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A Patient's Guide to

Osteoarthritis of the Hip

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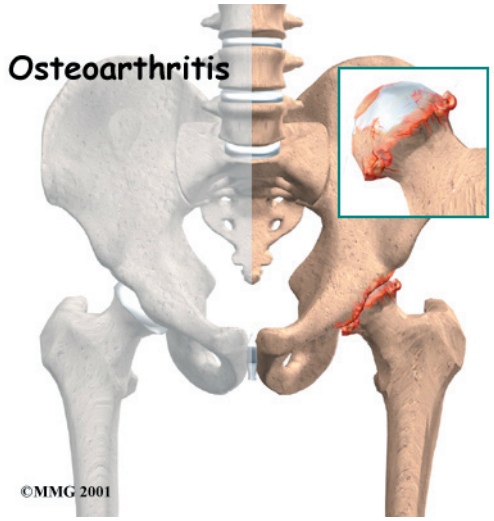


Introduction

Osteoarthritis (OA) is a common problem for many people after middle age. OA is sometimes referred to as *degenerative*, or wear-and-tear, arthritis. OA commonly affects the hip joint. In the past, little was done for the condition. Now doctors have many ways to treat hip OA so patients have less pain, better movement, and improved quality of life.

This guide will help you understand

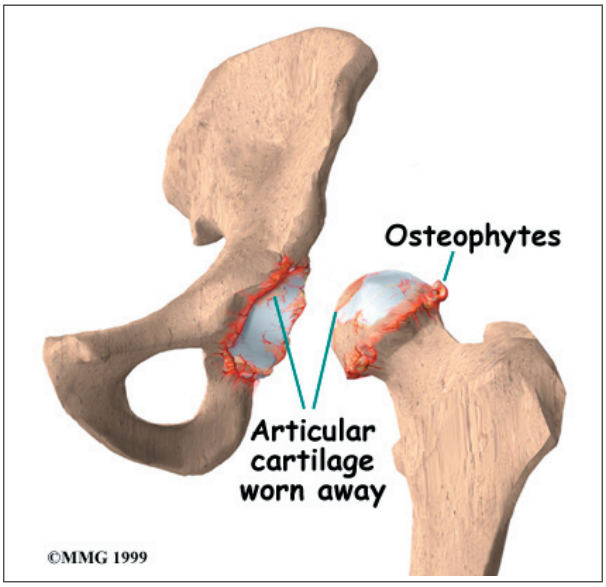
- **how OA develops in the hip**
- **how doctors diagnose the condition**
- **what can be done for your pain**

Anatomy

Which part of the hip does OA affect?

Articular cartilage is the smooth lining that covers the surfaces of the ball-and-socket joint of the hip. The cartilage gives the joint freedom of movement by decreasing friction. The layer of bone just below the articular cartilage is called *subchondral bone*. The main problem in OA is degeneration of the articular cartilage.

When the **articular cartilage** *degenerates*, or wears away, the subchondral bone is uncovered and rubs against bone. Small outgrowths called *bone spurs* or *osteophytes* may form in the joint.



Causes

How does OA develop?

OA of the hip can be caused by a hip injury earlier in life. Changes in the movement and alignment of the hip eventually lead to wear and tear on the joint surfaces. The alignment of the hip can be altered from a fracture in the bones around or inside the hip. If the fracture changes the alignment of the hip, this can lead to excessive wear and tear, just like the out-of-balance tire that wears out too soon on your car. Cartilage injuries, infection, or bleeding within the joint can also damage the joint surface of the hip.

Not all cases of OA are related to alignment problems or a prior injury, however. Scientists believe genetics makes some people prone to developing OA in the hip.

Scientists also believe that problems in the subchondral bone may trigger changes in the articular cartilage. As mentioned, the subchondral bone is the layer of bone just beneath the articular cartilage. Normally, the articular cartilage protects the subchondral bone. But some medical conditions can make the subchondral

bone too hard or too soft, changing how the cartilage normally cushions and absorbs shock in the joint.

Avascular necrosis (AVN) is another cause of degeneration of the hip joint. In this condition, the *femoral head* (the ball portion of the hip) loses a portion of its blood supply and actually dies. This leads to collapse of the femoral head and degeneration of the joint. AVN has been linked to alcoholism, fractures and dislocations of the hip, and long-term cortisone treatment for other diseases.

