# **Drug Treatment**

Several types of drugs can be used in treating arthritis of the knee. Because every patient is different, and because not all people respond the same to medications, your orthopaedic surgeon will develop a program for your specific condition.

Anti-inflammatory medications can include aspirin, acetaminophen or ibuprofen to help reduce swelling in the joint. Simple pain relievers such as Tylenol are available without a prescription and can be very effective in reducing pain. Pain relievers are usually the first choice of therapy for osteoarthritis of the knee. All drugs have potential side effects and simple analgesics are no exception. In addition, with time, your body can build up a tolerance, reducing the effects of the pain reliever. It is important to realize that these medications, although purchased over-the-counter, can also interact with other medications you are taking, such as blood-thinners. Be sure to discuss these issues with your orthopaedist or primary physician.

A more potent type of pain reliever is a nonsteroidal anti-inflammatory drug or NSAID. These drugs, which include brands such as Motrin, Advil and Aleve, are available in both over-the-counter and prescription forms. Like all pain relievers, NSAIDs can cause side effects including changes in kidney and liver function as well as a reduction in the ability of blood to clot. These effects are usually reversible when the medication is discontinued.

A COX-2 inhibitor is a special type of NSAID that is often prescribed if knee pain is moderate to severe. Common brand names of COX-2 inhibitors include Celebrex and Vioxx. It should be noted that Vioxx was recently withdrawn from the market by its manufacturer. COX-2 inhibitors reduce pain and inflammation so that you can function better. If you are taking a COX-2 inhibitor, you should not use a traditional NSAID (prescription or over-the-counter). Be sure to tell your doctor if you have had a heart attack, stroke, angina, blood clot or hypertension or if you are sensitive to aspirin, sulfa drugs or other NSAIDs.

COX-2 inhibitors can have side effects, including abdominal pain, nausea and indigestion. Antacids or a fatty meal can limit the body's ability to absorb and use COX-2 inhibitors, so do not take them together. These drugs are less irritating to the stomach than other NSAIDs, but abdominal bleeding can occur, sometimes without warning.

### Glucosamine and Chondroitin

Glucosamine and chondroitin (kon-dro'-i-tin) sulfate are oral supplements may relieve the pain of osteoarthritis. These are two large molecules that are found in the cartilage of our joints. Supplements sold over-the-counter are usually made from synthetic or animal products.

Glucosamine and/or chondroitin sulfate may be particularly helpful in the early stages of osteoarthritis of the knee, provided they are used as directed on package inserts and with caution. Although glucosamine and chondroitin sulfate are natural substances, sometimes classified as food additives, they can cause side effects such as headaches, stomach upset, nausea, vomiting, and skin reactions. These supplements can interact with other medications, so keep your doctor informed about your use of them.

These substances can help reduce swelling and tenderness, as well as improve mobility and function. If you decide to take this therapy, it is important not to discontinue too soon. At least two months of continuous use is necessary before the full effect is realized.

#### **Corticosteroids**

Corticosteroids are powerful anti-inflammatory agents that can be injected into the joint.

They are given for moderate to severe pain. They can be very useful if there is significant swelling, but are not very helpful if the arthritis affects the joint mechanics.

Corticosteroids or cortison are natural substances known as hormones. They are produced by the adrenal glands in the human body. They can provide pain relief and reduce inflammation with a subsequent increase in quadriceps (thigh muscle) strength. However, the effects are not long-lasting, and no more than four injections should be given per joint per year.

In addition, there is some concern about the use of these injections. For example, pain and swelling may "flare" immediately after the injection, and the potential exists for long-term joint damage or infection. With frequent repeated injections or over an extended period of time, joint damage can actually increase rather than decrease.

### Viscosupplementation with Hyaluronic Acid

Viscosupplementation involves injecting substances into the joint to improve the quality of the joint fluid. Complete coverage of this technique can be found in the article titled "Viscosupplementation Treatment for Arthritis."

## Gold Salt Injections

Special medical treatments for rheumatoid arthritis include gold salt injections and other disease-modifying drugs.