

REHABILITATION GUIDELINES: BEAR IMPLANT FOR ACL REPAIR

PHASE I (0-4 WEEKS POST-OP)

DATES:

Appointments	MD appointment at (2 weeks post-op) Begin physical therapy (3-5 days post-op, 2x week)
Rehabilitation Goals	• Edema control (Ice/elevate) • Slow progression of knee ROM • Quad re-education (BFR and NMES) • Protect repair
Precautions	• Gait: 50% WB with crutches and brace on and locked to 0 degrees x 2 weeks, then unlocked with brace on pending quad control (Age 14 and under keep WBAT with brace locked into extension x2- 4 weeks) • ROM Progression, 0-90 degrees at 4 weeks • Sleep with brace on and locked at 0 degrees x 4 weeks • No Scar massage until 3 weeks post-op
Suggested Therapeutic Exercises	• Passive knee extension stretching towel under ankle (no prone extension hang until 4 weeks post-op) • Supine, seated heel slides for knee ROM within protocol limitations • Quad set, SAQ once 0-30 degrees has been optioned is ok, SLR, avoid open chain ex's with any resistance, BFR and NMES ex's encouraged • Patellar mobility
Cardiovascular Exercises	• Seated UBE arm bike
Progression Criteria	• 4 weeks out from surgery

PHASE II (4-6 WEEKS POST-OP)

DATES:

Appointments	Continue physical therapy (2x week)
Rehabilitation Goals	• Gain full knee extension • Good quad contraction

	Minimize pain and swelling
Precautions	Gait: WBAT weaning from crutches 4-6 weeks If Quad control is appropriate, unlock brace 0-90 with walking WBAT ROM Progression: progress to full ROM as tolerated at 4-6 weeks (gentle PROM permitted if stiff) Gentle Scar mobilization
Suggested Therapeutic Exercises	- Prone knee extension stretch can be added to extension stretching - Continue with patellar mobility all planes - Continue with quad strength/activation (quad sets, add SLR if no extension lag present, - Initiate closed kinetic chain ex's with step-ups, stair reciprocal training, mini-squats, as allowed per protocol with ROM and brace use. - Gait training progressing to normal heel-to-toe with brace unlocked 0-90
Cardiovascular Exercises	Seated UBE arm-bike
Progression Criteria	6 weeks post-op

PHASE III (6-12 WEEKS POST-OP)

DATES:

Appointments	Continue physical therapy (2x week)
Rehabilitation Goals	- Minimize pain and swelling - Full knee extension ROM - Good quad control (able to do 20 SLR with no extension lag) - Normal gait pattern
Precautions	ROM to full Change from Hinged knee brace to ACL brace when ROM > 110 degrees. ACL brace worn during walking and all weight bearing/CKC ex's x 12 weeks
Suggested Therapeutic Exercises	- SLR with no extension lag - Bilateral squats - HS curls - Open/closed chain proximal hip strength ex's - Calf raises

	• Reciprocal stair training (step up/down) • Water jogging ok in pool starting at 8 weeks post-op
Cardiovascular Exercises	• Bike (no resistance) ROM
Progression Criteria	• Ability to do 20 SLR with no extension lag • Normal gait • Full extension and at least 90 degrees knee flexion ROM

PHASE IV (12-20 WEEKS POST-OP)

DATES:

Appointments	Continue physical therapy (2x week)
Rehabilitation Goals	• Full ROM • Strength progression • Proprioception and Balance progression and training
Precautions	• Return to running may start at week 16 • No pivot/cutting motions • No plyometrics until 20 weeks post-op
Suggested Therapeutic Exercises	• Closed Kinetic Chain strength as focus progressing from bilateral to single leg (squats, lunges, step up/down) • Single leg strength progression including single leg balance • Leg press • Proximal hip/core strength progressing from double leg to single leg
Cardiovascular Exercises	• Bike • Swimming with flutter kick only can start at 12 weeks • Running may start at 18 weeks if cleared by surgeon • Walk/hiking
Progression Criteria	• Full ROM • Good strength and control with daily activities

PHASE V (20-30 WEEKS POST-OP)

DATES:

Appointments	Continue physical therapy (1-2x week)
Rehabilitation Goals	• Return to pain free running • Plyometric training without pain or instability
Precautions	• No cutting or pivot motions
Suggested Therapeutic Exercises	• Continue with double leg and single leg closed kinetic chain strength • Begin double leg progressing to single leg plyometrics • Continue with proprioception and balance progressing to single leg
Cardiovascular Exercises	• Running (no cutting or pivot) and biking
Progression Criteria	• Running without pain • Able to hold single leg balance for at least 10 sec • 50% hop height on operated leg compared to non-operated leg

PHASE VI (30-52 WEEKS POST-OP)

DATES:

Appointments	Continue physical therapy (1x week)
Rehabilitation Goals	• Running with pivot/turns at 75% speed without difficulty • Jumping without difficulty • Hop test at 75% of non-operative leg • At 36-50 weeks goal of 85% strength and hop test of non-operative leg
Precautions	• Return to sport given before cleared by surgeon for cutting sports
Suggested Therapeutic Exercises	• Continue single leg closed kinetic chain strength • Continue with single leg plyometrics • Agility training with change of direction, cutting, and pivot training • Sport specific training
Cardiovascular Exercises	• Running and biking
Progression Criteria	• Running with cutting/pivot motions with confidence • Able to hold single leg balance for at least 30 sec • 95% hop height on operated leg compared to non-operated leg • Pass return to sport test

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