

## Internal Derangement of the Knee

**Internal derangement of the knee** is “catch basket” phrase used to describe a family of problems in the knee. On the following pages are examples of some of the problems that fall under the umbrella of internal derangement of the knee. The symptoms and signs caused by these are very similar and extremely hard to tell apart. Sometimes a more specific diagnosis can be made with a physical exam and/or an MRI, but often, the final diagnosis can only be confirmed with surgical exploration. We will have discussed what I feel is the likely problem in your knee. It’s up to you to decide what to do next.

**Treatment options** are listed below. We will discuss the option(s) that fit your situation best:

- **Live with it:** Obviously, this is not really a treatment, but it must be kept in mind that internal derangement of the knee is not a life or limb threatening problem. If your pain is not bad enough to make you want to pursue any of the other options, maybe this is the best option for you. In most cases, the pain will vary in intensity and generally worsen over time, but that is not always the case. Uncommonly, people can have sudden, severe increases in pain or have the pain reduce significantly. It is impossible to predict if, or when, your condition will worsen or not.
- **MRI:** An MRI (magnetic resonance imaging) is very useful tool. It is painless, and does not expose you to radiation. It does involve lying still while your body is slid into a magnetic tube. People with claustrophobia usually need medicine to tolerate the test and people with certain types of metal in their bodies cannot have the study done. An MRI is good at seeing meniscal tears; excellent at seeing most types of ligament tears, bone bruises, tumors, hidden fractures; but less effective at seeing articular cartilage tears, synovial problems, and knee cap problems. The purpose of an MRI is to help you and I decide what to do with your knee. In certain cases, I will insist on getting an MRI before proceeding with treatment, but often it is up to you and whether you want the test to help you make a decision. Even a normal MRI can be helpful in eliminating possible causes of your symptoms.
- **Knee injection.** In some cases, injections can be used to help with knee pain. I sometimes use corticosteroids (often referred to as “cortisone”) in cases where the knee seems to be inflamed. Corticosteroids are the ultimate anti-inflammatory and have the best chance of putting out an inflammation “fire” in the knee. Unfortunately, it usually is not a cure, but it can help in many cases. The other advantage to injections is that it can help confirm where the knee pain is coming from. If the local anesthetic used with the injection in the knee makes you feel better, it confirms that the source of the pain is *inside* the knee joint itself.

- **Arthroscopic knee surgery:** Arthroscopic knee surgery, or knee scope, is the usual treatment used to address internal derangement. It is an outpatient surgery, so you go home the day of surgery. Some of the different problems treated are as follows:
- **Meniscal tears:** are usually treated by shaving out the torn segment. Obviously, if we remove some of your cartilage, you will not be left with a normal knee. But, shaving the meniscus makes the knee much less abnormal than it would be with the tear left in place. After a meniscal shaving, you are given crutches to use until you are comfortable enough to walk without them (usually 3-5 days) and you slowly increase your activities as pain and swelling allow. Most people get back to light duty work in about 7-10 days. Heavy work is usually possible after about 4-weeks. If running is required for your job, it can take much longer to be able to return to that activity – and it is very unpredictable. Uncommonly, the meniscal tear is repairable. The good news about a repaired meniscus is that once it heals it can return your knee to near-normal condition. The bad news is that the recovery is much longer – it is at least 6-weeks before you are allowed to walk without crutches and/or a brace. With either procedure, physical therapy may be recommended by me, but we will make that decision usually at your first follow up.
  - **Chondromalacia patellae:** this is term used to describe worn and/or torn cartilage on the kneecap (patella) or the part of the femur (thigh bone) that contacts the patella. It is treated by trimming off the torn parts and smoothing off the surface. Recovery from this procedure is identical to that for meniscal shaving (see above).
  - **Articular cartilage tears:** this term is used to describe tears in the cartilage that covers the ends of the bone. It is usually treated just like chondromalacia patellae. In cases where all of the cartilage has torn off and small areas of bone are exposed, sometimes we will use a technique called microfracture chondroplasty. This is where tiny holes are made in the exposed bone so that fibrocartilage (or scar cartilage) can form. This is not near as good as having normal cartilage there, but in many cases it relieves pain very well. Microfracture chondroplasty often involves the use of crutches and or a brace for up to 6 weeks.
  - **Loose bodies:** these are pieces of cartilage or bone that are loose in the knee. Once removed, recovery is identical to that for meniscal shaving (see above).
  - **Plica syndrome:** this is an extra flap of tissue that formed in your knee as you developed. If present, it can cause irritation as it

rubs over the end of the femur or patella. When present, it is excised. Recovery is identical to that for meniscal shaving (see above).

- **Synovial overgrowth:** the lining of the knee is called synovium. Sometimes, for reasons that are unclear, it can overgrow. This is called hypertrophy or, less accurately, synovitis. It is shaved back to more normal levels and the recovery is identical to meniscal shaving (see above).
- **Arthritis:** unfortunately, there is no effective way to treat arthritis. It is a wearing off of the cartilage that covers the ends of the bones and it can't be replaced. In a way, it is basically advanced chondromalacia (see above). If arthritis is encountered during arthroscopy, we will trim off the rough edges and this can give some short-term relief, but it will not return the cartilage to its original condition. After treatment, recovery is identical to that for meniscal shaving (see above).

**Risks of surgery** are very low for healthy people, but they exist and include:

- Anesthesia:** severe, and even fatal, reactions to anesthesia are very rare, but not impossible.
- Infection:** is very rare.
- Nerve injury:** is very rare.
- Bleeding:** the possibility of needing a transfusion is almost unheard of.
- Blood clots:** in the legs and/or lungs can occur, but are very uncommon and usually only happen in people with underlying clotting problems. The chances of a life-threatening blood clot are extremely small.
- No improvement:** this is the most likely "complication" that can occur in arthroscopy. There is always a possibility that nothing treatable will be found, there is more arthritis in the knee than expected, or removing the torn cartilage does not make the knee feel as much better as you or I want it to. The vast majority of knee scopes are successful in reducing pain, but that is impossible to guarantee.

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