



WHAT IS A PCL?

The posterior cruciate ligament or (PCL) is a primary stabilising ligament in the knee. The PCL is made up of two thick bands of connective tissue that joins the back of the femur (thigh) to the top of the tibia (shin), stopping the tibia from excessively moving backwards on the femur.

INJURY FACTS:

PCL injuries are rare when compared to other knee ligament injuries, but quite often missed during examination. The different fibres of the PCL can be tight when the knee is both flexed and extended which explains varied mechanisms for the injury and why it can be torn together with the anterior cruciate ligament (ACL). Many patients can regain excellent function without an intact PCL.

PCL injuries are graded as:

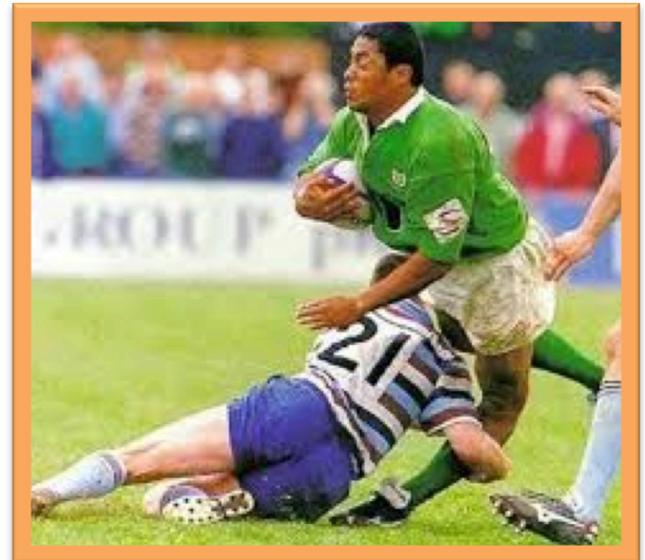
- Grade 1: Very slight tear or stretching;
- Grade 2: Moderate tear with mild laxity;
- Grade 3: Complete tear and unstable

SIGNS AND SYMPTOMS:

- Little to no swelling;
- Unclear symptoms of unsteadiness within the knee, especially if continuing sport;
- Only mild amount of pain and stiffness.

MECHANISM OF INJURY:

PCL injury normally occurs when there is a sharp blow to the front of the tibia forcing it to move backwards. This commonly occurs during motor vehicle accidents when the tibia contacts the dashboard. Another common history is when an athlete hits the ground with the flexed knee, making initial contact with the upper shin, which forces the tibia backwards.



DIAGNOSIS:

A thorough subjective history is initially needed to help accurate diagnosis. The physiotherapist will perform some ligament tests including passive knee hyperextension, posterior draw and the sag test. Further diagnosis may be required through medical imaging including MRI.



PROGNOSIS/TIMELINES:

Grade 1 and 2 PCL tears often return to sport within 2-6 weeks. Grade 3 tears treated conservatively can return once strength is 90-100% of the uninjured side, proprioception and balance are equal to the injured side and full function with agility, speed and power is possible.

PHYSIOTHERAPY TREATMENT OPTIONS:

- Quadriceps strengthening programs
- Dry needling
- Joint mobilization
- Taping and bracing techniques
- Education
- Exercise prescription and gait education
- Biomechanical analysis and correction
- Massage
- Electrotherapy
- Video movement analysis

FURTHER TREATMENT OPTIONS:

Grade 3 PCL injuries often require surgery. Grade 3 tears can have an associated avulsion fracture (ligament pulls off a piece of bone, common in adolescents) which can also require surgical intervention.

Post-surgical times following PCL injury will vary greatly depending on the surgeon, the technique used and other structures also injured.



HELPFUL HINTS:

- RICER protocol should be applied. Rest, Ice, Compress, Elevate and referral during the first 48-72 hours following injury;
- No HARM (No Heat, Alcohol, Running or Massage) protocol is utilised during the first 48 hours following injury.
- With early diagnosis, treatment and hard work surgery can be often avoided;
- The strengthening, balance and proprioception your physio gives you are important and much be adhered to.