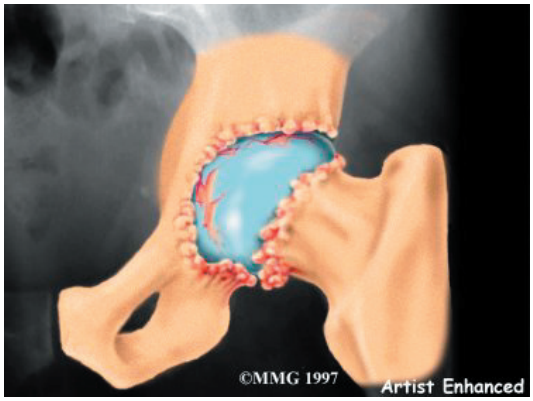
Symptoms

What does OA of the hip joint feel like?

The symptoms of hip OA usually begin as pain while putting weight on the affected hip. You may limp, which is the body's way of reducing the amount of force that the hip has to deal with. The changes that happen with OA cause the affected hip to feel stiff and tight due to a loss in its range of motion. Bone spurs will usually develop, which can also limit how far the hip can move. Finally, as the condition becomes worse, pain may be present all the time and may even keep you awake at night.

Diagnosis

How do doctors identify the problem?



The diagnosis of hip OA starts with a complete history and physical examination by your doctor. X-rays will be required to determine the extent of the cartilage damage and suggest a possible cause for it.

Other tests may be required if there is reason to believe that other conditions are contributing to the degenerative process. *Magnetic resonance imaging* (MRI) may be necessary to determine whether your hip condition is from problems with AVN.

Blood tests may be required to rule out systemic arthritis or infection in the hip.

Treatment

What can be done for the condition?

Nonsurgical Treatment

OA can't be cured, but therapies are available to ease symptoms and to slow down the degeneration of the joint. Recent information shows that your condition may be maintained and in some cases improved.

Your physician may prescribe medicine to help control your pain. Acetaminophen (Tylenol) is a mild pain reliever with few side effects. Some people may also get relief of pain with anti-inflammatory medication, such as ibuprofen and aspirin. Newer anti-inflammatory medicines called *COX-2 inhibitors* show promising results and seem not to cause as much stomach upset or other intestinal problems.

Medical studies have shown that *glucosamine* and *chondroitin sulfate* can also help people with OA. These supplements seem to have nearly the same benefits as anti-inflammatory medicine with fewer side affects. Many doctors feel the research supports these supplements and are encouraging their patients to use them.

If you aren't able to get your symptoms under control, a *cortisone* injection may be prescribed. Cortisone is a powerful anti-inflammatory medication, but it has secondary effects that limit its usefulness in the treatment of OA. Multiple injections of cortisone may actually speed up the process of degeneration.

Repeated injections also increase the risk of developing a hip joint infection, called *septic arthritis*. Any time a joint is entered with a needle, there is the possibility of an infection. Most physicians use cortisone sparingly, and avoid multiple injections unless the joint is already in the end stages of degeneration and the next step is an artificial hip replacement.

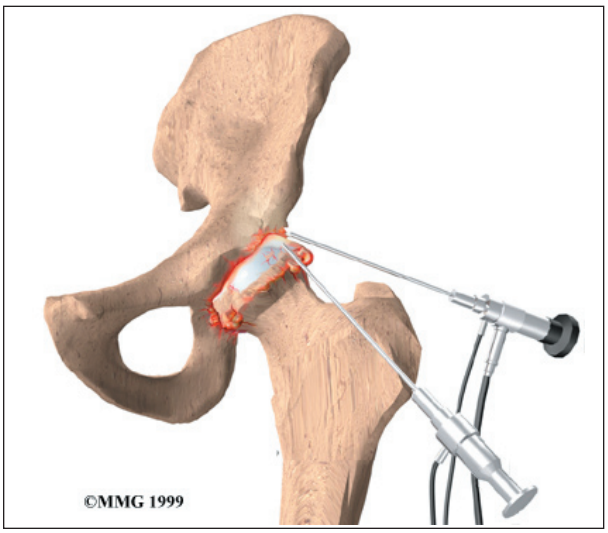
Physical therapy plays a critical role in the nonsurgical treatment of hip OA. A primary goal is to help you learn how to control symptoms and maximize the health of your hip. You will learn ways to calm pain and symptoms, which might include the use of rest, heat, or topical rubs. A cane or walker may be needed to ease pressure when walking. Range-of-motion and stretching exercises will be used to improve hip motion. You will be shown strengthening exercises for the hip to steady the joint and protect it from shock and stress. Your therapist can suggest tips for getting your tasks done with less strain on the joint.

Surgery

In some cases, surgical treatment of OA may be appropriate.

