



## Acute Phase

### Goals:

- Protect injured tissue
- Mitigate pain and inflammation
- Improve flexibility and ROM
- Restrict sport activities

### Modalities:

- Ice or GameReady x20 mins, several times per day
- Neoprene sleeve or compression wrap
- TENS for pain modulation
- Soft tissue massage when tolerable (>2 days post-injury)
- Passive stretching to point of pain

### Exercises:

- Seated knee extensions (modified in semi-supine if needed)
- Supine straight leg raises
- Side-lying hip abduction

### Criteria to Progress:

- Pain-free walking
- Reduction in swelling and inflammation
- Less tenderness to palpation over the lesion

## Subacute Phase

### Goals:

- Restore full active and passive ROM
- Improve strength and endurance
- Control any pain and inflammation
- Promote healing of injured tissue

### Modalities:

- Soft tissue massage or instrument-assisted soft tissue massage to address myofascial restrictions
- Passive stretching
- Positional release or trigger point release for iliopsoas, hamstring, etc
- Ice or GameReady to manage post-exercise soreness and inflammation

### Exercises:

- Active warmup (bike, walk) x10-15 mins (50-60% of max HR, training zone 1)

#### Mobility

- Supine 90/90 hamstring stretch
- Lunging hip flexor stretch

#### Strength

- Hip bridge
- OKC hamstring curl (low load)
- Physio ball hamstring curl
- Mini squat
- Lateral band walk
- Standing hip extension
- Initiate Nordic progression (low volume, sets of 4-6)

#### Core

- Pike using TRX straps or physio ball
- Ab wheel rollout



Side plank

Dynamic

Initiate slow jogging, intervals, may be more tolerable to jog in pool

Ankle hops, fast feet, side to side hopping

Criteria to Progress:

Full active and passive ROM

No pain with resisted knee flexion

No pain with slow jogging

No tenderness at site of lesion

## Dynamic Phase

Goals:

Improve dynamic active and passive ROM

Enhance strength and power

Initiate return to running program

Begin dynamic exercise training

Modalities:

Soft tissue massage or instrument-assisted soft tissue massage to address myofascial restrictions

Kinesiotaping or neoprene sleeve during dynamic activity for support

Ice or GameReady to manage post-exercise soreness and inflammation

Exercises:

Active warmup (incline walking, Stairmaster)

Mobility

Static stretching after exercise

Strength

Hip bridge legs extended, progress to single leg as tolerated

Continue Nordic progression

Introduce straight leg deadlift, progress to single leg as tolerated

Hip extension, bent over table

Gliders

Forward/lateral step-ups

Core

Side plank with knee drive

Pallof press

Pike progression

Ab wheel rollout

Birddogs

Dynamic

Running (time or distance intervals) at 40-50% speed

Resisted running in place with band, knee drive

Straight line accelerations/decelerations

Plyos (i.e. agility ladder, side shuffle, backwards running, etc)

Drop-landings, box jumps

Jump lunges

Criteria to Progress:

Pain-free running at 50-60% max speed

Hamstring strength >90 on the Limb Symmetry Index (LSI)



## Return to Sport Phase

### Goals:

- Progress to sprint training/intervals
- Begin sport specific activities
- Enhance lower extremity power and speed
- Facilitate a graduated return to sport

### Exercises:

Active warmup (run, plyos, dynamic stretching)

#### Mobility

Static stretching after exercise

#### Strength

Nordics

Single leg deadlift

Heavy hip thrusters

Hip extension, bent over table

Gliders

Forward/lateral step-ups

Plyo leg press

Olympic lifts

#### Core

Side plank with knee drive

Palof press

Pike progression

Ab wheel rollout

Bird dogs

#### Dynamic

Sprint intervals

Resisted running in place with band, knee drive

Straight line accelerations/decelerations with change of direction

Sport specific drills

Functional tests: T-agility, Shuttle Run, Triple Hop, Vertical Jump, Single Leg Hop for Distance

### Full Return to Sport Criteria:

Hamstring strength >95 on Limb Symmetry Index (LSI)

Reports no pain with maximal sprints

Symmetry on the single leg hop for distance, triple hop, and vertical jump tests

Can achieve age or team appropriate norms on the Shuttle Run and/or T-agility Tests