



Overture Knee Resurfacing Post-Operative Rehabilitation Protocol

0-2 weeks

- Full WBAT immediately. Crutches for 24-48 hours as needed.
- Discontinue crutches when gait normalized and non-antalgic
- AROM/PROM: 0-90° with emphasis on full extension
- Patella mobilization
- SLR supine with brace locked at 0°
- Quad Sets with brace locked at 0°
- Heel slides
- Ankle Pumps

2-12 weeks

- Continue with full ROM
- Progress with closed chain exercises
- Wall sits to 90°
- Lunges from 0-70°
- Leg press 0-70°
- Begin stationary bike

12-16 weeks



- Progress strengthening exercises
- Single leg strengthening
- Begin jogging and progress to running
- Sports specific exercise
- Plyo Prep Screen when initiating running and/or jumping. Lower Body Assessment when initiating return to sport progression. Schedule via QR code email or spc@rushortho.com

Weight Bearing Status

WBAT

ROM Restrictions

Full PROM
beginning
POD 1



Exercise	Week															
	1	2	3	4	5	6	7	8	9	10	12	16	20	24		
Initial Exercises:																
ROM Goals	0-90°				0-125°				Progress to full							
Flexion/extension, heel slides	█															
Flexion/extension- seated	█															
Patella/Tendon mobilization	█															
Quad Series	█															
Hamstring Sets	█															
Sit and Reach for Hamstrings	█															
Ankle Pumps	█															
Crutch weaning	WBAT															
Heel prop knee extension stretch	█															
SLR (w/ brace until quad control restored)	█															
Toe and Heel Raises		█														
Balance Series		█														
Weight-bearing Strength Exercises:																
Double Knee Bends	1	█														
Double Leg Bridges		█														
Reverse Lunge, static holds				█												
Beginning cord exercises				█												
Dead Lift (2 → 1 leg)				█												
Squat/Leg press (ISO → reps, 2 → 1 leg) (80-0° arc)				█												
Sports Test Exercises						█										
Cardiovascular Exercises:																
Bike with both legs-no resistance		█														
Bike with both legs- resistance		█														
Aqua jogging				█												
Treadmill-walking 7% incline				█												
Swimming with fins-light flutter kick					█											
Elliptical Trainer					█											
Rowing					█											
Stair stepper					█											
Agility Exercises:																
Running Progression						█										
Initial-Single Plane						█										
Advance-Multi Directional								█								
Functional Sports Test								█								
High Level Activities:																
Golf Progression				█												
Outdoor biking, hiking, running								█								
Return to Sport									█							



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
- Functional Sports Test: can be completed at around 6 months



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 and 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 (< 2 cm 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

