Anterior Cruciate Ligament (ACL) Reconstruction Rehabilitation

What is the ACL?

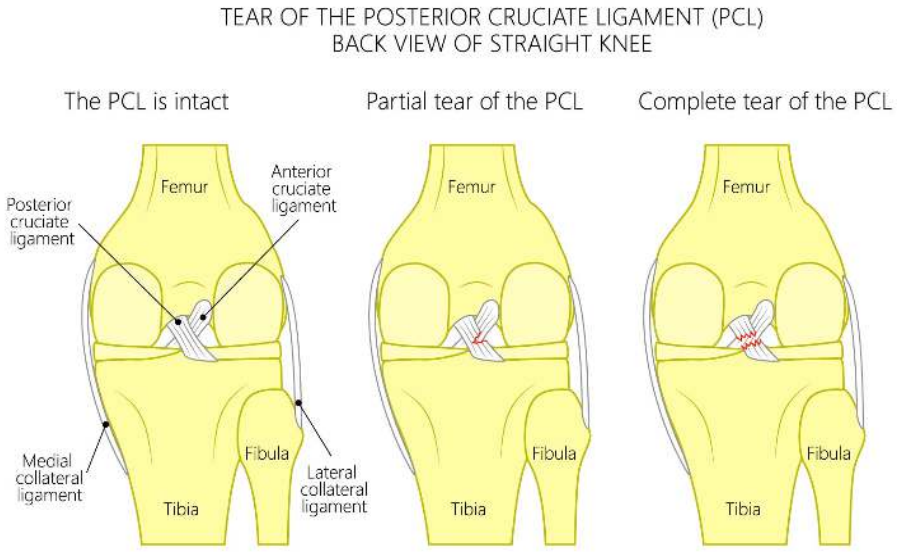
The ACL plays an important role in the structural and functional stability of your knee. The ACL runs from the front part of the tibia to the back part of the femur. The main function of your ACL is to prevent excessive forward and rotational movement of the tibia from underneath the femur.

What happens when I rupture my ACL?

The ACL is commonly injured whilst playing sports often during a rapid change in direction, pivoting, suddenly slowing down, and or landing with the knee almost fully straight. Often patients report a "popping" sensation followed by a feeling of instability as though the knee has given way. This is characteristic of a rupture or injury to the ACL.

What happens after I have an ACL reconstruction?

The main aim of an ACL reconstruction is to restore knee stability to allow you to return to full function and or return to playing sports. This will involve a consultation with your surgeon who will discuss further details on the surgery. After surgery, you will then work closely with your physiotherapist who will guide you through a graded rehabilitation program outlined below.



GUIDELINES ON REHABILITATION TIMEFRAMES

Phase 0	Pre-operative management: Minimise swelling, optimise muscle activation and range of motion
Phase 1	Days 1-7: Post-operative management Early range of motion, muscle activation, weight bearing and reduction of swelling
Phase 2	2-8 Weeks: Progress elements of Phase 1 as post-surgical irritability subsides
Phase 3	12 Weeks: Maximise muscle activation, improve strength, balance, range of motion & start walking 'normally' again
Phase 4	4-5 Months: Gradual return to running and increasing load with strength and balance
Phase 5	5-6 Months: Increase in agility exercises and load on the knee
Phase 6	6-12 Months: Full return to sports unrestricted

**Your physiotherapist from Sports & Spinal will advise how exercises and timeframes vary depending on other injuries that may co-exist with ACL rupture*

Goals throughout rehabilitation:
Your physiotherapist will explain each phase as you progress & goals you need to achieve

PHASES	GOALS	CRITERIA TO PROGRESS
Phase 0. Pre-Operative Management	Restore knee range of motion Maintain muscle bulk and activation Minimize swelling Maintain balance skills	Next step – surgery (decided by your surgeon) Restoration of range of motion, good muscle activation and minimal swelling are generally considered favorable indicators for earlier surgical management.
Phase 1. Days 1-7 Post-Op	Limit swelling Controlled weight bearing on crutches Avoid aggravation of pain or swelling Appropriate wound care Appropriate medication	
Phase 2 2-8 Weeks	Reduce swelling Restore quadriceps function Restore knee extension (straightening) Controlled return to full weight bearing * Surgeon may guide weight bearing – Generally takes 7-10days to be comfortable walking without crutches	Full knee extension (straightening) >100º knee flexion (bending) Quadriceps activation ++ Quadriceps and hamstring strength 'good'
Phase 3 12Weeks	Eliminate swelling Maintain knee extension Progress knee flexion Progress to full weight bearing with no limp Start single leg standing exercises Progress balance Return to walking	Knee flexion >130º Two leg squat to 90º No swelling No episodes of structural giving way * Note: any concern of structural giving way will be further assessed by surgeon + Other Physiotherapy measures
Phase 4 4-5 Months	Full range of motion Return to jogging Gradual increases in load with squat and single leg load tolerance	Single leg squat: 5-secold hold symmetrical > 60º knee flexion Symmetrical stride patterns when running on treadmill 10-16km/hr + Other physiotherapy measures
Phase 5 5-6Months	Improve symmetry of force through both legs Improve lower extremity non-weight bearing strength Improve single limb landing force attenuation strategies Return to restricted agility/sports specific drills	To be discussed and explained by your physiotherapist
Phase 6 6-12Months	Absorb landing equally through both limbs Improved confidence with stability during high intensity change of direction Improved power endurance between limbs Demonstration of 'safe' biomechanics when performing high intensity plyometric exercises Return to sport	To be discussed and explained by your physiotherapist

We pride ourselves on providing high quality evidence based practice and are guided by the latest peer-reviewed scientific research. References are available upon request.