



Patellar ORIF

Post-Operative Rehabilitation Protocol

0-2 weeks

- WBAT with hinged knee brace locked in extension until 6 weeks post-op
- AROM/PROM/AAROM
 - First Week: 0-15°
 - Second Week: 0-30°
- Isometric quadriceps/hamstring/abductor/abductor strengthening
- Ankle Thera-Band exercises

2-6 weeks

- Begin WBAT with hinged knee brace locked in full extension
- AROM/AAROM/PROM: Add 15° of flexion each week, goal is 90° by postop week 6-8
- Isometric quadriceps/ hamstring/ abductor/ abductor strengthening
- Ankle Thera-Band exercises
- Initiate SLR

6-10 weeks

- Full WB by 6 weeks, brace unlocked WB activities
- Progress to full ROM by postop week 10
- Progress active strengthening
- Start stationary bike

10-12 weeks

- Discontinue brace
- Full ROM

3-6 months

- Return to full activities as tolerated

Weight Bearing Status

WBAT

Brace Settings

Hinged knee brace locked in extension until week 6

ROM Restrictions

Week 0-1

0-15°

Week 1-2

0-30°

Week 2-3

0-45°

Week 3-4

0-60°

Week 4-5

0-75°

Week 5-6

0-90°



Exercise	Week														
	1	2	3	4	5	6	7	8	9	10	12	16	20	24	
Initial Exercises:															
ROM Goals	0-15°	0-30°	Progress 15 degrees each week, 90° by week 6-8							Progress to Full					
Flexion/extension, heel slides	[Green bar]														
Flexion/extension- seated	[Green bar]														
Patella/Tendon mobilization	[Green bar]														
Quad Series	[Green bar]														
Hamstring Sets	[Green bar]														
Sit and Reach for Hamstrings	[Green bar]														
Ankle Pumps	[Green bar]														
Crutch weaning	WBAT [Green bar]														
SLR (w/ brace until quad control restored)	[Green bar]														
Toe and Heel Raises	[Green bar]														
Balance Series	[Green bar]														
Weight-bearing Strength Exercises:															
Double Knee Bends	[Green bar]														
Double Leg Bridges	[Green bar]														
Reverse Lunge, static holds	[Green bar]														
Beginning cord exercises	[Green bar]														
Balance Squats	[Green bar]														
Dead Lift (2 → 1 leg)	[Green bar]														
Leg Press (ISO → reps, 2 → 1 leg)	[Green bar]														
Sports Test Exercises	[Green bar]														
Cardiovascular Exercises:															
Bike with both legs-no resistance	[Green bar]														
Bike with both legs- resistance	[Green bar]														
Aqua jogging	[Green bar]														
Treadmill-walking 7% incline	[Green bar]														
Swimming with fins-light flutter kick	[Green bar]														
Elliptical Trainer	[Green bar]														
Rowing	[Green bar]														
Stair stepper	[Green bar]														
Agility Exercises:															
Running Progression	[Green bar]														
Initial-Single Plane	[Green bar]														
Advance-Multi Directional	[Green bar]														
Functional Sports Test	[Green bar]														
High Level Activities:															
Golf Progression	[Green bar]														
Outdoor biking, hiking, running	[Green bar]														
Return to Full Sport at 6 months post-op	[Green bar]														

Adapted from post-operative protocol created by Howard Head Physical Therapy, Jill Monson, PT, OCS and Jon Schoenecker, PT, OCS, CSCS



Quad Series:

- Quad sets (5 sec hold) also quick contractions (NMES to supplement)
- Prone quad sets
- SLR with no extension leg
- Progression of Quad Strengthening
 - LAQ in safe range -no added resistance to begin
 - Once weight bearing tandem stance TKE with 5 sec hold
 - Isometric wall sit
 - SLR with resistance
 - Step up progression
 - Squat progression
 - Leg press progression
 - Lunge progression

Hamstring Series:

- Hamstring stretching (supine/prone)
- Hamstring set (heel dig)- contract hamstring with knee flexed pressing heel into the floor (5 sec hold)
- Hamstring curls
- Progress to resisted hamstring curl

Sport Test Exercises:

- Goals: impact training and introduction of directional drills
- Double leg squat jumps
- Box jumps
- Speed skaters
- Double leg jumps for height and distance progress to single leg as tolerated
- Blaze pod change of direction drills

Further Clarifications and Considerations.

- Double Knee Bends: feet shoulder width apart, bend knees to 30°, keeping knees behind the toes.
- Cord exercises (resistance band/cord): resisted double knee bends, resisted hamstring curls
- May begin to implement BFR as early as 1 week into post-op period



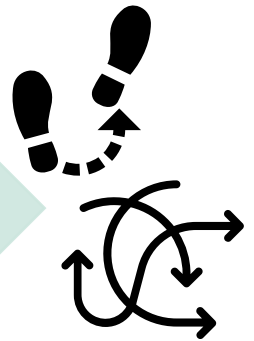
Return to Running Criteria

- Trace effusion, flexion within 5 degrees of contralateral side
- LSI on anterior reach Y balance test $\geq 90\%$
- LSI on quadriceps torque output on isometric measurement $\geq 75\%$
- 12" SL squat tolerance
- Able to walk > 1 mile with no limping or pain
- Able to "hop" with UE assist on operative leg 5 times without pain or compensation
- SL balance with eyes closed 30 seconds without loss of balance



Return to Agility/Change of Direction Criteria

- Return to running criteria listed above met
- No effusion
- Full ROM
- Quad LSI on isokinetic $\geq 85\%$
- Hamstring LSI on isokinetic $\geq 85\%$
- LSI on anterior reach Y-balance $\geq 95\%$
- SL hopping pain-free and effusion free



Return to Sport Criteria

- In order to test must demonstrate full AROM, no pain, no/trace effusion, 5/5 strength, negative lachman and pivot shift, LSI $\geq 95\%$ hamstring curl and leg press
- Quadricep strength $\geq 95\%$ of contralateral side (< 2cm of atrophy)
- Able to perform single leg squat with correct form
- LSI SL hop $\geq 95\%$
- Y-Balance $\geq 95\%$ (mean of 3 trials in anterior, posterolateral, posteromedial /100)
- Vertical jump test, single leg hop distance, and timed single leg hop over 20 -feet $\geq 90\%$ of contralateral side

