

## Common Knee Problems from Traumatic Injuries

### LIGAMENT INJURIES

The Medial Collateral Ligament (**MCL**) is the ligament on the inside of your knee. It can be injured if your knee is forced into a “knock kneed” position (usually as athletic injury). Fortunately, it heals very well on its own, even if it is completely torn. You can put full weight on your knee as soon as it is comfortable, and you may start working on quad strengthening and range of motion of the knee ASAP. It’s common to have a lot of pain at the top and inside of the knee, especially when you try to bend and straighten the knee. I encourage you to push through this discomfort to get good range of motion as soon as possible. I usually have you go to Physical Therapy so that they can help you get back to full activities as soon as possible.

If there is any looseness of the MCL, then we recommend that you use a Range of Motion Knee brace at all times (except for showering) for 8 weeks. Using the knee brace at least 23 hours per day will help the MCL to heal as well as possible,

The Anterior Cruciate Ligament (**ACL**) is the ligament in the middle of the knee. It helps the knee in lateral motions which require cutting, such as basketball and soccer. It can be injured if there is a significant force to the knee, such as in a football injury. If you strained the ACL but the ligament isn’t loose, then surgery isn’t needed, but you do need to rehabilitate your knee to regain strength, and this can take several months. If there is significant looseness of the ligament, a surgery may be required to allow you to return to sports, if the sports require a lot of pivoting. The rehabilitation can take up to a year or more.

### MENISCUS INJURIES

Meniscus is the shock absorbing pad between the two bones of the knee, your femur and tibia. There are two in each knee, the medial and the lateral meniscus. People often tear their meniscus by doing squatting and bent knee activities.

Meniscal tears can cause swelling and pain, especially if they flip up, like a rug flips up underneath a door. Sometimes, the meniscus will flip back down, and your knee may feel fine until it flips up again.

Symptoms from a meniscal tear may go away with quadriceps strengthening and rehabilitation. This occurs more in people who are greater than 50 years old.

Other times, meniscal symptoms may continue, even with rehabilitation, and may require surgery to trim away the torn part of the meniscus. Sometimes, the meniscus is torn where there is blood supply, and in that case, we can sometimes repair the meniscus by suturing it together. If the tear occurs in the area where there isn’t any blood supply (most of the meniscus), the meniscus can’t be repaired because it won’t heal.

## ARTICULAR CARTILAGE INJURIES

Articular Cartilage is the gliding surface of the bone. It is responsible for allowing us to do all its activities (walking, running, standing) without having pain or swelling in the knee.

Articular cartilage is also present on the ends of chicken bones, and it is smooth, shiny and glistening white, just like ours before we injure our knees. In the kitchen, you can take a sharp knife and whittle the cartilage away from the end of the chicken bone, or the whole cap can fall off after the chicken is cooked. It has a thickness to it, just like tread on a tire.

Articular cartilage in our knees can get injured by trauma, where a chunk gets knocked off, or it can just get thinner by wear and tear. Injury to articular cartilage can feel just like a meniscal tear, with pain and swelling of the knee especially after increased walking or activity of the knee. Unfortunately, arthroscopic surgery can't really fix articular cartilage injuries, and we can't put "tread back on the tire".

The best things to do in the case of articular cartilage damage are to try to reduce any stress to the knee, including:

- strengthening the quadriceps muscle so that it can better protect the knee
- reduce your activities to lessen impact at the knee (less high impact activities like running, fast walking, carry heavy things, also walk or stand less)
- lose weight if you are carrying a few extra pounds
- wear shoes that have a lot of cushion
- taking glucosamine and chondroitin sulfate may be helpful
- take NSAID's like ibuprofen or naprosyn to reduce inflammation

If it is determined that your knee may need surgery, how well your knee feels after surgery will depend on how much damage there is to your knee, and how well you can strengthen your quadriceps muscle.

Knees typically feel better after surgery for meniscal problems, however, if there is any damage to the articular cartilage, the results of surgery are much more difficult to predict.

Arthroscopic surgery cannot significantly improve the condition of the articular cartilage in your knee, and your ability to strengthen your quadriceps muscle may be affected by the articular cartilage injury (which is called arthritis if the damage is advanced).

Because people who have articular cartilage damage may actually feel like their knee is worse after surgery because it will be weaker after surgery, it is important for us to make sure that you are able to strengthen your quadriceps and that is why I may ask you to go to physical therapy and work on strengthening your quads before we consider surgery.

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