



ACL RECONSTRUCTION REHABILITATION GUIDELINES

Dr. Steven Pennington

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Phase I, Post-Op (0-2 weeks)	
OSMS Appointments	<ul style="list-style-type: none"> • Medical appointment at 2 weeks with fims • Physical therapy will begin as directed by your physician and as indicated on your physical therapy order
Rehabilitation Goals	<ul style="list-style-type: none"> • Toe-touch weight-bearing in locked brace at 0 degrees • Post-op brace is worn for 3 weeks locked in extension while ambulating and sleeping. <ul style="list-style-type: none"> ○ This will protect the graft during early incorporation as well as the donor site • Reduce swelling using cryocuff
Precautions	<ul style="list-style-type: none"> • Weight-bearing in locked brace with crutches
ROM Exercises	<ul style="list-style-type: none"> • AAROM 100 to 0 degrees
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • Toe-touch weight-bear as tolerated with two crutches • Heel slides, seated flexion stretch, passive prone flexion stretch, prone hangs, patellar mobilizations, ankle pumps, quad sets, flexion SLR with ankle weight • Passive extension stretch (foot on bolster) • Clam shells, abd SLR with ankle weight, standing terminal knee extensions into band • Standing knee flexion • NMES to quadriceps with quad set/SLR
Cardiovascular Exercises	<ul style="list-style-type: none"> • Stationary bike
Progression Criteria	<p>Patient may progress to phase II after 2 weeks if they have pain well-controlled, 5-90 degrees of knee ROM with minimal joint swelling and quadriceps muscle control</p>

PHASE II: after Phase I criteria met, usually 2-4 weeks	
OSMS Appointments	<ul style="list-style-type: none"> • Physical therapy appointments remain every 5-7 days
Rehabilitation Goals	<ul style="list-style-type: none"> • Achieve symmetric motion • Minimize joint swelling with standing activities
Precautions	<ul style="list-style-type: none"> • Discontinue crutches if no quad lag with SLR, no signs of quad inhibition, and can squat hold for 60 sec with blue band
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • LE/hip flexibility, passive flexion stretch, hydrants • Flexion and abd SLR with ankle weights, NMES to quadriceps, mini squats, squat holds • Heel raises, bridge holds, hamstring curls on ball with bridge-double leg • Front/side plank, supermans
Cardiovascular Exercises	<ul style="list-style-type: none"> • Stationary bike
Progression Criteria	<ul style="list-style-type: none"> • Patient may progress to phase II after 4 weeks if they have pain well-controlled • Progressive quadriceps control and no increase in joint swelling with standing activities



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PHASE III: after Phase II criteria met, usually 4-6 weeks	
OSMS Appointments	<ul style="list-style-type: none"> • Medical appointment at 6 weeks • Physical therapy appointments every 5-7 days, and progresses to home program
Rehabilitation Goals	<ul style="list-style-type: none"> • Balance and stability
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • Incline walking, LE/hip flexibility, multi-directional Wobble board, single leg balance, 8” step-ups, standing hydrant holds • Single leg bridge, hamstring curl on ball with bridge – single leg • Front plank with hydrant, side plank with clamshell, alternating supermans
Cardiovascular Exercises	<ul style="list-style-type: none"> • Bike, Stairmaster, Aquacisor (gait training), or retrograde treadmill
Progression Criteria	<ul style="list-style-type: none"> • Patient should be pain-free with minimal swelling • Step-ups with good form for 10-20 repetitions, standing hydrant exercise with good form for 30 seconds with blue band

PHASE IV: after Phase III criteria met, usually 6-11 weeks	
Rehabilitation Goals	<ul style="list-style-type: none"> • Non-impact strengthening: 6-day/week program
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • Incline walking, LE/hip flexibility, multi-directional wobble board, single leg balance, 8” step-ups, standing hydrant holds • Single leg bridge, hamstring curl on ball with bridge-single leg • Front plank with hydrant, side plank with clamshell, alternating supermans
Cardiovascular Exercises	<ul style="list-style-type: none"> • Bike, Stairmaster, Aquacisor (gait training), or retrograde treadmill
Progression Criteria	<ul style="list-style-type: none"> • Performs 6 day/week program for at least 4 weeks with documented weight-resistance progression. <ul style="list-style-type: none"> ○ Keep flow sheets for MD visits

PHASE V: after Phase IV criteria met, usually 12-16 weeks	
Rehabilitation Goals	<ul style="list-style-type: none"> • Non-impact strengthening: 6-day/week program (3 days cardio, 3 days strength)
Suggested Therapeutic Exercises	Cardio Day <ul style="list-style-type: none"> • Warm-up <ul style="list-style-type: none"> ○ Bike ○ LE/hip flexibility ○ Standing hydrant holds ○ Flex and abd SLR with ankle weights ○ Band stepping/walks • Cardio training goal <ul style="list-style-type: none"> ○ 60 min (elliptical, Stairmaster, bike)
	Strength Day <ul style="list-style-type: none"> • Warm-up <ul style="list-style-type: none"> ○ Bike ○ LE/hip flexibility ○ Standing hydrant holds ○ Flex and abd SLR with ankle weights



