

REHABILITATION GUIDELINES FOR ACL RECONSTRUCTION WITH CARTILAGE RECONSTRUCTION (TROCHLEA OF PATELLA)

PHASE I (0-3 WEEKS)

DATES:

Appointments	Physical therapy 2-3x/week, beginning 2-5 days post-op
Rehabilitation Goals	• Full extension symmetrical to contralateral knee before the first post-op visit at 2 weeks • PROM 0-90° • 20° SLR without quad lag
Precautions	ROM: Flexion limited to 90 degrees x 4 weeks Brace: • Brace locked 0° for ambulation, brace open 0-90° at rest in sitting • May remove brace for sleep and exercises after 1 week WB: • WBAT with crutches, brace locked in 0° extension x4 weeks post-op
Suggested Therapeutic Exercises	• Prolonged extension- prone hang, supine with roll under ankle • Heel slide, wall slide • Isometric quad set, then SLR • Hamstring isometrics • 4-way hip and ankle exercises • Initiate proprioceptive/balance exercises: weight shifts forward, retro, lateral with brace locked in extension • Patellar mobilizations (especially cranially) • Ice 5x/day, 20min each time. Especially after exercises
Cardiovascular Exercises	• UBE
Progression Criteria	• DC crutches when quad control returns, full extension achieved, stable with low fall risk, in brace locked to 0° extension only

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PHASE II (4-6 WEEKS)

DATES:

Appointments	Continue physical therapy 2-3x/week
Rehabilitation Goals	• AROM 0-120° • Advanced strengthening • Consider early neuromuscular retraining • DC brace at 6 weeks post-op, continue brace if patient does not have full extension and/or cannot perform SLR without extension lag.
Precautions	ROM: Flexion limited to 120 degrees x 6 weeks Brace: • Wear brace locked in extension for ambulation x 4 weeks a progress to normal gait and DC crutches when gait normalizes except for sleeping, exercises • AVOID OPEN CHAIN RESISTIVE ESPECIALLY WITH WEIGHTS
Suggested Therapeutic Exercises	• Thera band resistance ok for quad, hamstring • Quad: quad set, SAQ, LAQ • Hamstring: hamstring set, prone knee flexion • Calf, hip: extension, hip ABD, hip ADD
Cardiovascular Exercises	• UBE
Progression Criteria	• Minimal Effusion • Functional control for ADLs achieved

PHASE III (6 WEEKS – 3 MONTHS)

DATES:

Appointments	Continue physical therapy to 1-2x/week
Rehabilitation Goals	• Full ROM • Progress neuromuscular retraining program • Core integration
Precautions	• May DC brace if gait pattern is good and has quad control • No downhill walking/running, downhill skiing/biking x 4.5 months

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Suggested Therapeutic Exercises (Phase III continued)	• HEP 5x per week • Strengthening: begin closed kinetic chain exercises with knee flexion • Mini squat, lunges, bridges, sport cord, wall squats, step up/down • Progress neuromuscular proprioceptive/balance exercises including single leg balance progression- varying surfaces • Pool available: begin 4-way hip, lateral movement, deep water jogging in place, May swim w/ pool buoy between legs (no kicking)
Cardiovascular Exercises	• Stationary bike with resistance and operative leg pedaling, may begin road biking outdoor on flat roads only • Elliptical, Stair master, Treadmill walking
Progression Criteria	• Neuromuscular exercises without difficulty • No dynamic valgus with exercises

PHASE IV (3 TO 5 MONTHS)

DATES:

Appointments	Continue physical therapy 1-2x per week
Rehabilitation Goals	• Running patterns at 75% speed • Good jumping mechanics- NO DYNAMIC VALGUS • Hop drills without difficulty
Precautions	• Gentle downhill walking, No running, No downhill skiing, no downhill mountain biking until 4.5 months
Suggested Therapeutic Exercises	• HEP 5x per week • Agility drills: shuffling, hopping, running patterns (Ex: figure 8) • Some sport specific: closed-chain exercises including leg press (0-60°), step ups, mini squats (0-60°), short arc quad (30-90°), hamstring curls with light weight/high repetition
Cardiovascular Exercises	• Begin endurance closed-chain exercises 3-4x/week: - Stairmaster, stationary bike, elliptical, NordicTrack (short stride) • Gait training: jogging on treadmill or even ground at 12 weeks, progress to running patterns at 75% • Pool available: may start freestyle swimming (avoid frog/breaststroke kick), progress to shallow water jogging

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Progression Criteria	- Running without knee pain or effusion - Hopping/agility drills without knee pain or effusion
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PHASE IV (5 TO 8 MONTHS)

DATES:

Appointments	Continue physical therapy 2 visits per month to review HEP
Rehabilitation Goals	- Slow progression from jogging on even ground or treadmill to running patterns, hill work, cutting, jumping, pivoting - May begin plyometric program: jump rope exercises
Precautions	- Earliest return to sport = 9 months - Must pass return to sport test
Suggested Therapeutic Exercises	- HEP 4-5x per week - Return to sport testing at 9 months post-op, prior to MD visit - Agility drills: shuffling, hopping, running patterns (Ex: figure 8) - Sport Specific: plyometric program, fast straight running, backward running, cutting, cross-overs, carioca, etc. in controlled environment
Cardiovascular Exercises	Pool available: may advance swimming (avoid frog/breaststroke kick)
Progression Criteria (Return to Sport)	- quadriceps and hamstring strength at least 90% of opposite leg - Single leg hop test and vertical jump at least 90% of opposite leg - Jog, full speed run, shuttle run, and figure of 8 running without a limp - Full controlled acceleration and deceleration - Squat and rise from a full squat - No effusion or quadriceps atrophy

References:

Mammoth Orthopedic Institute

PT name and date: Andrea Dillon 6/21/16

MD name and date: Approved June 21, 2016

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