



Orthopaedic Surgery  
& Sports Medicine

## **Osteoarthritis**

### **What is osteoarthritis?**

Osteoarthritis is a disease process that affects the cartilage within a joint. Cartilage exists at the surface of the ends of the bones and provides joints with a gliding surface and shock absorber during activities of daily living.

Osteoarthritis causes the cartilage layer to break down and wear away, exposing raw bone. The rubbing of bone on bone in the joint causes symptoms of pain, swelling and stiffness. The body's reaction to this condition is the formation of more bone (bone spurs) and increasing stiffness of the joint. These symptoms are often the reason why patients with osteoarthritis seek relief and treatment.

### **Who gets osteoarthritis?**

Osteoarthritis is the most common form of arthritis. Approximately 12 percent of all Americans (21 million) have osteoarthritis.

Generally, osteoarthritis occurs as an accumulation of the wear and tear of the joint, and is more common in older adults. However, osteoarthritis can affect younger adults, primarily as a result of an injury to the joint. Osteoarthritis is more common in men under the age of 45 and more common in women over the age of 45. Other illnesses may also affect the cartilage in joints. An important factor that contributes to the development of osteoarthritis is excessive body weight or participation in recreational or professional activities that overstress certain joints.

### **What can I do when I am diagnosed with osteoarthritis?**

Osteoarthritis is a disease process that affects not only your joints: it can also cause stiffness in the surrounding tendons, ligaments and muscles. This may make it difficult for you to maintain your normal level of activity, and may significantly affect your ability to enjoy life. Exercise is one of the most effective treatments for osteoarthritis. A routine exercise program can decrease joint pain and stiffness, while strengthening the heart.

Exercise, when done correctly, has practically no side effects and can be done in a supervised (via physical therapy or fitness training with a professional) or non-supervised fashion in a gym or at home. Your doctor can help you identify exercises that are good for your particular situation.

Exercise, especially when coupled with a proper diet, will also help you with weight control. Every pound of weight you lose through exercise and/or diet will be approximately five pounds of weight that your knee does not have to carry! Weight loss should therefore be an important

part of your contribution to treat Osteoarthritis. A dietitian may help you develop a weight loss program that suits you best.

### **What can my doctor do to help me?**

Many patients with Osteoarthritis are afraid that they may need immediate surgery. That is not the usually the case. Many non-surgical methods exist that will be available to your doctor to help you live with osteoarthritis, and keep your pain under control while allowing you to be as active as you would like to be.

### **What non-surgical treatment options are available?**

There are different medications and tools that your doctor can use to help you return to your normal activities:

#### ***Medication by mouth***

- Tylenol (Acetaminophen): Tylenol is very effective for pain control. It does not decrease the inflammation alone and is therefore often combined with anti-inflammatory drugs
- Non-Steroidal Anti-Inflammatory Drugs (NSAIDs): These drugs are very effective in reducing pain and swelling. Often it is necessary to try different NSAIDs to get the best effect.
- Glucosamine & chondroitin sulfate (Supplements): These drugs are provided as a medical food supplement and may decrease swelling and pain in the joint in some patients; however, they are not effective in everyone.

Glucosamine is an amino sugar necessary for the construction of connective tissue and healthy cartilage. This provides a buffering action to help protect against excessive wear and tear of the joints. Without glucosamine, our tendons, ligaments, skin, nails, bones, mucous membranes, and other body tissues cannot form properly.

#### ***Cautions with these supplements***

- Diabetics: glucosamine is an amino sugar, so sugar levels should be checked more frequently.
- Anticoagulants: chondroitin sulfates structure is similar to heparin, so monitor coagulation more closely.
- Shellfish Allergy: avoid glucosamine. It is extracted from shellfish (crab, lobster, or shrimp shells).
- Patients that are pregnant or could become pregnant should consult with their primary physician before taking supplements.

#### ***Medication by injection:***

- Steroid injections

A one-time injection of a steroid directly into the joint, is a powerful anti-inflammatory agent, and effectively decreases the swelling of an osteoarthritic joint. A single steroid injection can provide relief from symptoms for several months to a year and longer, with little side effects.

- Viscosupplementation

These drugs usually are a treatment option if NSAIDS and steroid injections have failed. They act as a lubricant for the joint and can decrease the swelling. Generally, three to five injections may be necessary to complete the treatment

### **Braces**

Sometimes only one part of the joint may be affected with osteoarthritis. In that case, your doctor may prescribe a brace for you that can decrease the load that your affected joint must bear and in doing so, decrease your pain.

**Nutrition**

With arthritis, you may want to make sure you are eating particular nutrients that prevent inflammation and, therefore, assist in the management of osteoarthritis. By consuming a diet high in omega-3 fatty acids such as fish, vegetables, nuts, and flaxseed oil, this may reduce the frequency of flare-ups within your joints. Many patients have been know to experience symptoms after consuming food such as potatoes, tomatoes, peppers, and eggplants. If these foods are avoided, symptoms may decrease.

**What to do if all of these treatment options have failed?**

If all of the above options have failed to give you relief it is likely that you may require surgery. Your surgeon will discuss the different surgical options with you.

These options may include:

1. Arthroscopic (minimally-invasive) surgery to remove loose bone and debris,
2. Osteotomy
3. Partial or
4. Total replacement of your joint.