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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	<ul style="list-style-type: none"> • Edema control (Ice/elevate) • Slow progression of knee ROM • Quad re-education (BFR and NMES) • Protect repair
Precautions	<ul style="list-style-type: none"> • Gait: PWB 50% with crutches and brace on and locked to 0 degrees x 4 weeks • ROM Progression: 0-30 degrees at 0-2 weeks, 0-60 degrees at 2-4 weeks • Sleep with brace on and locked at 0 degrees x 6 weeks • No Scar massage until 6 weeks post-op
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Seated UBE arm bike
Progression Criteria	<ul style="list-style-type: none"> • 4 weeks out from surgery

PHASE II (4-6 WEEKS POST-OP)

DATES:

Appointments	Continue physical therapy (2x week)
Rehabilitation Goals	<ul style="list-style-type: none"> • Gain full knee extension • Good quad contraction • Minimize pain and swelling
Precautions	<ul style="list-style-type: none"> • Gait: WBAT weaning from crutches 4-6 weeks

	<ul style="list-style-type: none"> • If Quad control is appropriate, unlock brace 0-90 with walking WBAT • ROM Progression: 0-90 degrees at 4-6 weeks • Brace on and locked at 0 degrees for sleep • No Scar massage until 6 weeks post-op
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Seated UBE arm-bike
Progression Criteria	<ul style="list-style-type: none"> • 6 weeks post-op

PHASE III (6-12 WEEKS POST-OP)

DATES:

Appointments	Continue physical therapy (2x week)
Rehabilitation Goals	<ul style="list-style-type: none"> • Minimize pain and swelling • Full knee extension ROM • Good quad control (able to do 20 SLR with no extension lag) • Normal gait pattern
Precautions	<ul style="list-style-type: none"> • 0-110 degrees AROM by week 7, then 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Bike (no resistance) ROM
Progression Criteria	<ul style="list-style-type: none"> • Ability to do 20 SLR with no extension lag

	<ul style="list-style-type: none"> • Normal gait • Full extension and at least 90 degrees knee flexion ROM
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PHASE IV (12-20 WEEKS POST-OP)

DATES:

Appointments	Continue physical therapy (2x week)
Rehabilitation Goals	<ul style="list-style-type: none"> • Full ROM • Strength progression • Proprioception and Balance progression and training
Precautions	<ul style="list-style-type: none"> • Return to running may start at week 18 if ok by surgeon • No pivot/cutting motions • No plyometrics until 20 weeks post-op
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Return to pain free running • Plyometric training without pain or instability
Precautions	<ul style="list-style-type: none"> • No cutting or pivot motions
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Running (no cutting or pivot) and biking
Progression Criteria	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Return to sport given before cleared by surgeon for cutting sports
Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Running and biking
Progression Criteria	<ul style="list-style-type: none"> • 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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