Arthroscopy

Surgeons can use an *arthroscope* to check the condition of the articular cartilage in a joint. An arthroscope is a miniature TV camera inserted into the joint though a small incision. While checking the condition of the cartilage, your surgeon may try a few different techniques to give you relief from pain. One method involves cleaning the joint by removing loose fragments of cartilage. Another method involves simply flushing the joint with a saline solution, after which some patients report relief.



This procedure is sometimes helpful for temporary relief of symptoms. Hip arthroscopy is relatively new, and it is unclear at this time which patients will benefit.

Osteotomy

When the alignment of the hip joint is altered from disease or trauma, more pressure than normal is placed on the surfaces of the joint. This extra pressure leads to more pain and faster degeneration of the joint surfaces.

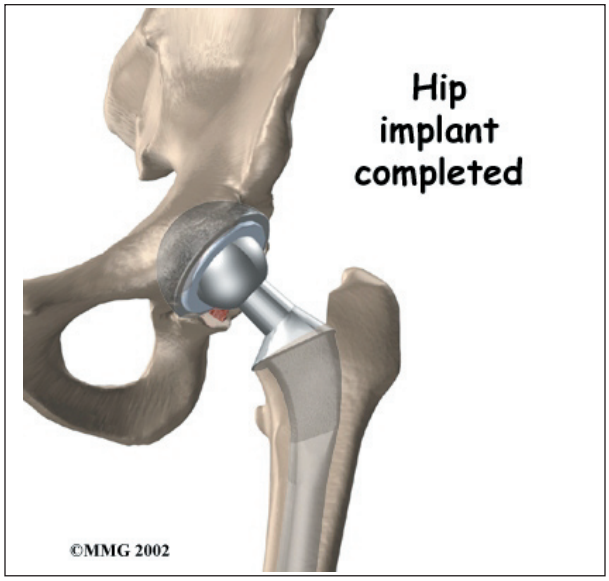
In some cases, surgery to realign the angles of the pelvic socket or femur (thighbone) can result in shifting pressure to the other healthier parts of the hip joint. The goal is to spread the forces over a larger surface in the hip joint. This can help ease pain and delay further degeneration.

The procedure to realign the angles in the joint is called *osteotomy*. In this procedure, the bone of either the pelvic socket or femur is cut, and the angle of the joint is changed. The procedure is not always successful. Generally it will reduce your pain but not eliminate it altogether. The advantage to this approach is that very active people still have their own hip joint, and once the bone heals, there are fewer restrictions in activity levels.

An osteotomy procedure in the best of circumstances is probably only temporary. It is thought that this operation buys some time before a total hip replacement becomes necessary.

Artificial Hip Replacement

An *artificial hip replacement* is the ultimate solution for advanced hip OA. Surgeons prefer not to put a new hip joint in patients less than 60 years old. This is because younger patients are generally more active and might put too much stress on the joint, causing it to loosen or even crack. A *revision* surgery to replace a damaged joint is harder to do, has more possible complications, and is usually less successful than a first-time joint replacement surgery.



Rehabilitation

What should I expect after treatment?

Nonsurgical Rehabilitation

Nonsurgical rehabilitation of hip OA is used to maximize the health of your hip and to prolong the time before any type of surgery is necessary. If you attend physical therapy as part of nonsurgical rehabilitation, you will probably progress to a home program within two to four weeks.

In cases of advanced OA where surgery is called for, patients may see a physical therapist before surgery to discuss exercises, special precautions to be followed just after surgery, and to practice walking with crutches or a walker.

After Surgery

Shortly after surgery, your physical therapist will see you in your hospital room. You'll practice getting out of bed and walking using your walker or a pair of crutches. Exercises are used to improve muscle tone and strength in the hip and thigh muscles and to help prevent the formation of blood clots.

During your recovery, you should follow your surgeon's instructions about how much weight you can put down while standing or walking. After you return home from the hospital, your surgeon may have you work with a physical therapist for up to six in-home visits.

These visits are to ensure you are safe in and about the home and getting in and out of a car. Your therapist will make recommendations about your safety, review special hip precautions and make sure you are placing a safe amount of weight on your foot when standing or walking. Home therapy visits end when you are safe to get out of the house.

A few additional visits in outpatient physical therapy may be needed for patients who still have problems walking or who need to get back to physically heavy work or activities.

The therapist's goal is to help you maximize hip strength, restore a normal walking pattern, and do your activities without risking further injury to your hip. When you are well under way, regular visits to the therapist's office will end. Your therapist will continue to be a resource, but you will be in charge of doing your exercises as part of an ongoing home program.

Notes