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ACL RECONSTRUCTION — REHABILITATION PROTOCOL

Autograft | Bone-Patellar Tendon-Bone • Hamstring • Quadriceps Tendon

LOS ANGELES ORTHOPEDIC SURGERY
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PHASE	WEIGHT BEARING	BRACE	ROM	GOALS	TREATMENT	CLINICAL MILESTONES
PHASE I — Weeks 0–4 (Pre-op to Post-op)						
Weeks 0–4	• WBAT w/ brace locked in ext. (0–2 wks) • WBAT w/ crutches (2–4 wks) • D/C crutches at 4 wks if gait normalized	• Locked 0° wk 1–2 • 0–90° wk 3–4 for ambulation • Remove for sleeping • D/C brace when ready	• 0–90° wks 1–4 • Avoid hyperflexion • No WB w/ flexion >90° (6 wks PO)	• Wound healing • Quad activation • Decrease effusion • Restore full extension • Normalize patellar mobility • Initiate proximal strengthening	• Ice, compression, elevation • Electrical muscle stimulation • Scar tissue mobilization • Quad sets, heel slides, SLR (w/ brace in full ext.) • Patellar mobilizations • Co-contractions • Active-assisted ROM • Quad/hamstring/glute isometrics • Begin side-lying hip/core exercises	• +1 effusion • Good quad set • Good patellar mobility • Pain-free at rest • AROM 0–90° • Single limb stance
PHASE II — Weeks 4–6						
Weeks 4–6	• FWB • Normalize gait	• Unlocked 0–90° • SLR w/o extensor lag	• Gradual increase to 90° • Progress to closed kinetic chain • Avoid patellar pain	• Brace unlocked • Progress to closed kinetic chain exercises • Avoid patellar pain • Neuromuscular re-education of quads	• Pain management & effusion control • Neuromuscular re-education • Mini squats, step-ups, toe raises • Closed chain extension exercises • 4-way hip (side lying and standing) • Clam shells • Balance exercises, calf raises • Stationary bike • Upper extremity reaches • ROM & flexibility exercises • Cardiovascular training: cycling	• FWB with normal gait • AROM 0–90° • Good quad recruitment • SLR without lag • Normal patellar mobility
PHASE III — Weeks 6–16						
Weeks 6–16	• Full	• None	• Flexion to 130° • Avoid pivoting • Avoid hyperflexion • Until 4 months PO	• Increase strength, power, endurance • Normalize knee ROM • Increase unilateral stance stability • Prepare for advanced exercises	• Progress Phase II exercises • Wall squats → Squats 0–90° • Lunges 0–90° • Leg press 0–90° (flexion only) • Proprioception training • Lateral step-ups, leg press, step-downs • Hamstring curls and SLR • Stair master / Elliptical • Isokinetic & endurance exercises • Swimming, Nordic Track • Single limb strengthening (wk 8) • SL balance exercises – progress difficulty • Continue quad and hamstring strength	• Improved unilateral stance stability • Minimal to no pain • Full ROM achieved • Equal hip strength bilaterally • Isokinetic quad strength <20% contralateral deficit
PHASE IV — Weeks 16–24 (4–6 months)						
Weeks 16–24	• Full	• None	• Full • Avoid hyperflexion	• Increase power and endurance	• Progress above exercises • Begin jogging/running progression (wk 16–17) • Plyometrics	• Full confidence in knee • Pain-free activity at 5 months • Satisfactory clinical exam

PHASE	WEIGHT BEARING	BRACE	ROM	GOALS	TREATMENT	CLINICAL MILESTONES
				• Return to skill activities • Prepare for full unrestricted activity	• Agility drills & plyometric training • Sport-specific drills • Initiate running program • Initiate cutting program • 16 wks: Begin jumping • 20 wks: Advance to sprinting, backward running, cutting/pivoting • 22 wks: Advance as tolerated • FSA completed at 22 wks	• Functional testing ≥90% contralateral • Isokinetic testing ≥90% contralateral
PHASE V — >6 Months — Return to Sport						
>6 Months	• Full	• None	• Full	• Gradual return to sports participation • FSA completion and MD clearance	• Sport-specific drills: agility, change of direction • Maintenance program for strength & endurance • Advance plyometrics as tolerated • Full unrestricted sport participation after clearance	• Cleared by MD • FSA completed • Full confidence in knee • No pain with sport activity

**Activities in brace: 2–4 wks PO*
**No WB w/ flexion >90°: 6 wks PO*
**Avoid tibial rotation: 8 wks PO*
**Hinged brace worn for 2–4 wks post-op; D/C brace when ready (see protocol)*
**If concomitant meniscus repair or cartilage/meniscal transplant is performed, protocol will be modified*
****FSA (Functional Sports Assessment/Lower Body Assessment) highly recommended at ~22 weeks post-op for competitive athletes returning to sport*

**Same protocol applies for all autograft choices | ROM restrictions may be modified based on intraoperative findings | Please fax progress notes to the treating surgeon*