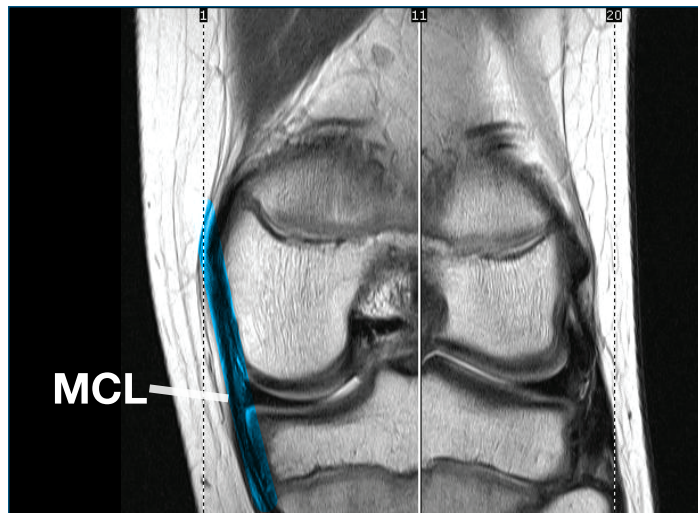


Medial collateral ligament injury

What is a medial collateral ligament injury of the knee?

The knee contains the medial collateral ligament (MCL), one of four ligaments (tough band of tissue) connecting the femur (thigh) bone to the tibia (lower leg) bone. In combination with the lateral collateral ligament (LCL), the ligament on the outside of knee, the MCL lies on the medial (inside) of the knee joint and provides stability to the knee for side-to-side movement. The ligament becomes injured or torn when it is stretched beyond its normal range of movement.



Mechanism of injury:

- Any activity where the knee is pushed in or that pushes the foot out could create a stress on the MCL.
- Injury commonly occurs in contact sports because of blows from other players on the opposite side of the body with the injury.
- In non-contact sports, landing from a jump with poor alignment of the hips, knees and ankles can cause this same stress.
- MCL injuries may involve other knee structures such as the medial or lateral meniscus (disc between the bones), which can present as pain on the opposite side (outside) of the knee.

Who is at risk?

- Children/adolescents both in non-contact or contact sports can be at risk.
- Females may be at greater risk than males due to anatomical alignment of the legs (hips, knees and ankles), hormone levels and differences in strength and conditioning.

What are the symptoms?

- May have pain in the inside of the knee.
- May have swelling with severe injury.
- May report feeling the knee will buckle or give out if they try to stand on it or report feeling the knee is unstable.

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What are the treatment options?

Conservative/non-surgical treatment:

- Rest from activities that cause pain or “relative rest.”
- Ice the area after activities and/or for swelling/pain for 10 to 20 minutes, once an hour as needed.
- A knee brace may help with stability of the knee during activities.
- Physical therapy to address pain, swelling, range of motion, flexibility, strength, gait, bracing and sport training will usually improve symptoms.
- Muscle stretching to improve flexibility and knee alignment:
 - Concentrate on stretching the hamstring (back of thigh) and gastrocnemius/soleus (calf).
 - Focus on strengthening the leg, emphasizing on the inside quadriceps (thigh) muscle, the vastus medialis (VMO) muscle. It is recommended to avoid deep squats, leg presses and long/short arc exercises.
 - The child/adolescent may benefit from a progressive core/balance program to provide sport-specific retraining.

Surgical treatment:

- Only needed in the most severe cases of instability (mobility in the joint).
- There are a number of techniques, depending on the patient's age and activities.
- Reconstruction options may be limited in children with open growth plates (the cartilage area at the end of bones that allow for growth).

What is the time frame for returning to activity/sport?

- If a conservative/non-surgical treatment is an option, the athlete may return back to sport/activities with a hinged knee brace within three to six months post injury.
- If surgery is required, it typically takes six to nine months after surgery and rehab.

What are the long-term side effects of a medial collateral ligament injury of the knee?

- May not be able to return to same level of activity, compared to before injury.
- Increased potential for arthritis in adulthood.
- May have instability of knee.