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## **Physical Therapy Prescription**

### **Hamstring Strain**

#### **Dx: (LEFT / RIGHT) Hamstring Strain**

##### **Phase 1**

###### Goals

1. Protect healing tissue
2. Minimize atrophy and strength loss
3. Prevent motion loss

###### Protection

Avoid excessive active or passive lengthening of the hamstrings that cause pain  
Avoid antalgic gait pattern

###### Therapeutic exercise (performed daily)

- Stationary bike
- Sub maximal Isometric at 4 angles (90°, 60°, 30°, 0°)
- Single leg balance
- Balance Board
- Soft tissue mobilization (STM)/Instrument assisted (IASTM)
- Gluteal strengthening
- Active and Passive knee and hip motion avoiding excessive strain at injury site
- Modalities PRN

###### Criteria for progression to next phase

1. Normal walking stride without pain
2. Pain-free isometric contraction against submaximal (50%-75%) resistance during prone knee flexion (90°) manual strength test (Achy, vague discomfort okay, should not be sharp and focal)

##### **Phase 2**

###### Goals

1. Regain pain-free hamstring strength, progressing through full range
2. Develop neuromuscular control of trunk and pelvis with progressive increase in movement speed preparing for functional movements

###### Protection

Avoid end-range lengthening of hamstrings if painful

###### Therapeutic exercise (performed 5-7 d/wk)

- Stationary bike
- Treadmill at moderate to high intensity (progressive increasing intervals), pain-free speed and stride
- CKC hip hinge variations
- Single-limb balance windmill touches without weight
- Single leg stance with perturbation (eg ball toss, reaches)
- CKC push movement variations
- STM/IASTM
- Nordic hamstring exercise as tolerated with arm/hand assistance
- Shuttle jumps



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## **Physical Therapy Prescription**

### **Hamstring Strain**

Lateral and retro bandwalks

Criteria for progression to next phase

1. Full strength (5/5) without pain during prone knee flexion (90°) manual strength test
2. Pain-free forward and backward jog, moderate intensity
3. Strength deficit less than 20% compared against uninjured limb using timed rep
4. Pain free max eccentric in a non-lengthened state

#### **Phase 3**

Goals

1. Symptom-free (eg, pain and tightness) during all activities
2. Normal concentric and eccentric hamstring strength through full range of motion and speeds
3. Improve neuromuscular control of trunk and pelvis
4. Integrate postural control into sport-specific movements

Protection

Train within symptom free intensity

Therapeutic exercise (performed 4–5 d/wk)

- Treadmill moderate to high intensity as tolerated
- Hamstring dynamic stretching
- STM/IASTM
- Plyometric jump training
- 5–10 yard accelerations/decelerations
- Single-limb balance windmill touches with weight on unstable surface
- Hip hinge and LE push variations with progressive overload
- Rotation and anti-rotation exercises for trunk musculature

Criteria for return to sport

1. Full strength without pain in the lengthened state testing position
2. Bilateral symmetry in knee flexion angle of peak torque
2. Full range of motion without pain
3. Replication of sport specific movements at competition speed without symptoms

**Frequency & Duration:** (circle one)    1-2      2-3 x/week for \_\_\_\_\_ weeks

\*\*Please send progress notes

**Physician's Signature:** \_\_\_\_\_