

Rehabilitation of Proximal Hamstring Repair

I. Phase I: Acute Phase (Weeks 0-6)

Goals: Diminish pain and inflammation
Gradually improve weight bearing
Retard muscular atrophy and strength loss
Enhance healing of repair

Immediately following surgery:

- Cryotherapy, compression wrap
- High voltage stimulation to control swelling
- Monitor wounds
- PROM exercises

- Crutches 4-6 weeks
- TTWB 4-6 weeks
- Gradually decrease hip flexion angle (avoid greater than 50 degrees hip flexion with knee extended)
- Teach patient how to transfer safely and gait training in crutches
- Avoid eccentric loading with gait and exercise

Exercises:

-Gentle stretch in hip flexors, quadriceps, calf and hip adductors (monitor hamstring symptoms)
-Quad sets
-Ankle strengthening
-Hip isometrics to ab and adductors
-Initiate core stabilization drills (abdominal and back)

-ROM exercises: perform post-exercise regimen
-Modalities for pain

II. Phase II: Subacute Phase (Weeks 6-12)

Goals: Improve flexibility and ROM
Enhance muscular strength and endurance
Promote healing of injured structures
Control any inflammation and pain

- Superficial heat to injured hamstring or contrast heat/cold
- Ultrasound over injured area
- Soft tissue mobilization and massage
- Restore normal gait-progress to FWB over next 2-3 weeks

Exercises:

-Gentle stretch lower extremity musculature- manual and self stretches (gentle stretch of hamstrings seated and supine)
-Isometric hamstring contractions (knee flexion 45°)

Initiate isotonic strengthening program when appropriate
-Straight leg raises (3 directions)

- Active knee extensions (strand AROM)
- Backward lunges
- Lateral step-overs
- Forward and backward step-overs
- Toe-calf raises
- Light bridging
- Wall squats
- Front lunges
- Lateral lunges
- Leg press
- Initiate proprioception drills
- Initiate pool exercises and running in pool

- Cryotherapy
- Use neoprene sleeve following workouts

III. Phase III: Dynamic Phase (Week 12-20)

Goals: Improve dynamic flexibility of hamstrings
Normalize static flexibility
Normalize muscular strength

Exercises:

- Active warm-up (bicycle or elliptical)
- Stretch all major lower extremity muscular groups (stretch hamstrings seated and supine)
- Continue strengthening exercises listed above

Initiate light ballistic stretching maneuvers when appropriate (~4 months)

*** The below activities & exercises may not be appropriate for all patients (Physician will determine)

- Plyometric leg press***
- Plyometric front lunges***
- Scissor jumps***
- Scissor jumps onto box***
- Side to side box jumps***
- Skip lunges***
- Fast speed lateral step-overs***
- Forward knee high running***

- Stretch after workout
- Cryotherapy
- Consider neoprene sleeve during drills

IV. Phase IV: Sports Specific and Agility Drill Phase (Week 20 and beyond)

Goals: Normalize ballistic flexibility
Normalize muscular strength and agility
Gradual return to sport participation

Exercises:

- Active warm-up or jog
- Stretch all lower extremity muscles
- Continue strengthening program
- Continue selected ballistic stretching drills

Initiate sport specific program

- Side shuffles
- Carciacos
- Backward running
- Forward running
- Progress to sprints
- Running and cutting drills
- Gradually increase intensity of running (jog to run to sprint)

- Stretch following drills
- Consider neoprene sleeve during drills
- Gradually return to sport participation