

Revision ACL Reconstruction Rehabilitation Protocol

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Patient: _____ **DOS:** _____

Surgeon Parameters

Graft: ☐ BTB ☐ Quad ☐ Hamstring ☐ Allograft	LET: ☐ Meniscus repair: ☐	Weight bearing: ☐ As tolerated ☐ Protected ____ wks
Other Precautions:		

Parameters above are patient-specific and supersede the general timeframes below. **Early rehabilitation matches a primary ACL reconstruction — immediate weight bearing and full motion, no routine brace — but the later phases are slower and return to sport is not before 9 months.** A concomitant meniscus repair, cartilage procedure, or osteotomy overrides the weight bearing and ROM below. After stage 1 bone grafting alone, use the General Knee Arthroscopy protocol with no running or pivoting before stage 2. Therapist to use clinical judgment to individualize exercise selection and pace within each phase.

Phase	Goals	Precautions	Treatment Focus
Phase 1 Weeks 0–6	Goals - Full passive extension by wk 2; flexion $\geq 120^\circ$ by wk 6 - Effusion $\leq 1+$ - Quad activation; SLR without lag - Normal gait off crutches	Precautions - WBAT with crutches until gait is normal (per parameters above) - No routine brace; ROM unrestricted; avoid forced hyperextension - No resisted open-chain knee extension - No running, jumping, or pivoting If LET: no change in pace; lateral soreness is expected — no aggressive IT band or lateral soft-tissue work for 6 wks If meniscus repair: weight bearing and flexion limits per surgeon	Treatment Focus - Cryotherapy, compression, patellar mobilization - Heel slides, prone hangs, heel props - Quad sets, SLR (4 planes); NMES; BFR if available from wk 2 - Weight shifts, mini-squats, leg press $0-60^\circ$ - Bike when flexion allows ($\approx$ wks 2–3) - Double- → single-leg balance
► Advance to Phase 2 when: full extension, flexion $\geq 120^\circ$, effusion $\leq 1+$, SLR without lag, normal gait without a device.			
Phase 2 Weeks 6–12	Goals - Full symmetric ROM; effusion $\leq$ trace - Quad and hip strength; normal stairs - Single-leg control	Precautions - No running, jumping, or pivoting - Open-chain knee extension: $90-45^\circ$ from wk 6, $90-0^\circ$ by wk 10, progressive load from wk 12 - Watch for patellofemoral pain and post-exercise effusion	Treatment Focus - Squats $0-90^\circ$, leg press, step-ups/downs, bridges - Hamstring curls, light load - Balance and perturbation training - Bike with resistance, elliptical, pool - Hip and core strengthening
► Advance to Phase 3 when: full ROM, effusion $\leq$ trace, no pain with exercise, single-leg squat to 45° with good control.			
Phase 3 Months 3–6	Goals - Quad and hamstring LSI $\geq 70\%$ by ≈ 4 months - Begin running at ≥ 16 wks once criteria are met - Sound double-leg landing mechanics	Precautions - Running not before 16 wks, and only with quad LSI $\geq 70\%$, full ROM, and no effusion - No cutting, pivoting, or sport - Post-activity swelling → reduce load If allograft: use the later end of each time range	Treatment Focus - Progressive resistance with single-leg emphasis (split squat, single-leg RDL, leg press) - Walk-jog progression (anti-gravity treadmill if available) - Double-leg landing and low-level plyometrics from ≈ 5 months - Straight-line agility - Strength testing at 4 and 6 months
► Advance to Phase 4 when: quad and hamstring LSI $\geq 80\%$, running 20 min without pain or effusion, good double-leg landing mechanics.			

Phase	Goals	Precautions	Treatment Focus
Phase 4 <i>Months 6–9</i>	Goals • Quad and hamstring LSI $\geq 90\%$ • Hop test battery LSI $\geq 90\%$ • Cutting and pivoting in controlled settings • Psychological readiness	Precautions • No competition or unrestricted practice • Predictable cutting first; reactive drills last	Treatment Focus • Heavy bilateral and unilateral strength; eccentric emphasis • Sprinting, acceleration/deceleration, cutting $45^\circ \rightarrow 90^\circ$ • Single-leg plyometrics, bounding • Reactive agility and sport-specific drills
► Advance to Phase 5 when: quad and hamstring LSI $\geq 90\%$, hop battery $\geq 90\%$, no effusion, full-speed sport drills without symptoms, ACL-RSI improving.			
Phase 5 <i>Months 9–12</i>	Goals • Graded return to practice, then competition • Maintain LSI $\geq 90\%$ • Injury-prevention program established	Precautions • Return to sport not before 9 months, and only when all criteria are met • Functional ACL brace recommended for cutting/pivoting sport through the first season	Treatment Focus • Non-contact $\rightarrow$ contact practice $\rightarrow$ competition • Maintenance strength 2–3x/wk • Neuromuscular injury-prevention program long term
► Full Release (typically 9–12 months): full ROM, no effusion, quad and hamstring LSI $\geq 90\%$, hop battery $\geq 90\%$, ACL-RSI > 68 , sport-specific progression completed, cleared by physician.			

Special Considerations

- If the graft was harvested from the other knee, that leg needs its own quad program and is not a valid strength comparison until it has recovered
- Recurrent effusion, giving way, or loss of extension — contact the surgeon

Thank you for taking care of our patient.

This protocol serves as a general guideline and outline only. Our team defers to the clinical judgment and expertise of the treating physical therapist to make appropriate adjustments and modifications based on the individual patient's presentation, progress, and response to treatment. For any questions regarding this protocol, please contact Dr. Wollenman directly at (561) 215 – 0184.