Beyond the Twist: When a Routine Knee Injury Is Something More

Key data highlighting the impact of sports injuries in Australia (2023–24)

~62,100

Sports injury hospitalisations in Australia in 2023–24[1]

>50%

Fractures represented more than half of soccer injury hospitalisations[2]

Rugby & AFL

Among the highest injury hospitalisation rates by participation[3]

Most knee injuries improve with rest, rehabilitation, and a gradual return to activity. However, when pain, swelling, and instability persist beyond the expected recovery period, clinicians should consider a structural injury — commonly involving the ligaments, menisci, or articular cartilage.

1. Symptoms Seem Out of Proportion

Unlike a typical soft-tissue strain, a structural knee injury affects the ligaments, menisci, or articular cartilage — the core stabilising and load-bearing elements of the joint. Patients often report significant joint line pain, rapid swelling, and a persistent sense of giving-way. A key warning sign is a failure to progress despite appropriate treatment, with disability often exceeding what would be expected from a minor sprain.

2. The Hidden Injury: Meniscal & Cartilage Damage

The knee is stabilised by several structures, including the anterior and posterior cruciate ligaments, the collateral ligaments, and the medial and lateral menisci. The menisci act as shock absorbers and help distribute load across the joint. Because intra-articular structures lie deep within the joint, injury can be difficult to detect clinically. MRI plays a crucial role in diagnosis — particularly in identifying meniscal tears, chondral defects, and bone marrow oedema that may not be visible on standard imaging.

3. The Importance of Joint Alignment

A serious consequence of structural knee injury is joint malalignment — as the supporting ligaments fail, the tibiofemoral joint can no longer be held in its normal position under load. On a weight-bearing X-ray, joint space narrowing or varus or valgus deformity may indicate significant instability. In some cases, surgical reconstruction is required to restore alignment and allow healing.

Looking Beyond the Initial Diagnosis

Early recognition of structural knee injuries is critical to preventing chronic instability and long-term joint degeneration. When symptoms are disproportionate to the original injury, or recovery is not progressing as expected, further investigation should be considered.

The question may not be how long the knee will take to heal — but whether its stabilising structures remain intact.

1 https://www.aihw.gov.au/reports/sports-injury/sports-injury-in-australia/data Table 9.
2 https://www.aihw.gov.au/reports/sports-injury/sports-injury-in-australia/contents/featured-sports/soccer.
3 https://www.aihw.gov.au/reports/sports-injury/sports-injury-in-australia/data Table 4_Activity.

Key considerations to qualify for a Medicare rebate with a GP referral

Knee X-ray indications after acute knee injury

- aged 55 years or over
- tenderness at the head of the fibula
- isolated tenderness of the patella
- inability to flex knee to 90 degrees
- inability to bear weight (defined as an inability to take four steps, ie. two steps on each leg, regardless of limping) immediately and at presentation*

*Stiell IG, Greenberg GH, Wells GA, et al. Derivation of a decision rule for the use of radiograph in acute knee injuries. Ann Emerg Med 1995;26:405–13.

When to use CT for knee

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Knee	
MRI	• Include MBS item 63560 on the request form. • State the clinical indication (ACL or meniscal tear) in the Clinical Details field. • Confirm patient age is 16–49 at the time of referral. • A prior X-ray is not required to request MRI under item 63560. • For patients aged 50 and over, a GP referral will not qualify for Medicare rebate.
CT	• Pre and post-op assessments • Assessing complex fractures • Soft tissue calcification
Ultrasound	• Patellar and quadriceps tendon assessment • Bursal fluid and joint effusion evaluation • Assessment of clinically palpable lumps • Arterial and venous doppler for blood vessel assessment
X-ray	• Fracture assessment in acute trauma • Weight-bearing alignment assessment • Osteoarthritis and inflammatory arthopathies • Post-operative orthopaedic assessment

Medicare criteria are subject to change. Verify current item descriptors at mbsonline.gov.au or contact Services Australia on 132 150.

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