



Rehab Protocol

Anterior cruciate
ligament reconstruction

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Post-op recovery		First 2 weeks	Date
Goals	<ul style="list-style-type: none"> • Protect the knee and surgical incisions • Recover from swelling and inflammation • Control of post-surgical pain 		
Precautions	<ul style="list-style-type: none"> • Fully weight-bear but use crutches for support and to improve gait 		
Recommendations	<ul style="list-style-type: none"> • Rest and elevate as required • Ice the knee up to 3 times a day – particularly in the first 72 hours • Range of motion exercises of ankle • Range of motion exercises of hip • Gentle movement of the knee from full extension to 90 degrees of flexion as pain and swelling allows • When walking with crutches – concentrate on achieving heel strike, role through and toe off • When standing, push both knees back straight to help achieve full extension 		
Exercise suggestions	<ul style="list-style-type: none"> • Static quads contraction • Supine straight leg raise • Ankle pumps • Supine bed supported knee bend • Sitting supported knee bend • Sitting knee extension stretch – foot on floor • Supine knee extension – foot elevated/supported • Standing knee extension • Side leg raise – knee straight, knee flexed • Double calf raises 		
Criteria for progression	<ul style="list-style-type: none"> • Healed surgical incisions 		

Phase 1		Week 2 to week 6	
Goals	<ul style="list-style-type: none"> • Increase ROM • Begin strengthening • Normal gait • Minimal Pain • Minimal Swelling 		
Precautions	<ul style="list-style-type: none"> • Wean off crutches as able 		
Recommendation	<ul style="list-style-type: none"> • When standing, push knees back straight to help achieve full extension • When walking – concentrate on achieving heel strike, role through and toe off • Increase range of motion from full extension to full flexion • Hip and gluteal muscle strengthening 		

	<ul style="list-style-type: none"> • Ankle range of motion and strengthening • Balance and coordination of leg 	
Exercise suggestions	<ul style="list-style-type: none"> • Low load, long duration (assisted as required) • Wall slide mini squat • Double leg squats (0-60) • Sitting unsupported knee extension and flexion • Single leg stance – knee straight, knee flexed • Straight leg raise • Step ups • Double calf raises – progress to single calf raise • Side leg raise – knee straight, knee flexed • Gluteal band exercises • Bridging with gluteal contraction • Exercycle – low resistance, short interval • Cardio: • Swimming (freestyle or backstroke only) • Hydrotherapy • Stationary bike cycling • Upper body weight training (must be seated or lying) 	
Criteria for progression	<ul style="list-style-type: none"> • No requirement for crutches • No active extension lag, 110° active flexion • Minimal effusion/pain • Normal Gait • Functional strength and control in daily activities 	

Phase 2		Week 7 to week 12	
Goals	<ul style="list-style-type: none"> • Gain full range of motion • Muscle strengthening • Neuromuscular control • No swelling • No pain 		
Precautions	<ul style="list-style-type: none"> • No running until week 12 if meeting all criteria 		
Recommendations	<ul style="list-style-type: none"> • Fully weight bear as able • Passive stretching to achieve full extension and flexion • Concentrated full rehab program that includes strengthening of core, hip flexors, gluteal muscles, external rotators of the hip, quadriceps, hamstrings and calves. Neuromuscular control and co-ordination of leg 		
Suggested exercises	<ul style="list-style-type: none"> • Double leg squats (0-90) • Single leg squats • Single leg hop • Step ups – increase height 		

	<ul style="list-style-type: none"> • Step downs • Resisted quads and hamstring weight training • Gluteal band exercises • Bridging with gluteal contraction • Double calf raises – progress to single calf raise • Exercycle – increase resistance and training length • Neuromuscular Training: Wobble board, rocker board, roller board, Varied surfaces • Cardio: • Bike, Elliptical trainer, Stairmaster, swimming 	
Criteria for progression	<ul style="list-style-type: none"> • Walking 20 minutes without pain or swelling • Neuromuscular and strength training exercises without difficulty • Full ROM 	

Phase 3		3 Months – 6 months	
Goals	<ul style="list-style-type: none"> • Running on flat surface • Jumping (double leg) • Hop Tests 75% of contra-lateral side • Hopping without pain, swelling, or giving way 		
Precautions	<ul style="list-style-type: none"> • Run on flat stable surface in daylight • No pivoting or cutting activities or sports 		
Recommendations	<ul style="list-style-type: none"> • Passive stretching to achieve full extension and flexion • Concentrated full rehab program that includes strengthening of core, hip flexors, gluteal muscles, external rotators of the hip, quadriceps, hamstrings and calves. Neuromuscular control and co-ordination of leg 		
Suggested exercises	<ul style="list-style-type: none"> • Running on flat even surface. Gradually increasing distance • Aggressive strength training Hamstrings, Quads, calves, adductors, abductors, core strength • Cycling with high resistance (standing permitted) • Neuromuscular Training: Wobble board, rocker board, roller board, varied surfaces • Begin gentle pivoting and direction changing • Cardio: • Running, swimming, cycling, stair climber, elliptical trainer 		
Criteria for progression	<ul style="list-style-type: none"> • Maximum vertical jump without pain or instability • 75% of contralateral on hop tests • Run at 75% speed without difficulty 		

	<ul style="list-style-type: none"> • Some confidence with pivoting and changing direction 	
Phase 4		6 Months – 12 months
Goals	<ul style="list-style-type: none"> • 100% contralateral strength • 85% contralateral on hop tests • Running without pain • Absolute confidence with pivoting and turning 	
Precautions	<ul style="list-style-type: none"> • NO pivoting or contact sports • Can return to non-competitive non-contact sport training 	
Recommendations	<ul style="list-style-type: none"> • Gain and maintain endurance and strength • Sport specific functional training • Graduated return to cutting and pivoting movements • Neuromuscular control and coordination 	
Suggested exercises	<ul style="list-style-type: none"> • Running on flat even surface. Sprinting. Direction changes • Aggressive strength training Hamstrings, Quads, calves, adductors, abductors, core strength • Cycling with high resistance (standing permitted) • Hopping, jumping • Pivoting and direction changes • Begin cutting (non-competitive environment) • Cardio: • Running, swimming, cycling, stair climber, elliptical trainer 	
Criteria for progression	<ul style="list-style-type: none"> • Return to sport criteria • -One year post reconstruction • -No functional complaints • -Confidence when running, cutting, jumping at full speed • -85% contralateral values on hop tests 	