

# Posterior cruciate ligament injury

## Introduction

A posterior cruciate ligament injury is a partial or complete tearing or stretching of any part of the posterior cruciate ligament (PCL). The posterior cruciate ligament (PCL) is the strongest ligament in the knee which arises from the top-rear surface of the tibia to the femur.

The posterior cruciate ligament prevents the knee joint from excessive posterior translation which means the PCL prevents the tibia from moving too much and going behind the femur.

The PCL is usually injured by overextending the knee (hyperextension). This can happen after an awkward landing after jumping. The PCL can also become injured from a direct impact to the proximal tibia such as road traffic accident or falling hard on a bent knee.

## Symptoms

After an acute injury of the PCL, there is knee pain, swelling and decrease range of motion which is similar to ACL and meniscus injury in the knee. Some patients may feel that their knee “popped” or giving way. For those patient recovered from the acute injury, some of them may suffer from instability as the knee may give way in vigorous motion.

## Diagnosis

The Orthopaedic Surgeon will diagnose the problem based on the injury mechanism, symptoms, physical examination and investigation. To look for the PCL injury, doctor will perform the posterior drawer test by pushing the tibia backwards, stressing the PCL. If there is PCL insufficiency, the tibia will slide backwards. Moreover, they will look for any posterior sagging of the proximal tibia and any associated injury during the physical examination. PCL tears can be graded by the severity of the laxity from grade I to grade III. Investigation such as x-ray and MRI may be used for diagnosis.

## **Treatment**

The initial treatment of PCL injury includes rest, ice therapy, compression and elevation. Doctors need to look for any associated knee injury and proceed with the relevant investigation depends on the clinical condition. The treatment of PCL injury is controversial. Conservative treatment such as bracing, physiotherapy, protected weight bearing walking can be considered in mild grade PCL insufficiency. Surgical reconstruction can be performed with those high grade PCL injuries. The final treatment will depend on the age of patient, associated injury, symptom and daily requirement. Please discuss with your Orthopaedic surgeon.