

## **ACL Reconstruction with Hamstring Autograft**

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The surgeon must specify on the referral any specific requests or deviations that fall outside the scope of this protocol, including if *deceleration* of these time frames is desired.

Phase I	Phase II	Phase III	Phase IV
(Weeks 0 - 2)	(Weeks 2 – 6)	(Weeks 6 – 12)	(Weeks 12 – 24+)
PRECAUTIONS	PRECAUTIONS	PRECAUTIONS	PRECAUTIONS
<ul> <li>No hamstring strengthening x 6 weeks</li> </ul>	No hamstring strengthening x 6 weeks	Watch for patellofemoral pain	No jumping, cutting, or sprinting until cleared
<ul> <li>No pool activity</li> <li>CLINICAL CARE</li> <li>Swelling/Wound Management</li> <li>Patellar mobs</li> <li>NMES</li> <li>ROM as tolerated</li> </ul>	WBAT crutches until sufficient quad control     CKC (0-60°) for strength training     OKC (90-45°)     Strengthening  CLINICAL CARE	CLINICAL CARE  • Blood Flow Restriction Training  • Manual Therapy PRN  • Eccentric Training (CKC)	Hold on return to run or hop testing until quad limb symmetry index (LSI) is >80% and there is trace or less joint effusion      CLINICAL CARE     Blood Flow Restriction Training for atrophy if needed
EXERCISES  AAROM knee flexion with over-pressure Stationary biking, no resistance Passive extension stretching Patellar mobs Ankle pumps Quad sets SLR (no extensor lag) Calf raises Mini squats with band Proprioceptive activities MES is strongly recommended to improve quad strength  CRITERIA to advance Wean from brace after: SLR x 10 without lag	<ul> <li>Swelling Management</li> <li>Patellar mobs</li> <li>NMES</li> <li>Manual knee flexion/extension stretching</li> <li>Light scar mobilization when wound closed</li> <li>Blood Flow Restriction Training</li> <li>Pool therapy when OK'ed by MD</li> <li>EXERCISES</li> <li>Leg press (double/single)</li> <li>Forward and Lateral Step ups</li> <li>Seated knee extension (90-45° only starting at week 4)</li> <li>CKC hip strengthening</li> <li>Progress proprioceptive activities</li> <li>Continue NMES</li> </ul>	• Stationary biking with resistance • Advance CKC strengthening single leg without dynamic valgus • Continue seated knee extension (90-45°) • Step downs • Lunges • Begin light hamstring strengthening  CRITERIA to advance • Negotiate stairs normally • Restore limb confidence • ROM • Full extension • Flexion within 10° of uninvolved side	EXERCISES 12-16 weeks  Stairmaster, elliptical, Nordic moderate biking Running: initiate walk-jog program when the following criteria are met:  80% quad LSI Effusion - trace or less Jumping: double progress to single leg High level strengthening: single leg on unstable surfaces without dynamic valgus Seated knee extension 90-0°  16+ weeks Agility drills/plyometrics without dynamic valgus Sports specific activities  24+ weeks Cutting/sport specific activities if
<ul> <li>Single leg stance w/ UE support</li> <li>Wean from crutches by POD 14</li> <li>ROM</li> <li>Extension: 0°</li> <li>Flexion: 90°</li> </ul>	CRITERIA to advance  Normal gait mechanics  Single leg stance control w/o UE support  Effusion managed  ROM  Flexion: >120°		cleared  CRITERIA to advance  Return to sport or heavy work cleared by MD  >90% of limb symmetry on Functional Testing  Within 1 cm quad girth difference side to side

Questions and updates regarding the progress of any specific patient are encouraged and should be directed to Dr. Cooper at 952-456-7617.