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		<ul style="list-style-type: none"> ○ Band walks ● Strength training (continue with previous, add) <ul style="list-style-type: none"> ○ Single leg squats ○ Step downs in hip dominant position <ul style="list-style-type: none"> ▪ Goal: 8" ○ 12-18" power step-ups ○ Single leg Romanian deadlifts (RDLs)
Progression Criteria		<ul style="list-style-type: none"> ● Performs 6 day/week program for at least 4 weeks with documented weight-resistance progression. ● Analysis is required for validation of proper form in 8" step down <ul style="list-style-type: none"> ○ Keep flow sheets for MD visits

PHASE VI: after Phase V criteria met, usually 16-20 weeks		
Rehabilitation Goals		<ul style="list-style-type: none"> ● Return to jumping: 6-day/week program (3 days cardio, 3 days strength/plyometrics)
Suggested Therapeutic Exercises	Cardio Day	<ul style="list-style-type: none"> ● Warm-up <ul style="list-style-type: none"> ○ Bike ○ LE/hip flexibility ○ Standing hydrant holds ○ Flex and abd SLR with ankle weights ○ Band walks ● Cardio training goal <ul style="list-style-type: none"> ○ 60 min (elliptical, Stairmaster, bike)
	Strength Day	<ul style="list-style-type: none"> ● Warm-up <ul style="list-style-type: none"> ○ Bike ○ LE/hip flexibility ○ Standing hydrant holds ○ Flex and abd SLR with ankle weights ● Strength training (continue with previous, add upper body and adv weight as tolerated) ● Plyometric & Jump Rope Progression <ul style="list-style-type: none"> ○ Stationary jump ○ Jump up ○ Jump over a line – forward and lateral ○ Drop jump (progress to 18") ○ Jump rope exercises ○ Hurdle jump – forward and lateral
Progression Criteria		<ul style="list-style-type: none"> ● Performs 6 day/week program for at least 4 weeks with documented weight-resistance progression. ● Analysis is required for validation of proper form in 18" drop down

PHASE VII: after Phase VI criteria met, usually 20-24 weeks		
Rehabilitation Goals		<ul style="list-style-type: none"> ● Return to running: 6-day/week program (3 days cardio, 3 days strength/plyometrics)
	Cardio Day	<ul style="list-style-type: none"> ● Warm-up <ul style="list-style-type: none"> ○ Bike



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Suggested Therapeutic Exercises		<ul style="list-style-type: none"> ○ LE/hip flexibility ○ Standing hydrant holds ○ Flex and abd SLR with ankle weights ○ Band walks ● Cardio training goal <ul style="list-style-type: none"> ○ 60 min (elliptical, Stairmaster, bike) ● Running drills <ul style="list-style-type: none"> ○ Jogging 40 yards at 60-70% max ○ Slowly progressing to continuous running
	Strength Day	<ul style="list-style-type: none"> ● Warm-up <ul style="list-style-type: none"> ○ Bike ○ LE/hip flexibility ○ Standing hydrant holds ○ Flex and abd SLR with ankle weights ● Strength training (continue with previous, add upper body and adv weight as tolerated) ● Plyometric & Jump Rope Progression <ul style="list-style-type: none"> ○ Jump rope exercises ○ Drop jump (progress to 18") ○ 10-yard broad jump ○ Single leg hop for distance ○ Single leg hurdle hop – forward and lateral ○ Bounds – forward, lateral and diagonal ○ Stationary single leg hop ○ Single leg hop up & down
Progression Criteria	<ul style="list-style-type: none"> ● Performs 6 day/week program for at least 4 weeks with documented weight-resistance progression. ● Analysis is required for validation of proper form of triple hop and readiness to progress onto cutting and changing direction activity 	

PHASE VIII: after Phase VII criteria met, usually 24+ weeks		
Rehabilitation Goals	<ul style="list-style-type: none"> ● Cutting and change of direction: 6-day/week program (3 days cardio, 3 days strength/plyometrics) 	
Suggested Therapeutic Exercises	Cardio Day	<ul style="list-style-type: none"> ● Warm-up <ul style="list-style-type: none"> ○ Bike ○ LE/hip flexibility ○ Standing hydrant holds ○ Flex and abd SLR with ankle weights ○ Band walks ● Cardio training goal <ul style="list-style-type: none"> ○ 60 min (elliptical, Stairmaster, bike, jogging) ● Running drills <ul style="list-style-type: none"> ○ Lateral shuffle ○ Deceleration ○ 90 degree cuts
	Strength Day	<ul style="list-style-type: none"> ● Warm-up <ul style="list-style-type: none"> ○ Bike



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		<ul style="list-style-type: none"> ○ LE/hip flexibility ○ Standing hydrant holds ○ Flex and abd SLR with ankle weights ● Strength training (continue with previous, add upper body and adv weight as tolerated) ● Plyometric Progression <ul style="list-style-type: none"> ○ Jump rope exercises ○ Drop jump (progress to 18") ○ 10-yard broad jump ○ Single leg hop for distance, triple hop ○ Single leg hurdle hop – forward and lateral ○ Bounds – forward, lateral and diagonal ○ Stationary single leg hop ○ Single leg hop up & down
<p>Progression Criteria</p>		<ul style="list-style-type: none"> ● Performs 6 day/week program for at least 4 weeks ● Analysis is required for validation of proper form of: <ul style="list-style-type: none"> ○ 18" step down ○ 18" box jump ○ Triple hop ○ Lateral shuffle ○ Deceleration and cutting