

Deidre Muller Birkill Physiotherapists

ACL Rehabilitation Protocol

The time frames in the table are a guideline only and must be adjusted depending on the progress and state of the individual patient.

Note thought that the remarks in red are goals that are extremely important to strive for and not achieving these goals within these time frames can be extremely detrimental to the outcome of the patient.

PHASE	TIME POST SURGERY	GOAL OF PHASE	Exercise Program/ Function
<p><u>Preoperative Rehabilitation</u> NOTE: It is suggested that ACL reconstruction not be performed before quadriceps muscle strength of the injured limb is at least 80 % that of the uninjured limb.</p>	N/A	<ul style="list-style-type: none"> - Patient Education- time frames to expect post surgically, cost (not only surgery etc but for rehabilitation as well), goal setting. - Strengthening – especially quadriceps function in full knee extension! - Restore full ROM- NB extension. 	<ul style="list-style-type: none"> - All depends on ability of patient at this stage, do as much as possible. - Function (Fx): walking, bike riding, swimming (light kick, no breaststroke)
<p><u>Phase 1</u></p>	0-2 wks	<ul style="list-style-type: none"> - If an MCL repair was performed as well, the pt will be immobilized in 0-30 knee F for a longer period, 4-6 wks- this does depend on the surgeon.) - <i>PWB to FWB (some surgeons prefer NWB</i> for the first 2 wks) - Start with gentle F ROM. Ranger Brace on 0- 30 degrees F ROM for 2 wks, but if patients pain etc allows can increase to 60 degrees (unless MCL repair as mentioned above) - Full extension must be attained during this period. 	<ul style="list-style-type: none"> - Gentle F ROM - Ext ROM!!! 0 degrees - Quadriceps/VMO setting - Hip and knee NWB exercises - If surgeon permits PWB can start with supported (bilateral) calf raises as well as Gait drills- if NWB start this from as 2-4 wks. - Fx: Nil (only crutch walking drills- remember to teach the patient stair climbing with crutches.)

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PHASE	TIME POST SURGERY	GOAL OF PHASE	Exercise Program/Function
<u>Phase 2</u>	2-12 wks	<ul style="list-style-type: none">- Full knee hyperextension (compare with unaffected side)- Kn F 90 Degrees at 6 wks- Kn F to 130 degrees plus here after- Full squat: don't start to early: respect graft area.- Good balance and control (Proprioception!!) Start Proprioception training from as 2 wks latest.- FWB (again some surgeons only allow PWB at 2 wks then expect FWB at 4-6 wks)- NOTE: Most patients usually do well with leaving the crutches completely at 6-8 wks as this is usually only when there is adequate amounts of proprioception and quadriceps activation to allow for FWB <p>RANGER BRACE is to remain on till 12 wks!!</p>	<ul style="list-style-type: none">- all as above- mini squats and lunges- small step ups- Bridges- Progress hip exercises to rubber tubing- Progress to single leg calf raises- Gait re-education drills!- Balance and proprioception drills.- Fx: Walking, exercise bike.

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General Notes:

It is of utmost importance to note that ACL injuries rarely occur in isolation, most occur in combination with other injuries such as MCL tear, meniscus injury, bone bruising etc. The presence and extent of associated injuries may affect the way in which the ACL injury is managed. Make sure inform the surgeon that you are clear about what the associative injuries are.

The major change over the past few years in regards with rehabilitating ACL injuries pre- and post operatively (as well as preventatively) is the incorporation of a core stability program, along with increased emphasis on proprioceptive and balance exercises.

RTS (return to sport): 6- 9 months

Rehabilitation must occur from the time of *injury* and not from the time of surgery!

After surgery, WB status is largely determined by concomitant injuries e.g. meniscal repair.

Isolated ACL reconstructions are typically treated as WB as tolerated but NWB is advised for the first 2 weeks whilst a lot of swelling is present and quadriceps activation is inhibited.

If pain and quadriceps activation permits patient can do FWB at 2 weeks, otherwise 4 weeks.

The rehabilitation programs for patellar tendon and hamstring tendon graft ACL reconstructions are slightly different so please make sure you know which technique your doctor performed.

If a hamstring/gracilis graft was performed, for a period of 4-6 wks be very careful with any hamstring work/ loading! (This graft should be treated as if the patient has had a hamstring tear.)