

Medial Collateral Ligament (MCL) Knee Injury



Kalyani's
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Patient Awareness | Knee Preservation &
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What is an MCL injury? The medial collateral ligament is the strong stabilising ligament on the inner side of the knee. It resists the knee opening inwards and protects the joint during walking, sports and twisting movements. An MCL sprain or tear may cause inner-knee pain, swelling and instability.

Knee preservation focus: Early diagnosis, protected healing and structured rehabilitation help restore stability, protect the meniscus/cartilage and reduce the risk of chronic instability. Correctly treated MCL injuries often heal without surgery, preserving the natural knee.

MODE OF INJURY

- Direct blow to the outer side of the knee, forcing the knee inward (valgus force).
- Twisting injury while the foot is planted, common in football, kabaddi, basketball and skiing.
- Fall, tackle or collision during sports or daily activity.
- Sudden change of direction or awkward landing.
- May occur with ACL, meniscus, cartilage or multi-ligament injury in high-energy trauma.

Common symptoms

- Pain and tenderness along the inner side of the knee.
- Swelling, bruising or warmth around the inner knee.
- Pain when walking, climbing stairs, squatting or turning.
- Feeling that the knee may give way, especially sideways.
- Stiffness, reduced confidence and difficulty returning to sport.

When to seek early consultation

- Severe pain, deformity or inability to bear weight.
- Large swelling within a few hours, locking/catching or inability to straighten the knee.
- Numbness, cold foot, open wound, repeated giving way or persistent pain despite rest.

Examination and diagnosis

History: mechanism of injury, swelling timing, sport/work demands, instability episodes and previous injuries are reviewed.

Inspection: swelling, bruising, tenderness, walking pattern, range of motion and quadriceps control are assessed.

Valgus stress test: the knee is gently stressed at 30 degrees and at full extension to assess medial opening and grade severity.

Associated injuries: ACL/PCL tests, meniscus tests and examination of lateral/posterolateral structures are important.

Imaging: X-rays may check fracture or avulsion. MRI helps confirm the MCL grade and associated meniscus, cartilage or ligament injury.

Grading of MCL injury

Grade I: mild sprain with tenderness but stable knee.

Grade II: partial tear with pain and some laxity, but a firm end point.

Grade III: complete tear with significant medial opening; may be isolated or combined with other ligament injury.

Technical details

Why many MCL injuries heal well

- The MCL has good healing potential because of its blood supply.
- A hinged brace protects the ligament from valgus stress while allowing controlled movement.
- Early controlled motion reduces stiffness and muscle inhibition.
- Rehabilitation strengthens quadriceps, hamstrings and hip muscles to improve dynamic stability.

When surgery is considered

- Acute bony avulsion or displaced ligament end.
- Persistent medial instability despite appropriate bracing and rehabilitation.
- Open injury or entrapment of torn ligament tissue.
- Multi-ligament injury involving ACL/PCL/PLC or severe instability.
- Chronic laxity where reconstruction with graft is needed.

Treatment options

Non-surgical treatment

- Initial care: protection, rest, ice, compression, elevation, pain control and crutches if needed.
- Hinged knee brace for Grade II/III injuries or painful instability.
- Early controlled movement to prevent stiffness, followed by strengthening.
- Physiotherapy focuses on strength, balance and safe gait.
- Gradual return to activity only after pain, swelling, strength and stability have improved.
- Most isolated Grade I-II and many isolated Grade III MCL injuries can be treated without surgery.

Surgical treatment

- Repair may be possible in selected acute avulsion-type injuries.
- Reconstruction with a tendon graft may be preferred for chronic laxity or poor tissue quality.
- Surgery is more likely in combined ACL/PCL/PLC or multi-ligament knee injury.
- Fixation is planned at anatomical attachment points to restore medial stability.
- Post-operative rehabilitation uses protected bracing, gradual motion and staged strengthening.

How MCL treatment preserves the knee

- Restores side-to-side stability so the knee feels confident during walking, work and sport.
- Protects the meniscus and cartilage from repeated abnormal loading.
- Helps prevent chronic medial opening, persistent giving way and secondary joint damage.
- Supports safe return to activity while preserving the patient’s own knee joint.
- When associated injuries are identified early, combined treatment can reduce the risk of long-term degeneration.

Return to activity and follow-up

Early phase: swelling control, pain relief, protected walking and regaining full knee extension.

Strength phase: progressive quadriceps, hamstring, hip and calf strengthening with balance training.

Sport/work phase: running, cutting, pivoting and occupational demands are reintroduced step by step after objective assessment.

Follow-up: review is important if pain, laxity or swelling persists, or if MRI shows associated ACL, meniscus or cartilage damage.

MCL injury: simple treatment guide

Injury pattern	Typical treatment	Knee preservation goal	Surgery?
Grade I sprain	Rest, brace if needed, physiotherapy	Pain relief and return of confidence	Rare
Grade II partial tear	Hinged brace + structured rehab	Allow ligament to heal with stability	Uncommon
Isolated Grade III tear	Brace/rehab in many cases	Prevent chronic medial laxity	Selected cases
MCL + ACL/PCL/PLC injury	Specialist plan, often staged/combined care	Restore global knee stability	More likely

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For MCL injury, knee ligament injury, sports injury, arthroscopy and rehabilitation guidance

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Note: This handout is for patient education only. Final diagnosis and treatment should be individualised after orthopaedic consultation and appropriate imaging. Sources reviewed: AAOS OrthoInfo, NHS-style rehabilitation guidance and peer-reviewed MCL knee injury literature.