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Proximal Hamstring Repair Rehabilitation Protocol

1-6 weeks postop

Appointments:

- 7 days postop-6 weeks postop: 1x/week

Rehabilitation Goals

- Protection of the repaired tendon(s) Pain control
- Weight Bearing
    - Use axillary crutches for up to 6 weeks
- Post-operative weeks 0-2: Touch down weight bearing
- Post-operative weeks 3-6: 15% - 40% weight bearing progression
- Brace: hinged knee brace locked at 45 degrees at all times until week 6

Precautions

- Avoid hip flexion coupled with knee extension
- Avoid unsafe surfaces and environments

Suggested Therapeutic Exercise

- Quad sets
- Ankle pumps
- Abdominal isometrics
- Passive knee range of motion (ROM) with no hip flexion during knee extension
- Post-operative weeks 3-4: Begin pool walking drills (without hip flexion coupled with knee extension), hip abduction, hip extension, and balance exercises
- Scar mobilizations
- Cardiovascular Exercise: Upper body circuit training or upper body ergometer (UBE)
- Progression Criteria: 6 weeks post-operative

Begin after meeting Phase I criteria (usually 6 weeks after surgery)

Appointments:

- 2x/week for 6-12 weeks

Rehabilitation Goals

- Post-operative weeks 6-7: Unlock hinged knee brace, weight bearing as tolerated
- with weaning from crutches
- Normalize gait
- Good control and no pain with functional movements, including step up/down,
- squat, partial lunge (do not exceed 60° of knee flexion)

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Precautions

- Avoid dynamic stretching
- Avoid loading the hip at deep flexion angles
- No impact or running

Suggested Therapeutic Exercise

- Non-impact balance and proprioceptive drills – beginning with double leg and
- gradually progressing to single leg
- Stationary bike
- Gait training
- Begin hamstring strengthening – start by avoidance of lengthened hamstring
- position (hip flexion combined with knee extension) by working hip extension
- and knee flexion moments separately; begin with isometric and concentric
- strengthening with hamstring sets, heel slides, double leg bridge, standing leg
- extensions, and physioball curls
- Hip and core strengthening
- Cardiovascular Exercise: Upper body circuit training or UBE

Progression Criteria

- Normal gait on all surfaces
- Ability to carry out functional movements without unloading the affected leg or pain while demonstrating good control
- Single leg balance greater than 15 seconds
- Normal (5/5) hamstring strength in prone with the knee in a position of at least 90° knee flexion

Begin after meeting phase II criteria (usually three months after surgery)

Appointments

- 2x/week for 12-16 weeks

Rehabilitation Goals

- Good control and no pain with sport and work specific movements, including
- impact
- Precautions
- No pain during strength training
- Post-activity soreness should resolve within 24 hours

Suggested Therapeutic Exercise

- Continue hamstring strengthening – progress toward strengthening in lengthened

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- hamstring positions; begin to incorporate eccentric strengthening with single leg
- forward leans, single leg bridge lowering, prone foot catches, and assisted Nordic
- curls
- Hip and core strengthening
- Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to the
- other and then 1 foot to same foot
- Movement control exercise beginning with low velocity, single plane activities
- and progressing to higher velocity, multi-plane activities
- Initiate running drills, but no sprinting until Phase IV
- Cardiovascular Exercise: Biking, elliptical machine, Stairmaster, swimming, and
- deep water running

Progression Criteria

- Dynamic neuromuscular control with multi-plane activities at low to medium velocity without pain or swelling
- Less than 25% deficit for side to side hamstring comparison on Biodex testing at 60° and 240° per second

Begin after meeting phase III criteria (usually 4-5 months after surgery)

Appointments:

- 1-2x/week for 16+ weeks

Rehabilitation Goals

- Good control and no pain with sport and work specific movements, including impact

Precautions

- No pain during the strength training
- Post-activity soreness should resolve within 24 hours

Suggested Therapeutic Exercise

- Continue hamstring strengthening – progress toward higher velocity strengthening and reaction in lengthened positions, including eccentric strengthening with single leg forward leans with medicine ball, single leg dead lifts with dumbbells, single leg bridge curls on physioball, resisted running foot catches, and Nordic curls
- Running and sprinting mechanics and drills
- Hip and core strengthening
- Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to other and then 1 foot to same foot

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- Movement control exercise beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities
- Sport/work specific balance and proprioceptive drills
- Stretching for patient specific muscle imbalances
- Cardiovascular Exercise: Replicate sport or work specific energy demands

Return to Sport/Work Criteria

- Dynamic neuromuscular control with multi-plane activities at high velocity without pain or swelling
- Less than 10% deficit for side to side hamstring comparison on Biodex testing at 60° and 240° per second
- Less than 10% deficit on functional testing profile