less likely to develop OA.
- Insufficient levels of vitamin D3: this vitamin plays a key role in cartilage and bone metabolism

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## What are the effects of OA on health?

Negative health effects include increased difficulty with exercise, which can worsen weight gain and cause high blood pressure, diabetes and heart disease. OA sufferers fall 30% more often than people without OA, and this increases the risk of fracture partly due to the medications taken to reduce pain and because of weakened muscles around the affected joint.

#### How is OA diagnosed?

OA is diagnosed based on symptoms, a clinical examination, x-rays/MRI imaging, and your medical history. Lab tests may be ordered to rule out rheumatoid arthritis or other conditions. During your consultation, it's important to explain to your doctor how OA is affecting your activities, as well as other medical conditions and medications.

### What are the core treatments?

There is no cure. The goal of nonsurgical treatment is to allow patients the best chance for pain relief and improved function. Exercise, physical therapy with muscle strengthening, and pain management can help.

Supportive devices such as a cane or crutches may be beneficial. Topical pain creams such as those with capsaicin, menthol and lidocaine may help. Oral steroids can reduce inflammation. Steroid injections into the arthritic joint can help improve pain and movement. Platelet-rich plasma and hyaluronic acid injections can ease pain and inflammation and improve function.

High blood sugar levels stiffen cartilage, and diabetes causes inflammation that weakens cartilage. Maintaining a healthy weight and blood sugar levels can slow deterioration.

When conservative measures fail to relieve pain, joint replacement surgery may be recommended.