

### MEDIAL COLLATERAL LIGAMENT (MCL)

This is the large ligament on the inside of the knee and attaches the inside of the femur (thigh bone) to the inside of the tibia (shin bone). Injury to the MCL is more common than to the LCL. Injury to the MCL can occur mainly by two possible mechanisms. These include twisting the knee usually with the foot planted or having excessive force applied to the outside of the knee or above the knee from a tackle, which pushes the knee joint inwards. MCL injuries are frequently associated with ACL ruptures and meniscal tears.



**Figure 1** Collateral ligament tear  
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### LATERAL COLLATERAL LIGAMENT (LCL)

This is the ligament on the outside of the knee and attaches the outside of the femur to the fibula (outermost shin bone). Injury to the LCL occurs when the knee is twisted or receives trauma from a tackle to the inside of the knee or shin, which pushes the knee outwards.

### Severity of a MCL/LCL sprain

**Grade 1** - a few fibers of the ligament are torn

**Grade 2** - a large number of ligament fibers are torn but the ligament is still intact

**Grade 3** - the ligament has completely ruptured

### Signs and Symptoms

Depending on the severity there MAY be:

#### Grade 1

- ✦ pain on the inside (MCL) or outside (LCL) of the knee
- ✦ pain on stressing the inside (MCL) or outside (LCL) of the knee joint
- ✦ stiffness

#### Grade 2- the above and possibly

- ✦ Swelling
- ✦ restrictions in movement- especially on fully bending the knee (MCL) or fully straightening the knee (LCL)

#### Grade 3- the above and possibly:

- ✦ a feeling of the knee being unstable but often with minimal pain

## Diagnosis

A physiotherapist or doctor will look for various signs and go through clinical tests to establish if there is damage to the MCL or LCL.

## MANAGEMENT

Regardless of the extent of damage to the ligament the initial line of treatment is to reduce the swelling and pain at the knee with PRICE (see ACL injury). If the sprain is severe enough a knee brace that limits knee bend (for MCL sprains) or full knee straightening (for LCL sprains) may protect and provide stability to the knee. Collateral ligament sprains are normally managed conservatively unless there is a complete rupture, which may require surgical reconstruction.

The conservative approach to treatment for grade 1 and 2 sprains, which may take 3-6+ weeks, usually consists of a program containing the following elements:

- gait re-education
- bracing if appropriate
- manual therapy and stretches to regain range of movement
- electrotherapy for pain and increased healing
- deep massage after 3 days
- a strengthening program including lower limb, core stability and upper body conditioning
- lower limb flexibility (stretching)
- balance program (very important post-

## ligament injury)

- low weight bearing cardiovascular program (static cycling) progressing to full weight bearing activities like walking – jogging – running etc...
- strapping to unload and protect the ligament for the return to the above activities
- plyometric programme (very important post-ligament injury)
- Sports specific skills (in the later stage of rehabilitation (6-12 weeks) e.g. sprinting, twisting, turning, cutting, ball skills, etc...

## MCL/LCL RECONSTRUCTION SURGERY

The ligament will be re-attached the bone, repaired or tightened. The knee is likely to be braced post-op. for 4-6 weeks with range of movement limited. The rehabilitation process will generally follow the same structure as post ACL Reconstruction (see ACL injuries).

Return to sport may take 4-6 months.