

Arthritis of the Knee

Arthritis is often thought of as an explanation of any ache or pain in arms, legs or spine. However, arthritis is really only in joints and it describes the loss of cartilage off the end of the bones.

In a normal joint, the cartilage is smooth, white, and relatively thin – often $\frac{1}{4}$ inch or less. It provides a nearly frictionless surface for painless movement. On an x-ray, the cartilage looks black giving the appearance of a “space” between the bones.

In an arthritic joint the cartilage becomes cracked, gouged out, dried out, and in advanced cases, the cartilage is completely worn off (no space seen on x-ray or “bone on bone”). Spurring occurs as the bone tries to reduce stress on the joint. In other words, spurring is the body's response to the pain, not the cause of the pain.



Normal Knee



Arthritic Knee

As the cartilage is lost, the knee will start to hurt with activities. At first, pain occurs with high demand activities like running, squatting, and climbing stairs. As the cartilage loss progresses, even walking on level surfaces or standing for any length of time can cause pain. Arthritic knees are often stiffest in the morning and most uncomfortable in the evening. Usually, the arthritic knee will not interfere with sleep unless it is moved “wrong” when changing position in bed. However, in advanced cases the pain can last all night long and even when sitting and getting “off your feet”.

Unfortunately, cartilage cannot be replaced. As a result, treatment of arthritis is treatment of the pain, not correction of the problem. One must keep this in mind when looking at the options we will discuss.

Treatment options for the Arthritic Knee

- ❑ **Live with it.** Obviously, this will not make the pain better. However, it must be kept in mind that all we are doing is treating pain. If you just want to put up with it, that's a reasonable choice. You are not burning any bridges.
- ❑ **Lifestyle modification.** Basically, avoid activities that makes your knee(s) hurt. Unfortunately, this option only works well if the activities you are stopping are not important to you.
- ❑ **Walking aids.** Grocery carts, canes, crutches, trekking poles, scooters, wheelchairs, etc. can all reduce the stress on the knee. If using a cane, it is most helpful to have it in the hand on the opposite side of your sore knee.
- ❑ **Physical Therapy.** When we hurt, we favor that leg and it gets weaker. That weakness can actually make your knee hurt more. Strengthening those muscles in ways that don't irritate the knee can reduce pain.
- ❑ **Weight loss.** If you are heavy, losing some weight can reduce the stress on your knee(s) and help with pain. In addition, if you end up having a knee replacement, being significantly overweight can increase your chances of infection, blood clots, and other complications. Losing weight before surgery can reduce that risk.
- ❑ **Glucosamine – Chondroitin.** For years these supplements were thought to possibly slow the rate of cartilage breakdown, but that has proven to be incorrect. However, about 1 in 3 people do get pain relief from these. If it makes you feel better, I recommend using it. If you are not feeling better after a few weeks of trying it, you are wasting your money by continuing to take them.
- ❑ **Anti-inflammatories and/or analgesics.** Some people get a great deal of help from oral medications. There are a wide variety of types available over-the-counter and by prescription.
- ❑ **Unloader braces.** When arthritis is only in one part of the knee, custom braces can help reduce the stress to the arthritic part of the joint and make more use of the normal cartilage in the knee.
- ❑ **Steroid injections (cortisone).** Steroid injections are very useful in the arthritic knee when used properly. It is a great drug for treating flare-ups of pain. In other words, it is best for the time(s) when your pain is much worse than usual. It is typically not as good at managing routine, day-to-day levels of pain. In addition, too many shots done too frequently can make the situation worse, so it needs to be reserved for those really bad times.
- ❑ **Supartz.** Supartz (highly purified sodium hyaluronate) is a substance found in normal knees that helps the cartilage lubricate itself. It is made from rooster combs. It is given by 3-5 injections, each 1-week apart. In my practice, I have seen about 80% of patients get significant relief. Unlike steroids, there is no damage from repeated use of Supartz, but it is very expensive. As a result, insurance companies generally will not pay for repeat treatment until at least 6-months from the last treatment. In most cases, when patients get relief, it last 6-9 months. It can be repeated as long as it continues to work.

- ❑ **Arthroscopy (knee scopes).** For most people with arthritis, arthroscopy is not helpful. However, if your primary complaints are “mechanical symptoms” such as locking, buckling, or giving away, arthroscopy can be helpful in reducing those symptoms.
- ❑ **Platelet Rich Plasma (PRP):** PRP is where approximately 15cc (one Tbsp.) of your blood is removed and spun in a special centrifuge. This separates the red blood cells and most of the white blood cells from the plasma and the platelets. Then this mixture of your plasma and platelets is injected into your knee. Recent research has shown this to be a relatively safe, minimally uncomfortable, and effective treatment for mild to moderate knee osteoarthritis. One to three total shots are typically done and research has shown good results with them being done from once a week up to once a month. This treatment is only offered in our Hamilton Office. Since it is a new treatment, most insurance companies are not covering the treatment yet. This means you will need to pay for the treatment yourself at the time of service. If you plan to pursue this treatment option, we will discuss costs with you then.
- ❑ **Total Knee Replacement (arthroplasty).** This option should only be considered when your knee pain is so severe that you can't live your life the way you want to and you've already tried other reasonable options. I currently offer this surgery using minimally invasive techniques and the vast majority of patients are very happy with the results of this procedure. However, make no mistake; this is major surgery with potentially severe complications.

Risks of surgery include but are not limited to:

- Anesthesia complications including the possibility of death from heart attack, stroke, or other cause. This is very uncommon, but not impossible.
- There is a chance of infection that lasts as long as you have the knee. If an artificial knee becomes infected, it is a huge problem. Bacteria attach to the artificial joint in a way that the infection cannot be eliminated by antibiotics alone. As a result, if the knee becomes infected it usually has to be completely removed, have something put in its place, you will need to go on several weeks of IV antibiotics, and then - assuming the infection is cleared - you will have another knee put in. We will do everything we can to prevent this complication but the risk of infection is between 1-4% in your lifetime depending on other medical problems you may be dealing with.
- Bleeding up to the point of needing a transfusion happens in about 10% of cases.
- Major nerve injury is relatively rare, but not impossible. However, there is a 100% chance of having numbness on the skin on the lateral (outer) side of the incision. It is an unavoidable part of the procedure.
- Stiffness of the knee, also called arthrofibrosis, is an uncommon but very difficult problem. You will need to work very hard to regain your motion immediately after surgery. Occasionally, repeat surgery is needed to break up excessive scar tissue in the knee. There have been rare cases where even after multiple surgeries, the knee remained permanently stiff and painful.
- There is a risk of incomplete pain relief. Pain reduction is the goal of surgery. The vast majority of my patients are very happy with the amount of pain relief

they achieve with surgery, but most are not 100% pain free. You have to remember that we can't make a knee as good as the one you were born with.

- Blood clots in the legs and/or lungs can occur. We will give you medications and use devices to reduce this risk, but it still can happen even with proper precautions taken.
- There is the risk of not knowing how long the knee implant will last. We do not expect artificial knees to last as long as the ones you were born with. I use the "Verilast" knee made by Smith & Nephew. They have been given permission to make the claim that it is a "30-year knee" based on extensive trials. I have been very happy with the performance of the knee and expect it to out-perform knees made in years past, but only time will tell for sure. Infection, fracture, or misuse can drastically shorten the knee's life.

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