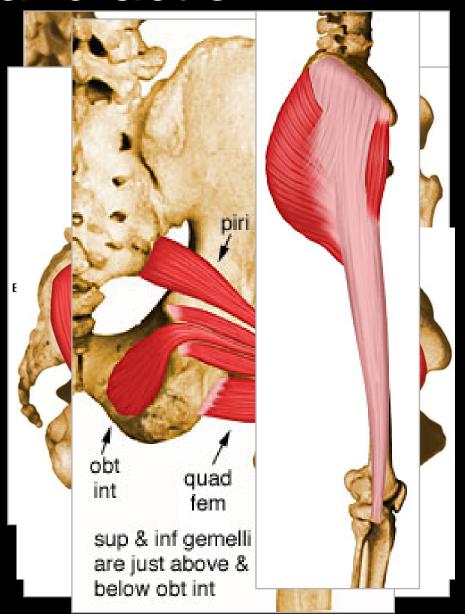
Iliopsoas and Adductor Strains of the Hip

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Anatomy of the Hip

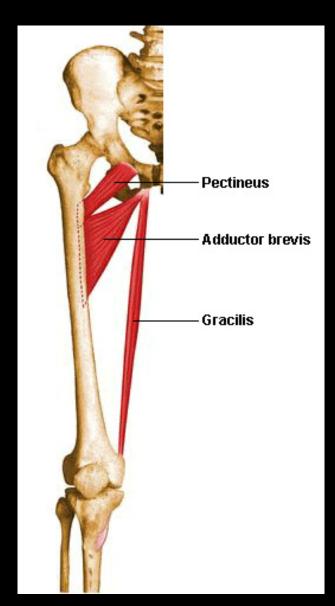
Hip muscles and action

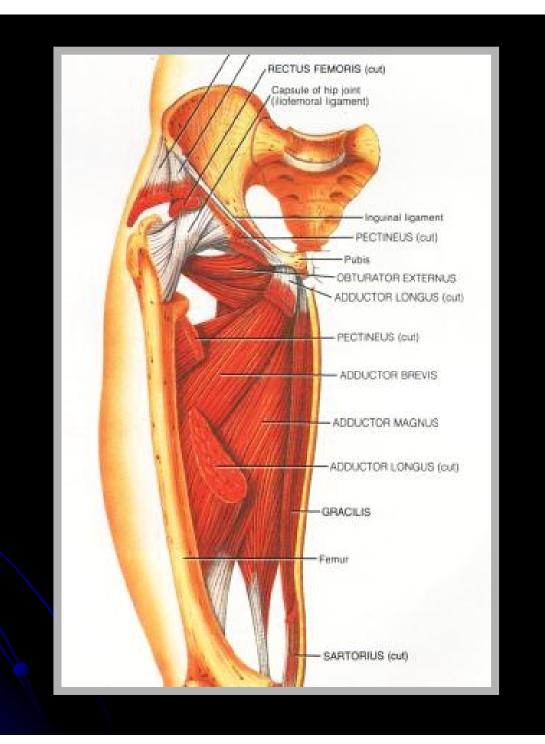
- Hip flexion
 - iliopsoas group
 - rectus femoris
- Hip extension
 - gluteus max. and hams
- Abduction
 - gluteus medius
 - gluteus minimis
 - Piriformis
 - tensor fasciae latae



Hip muscles and action

- Adduction
 - adductor longus
 - adductor brevis
 - adductor magnus
 - gracilis
 - Pectineus
 - gluteus maximus

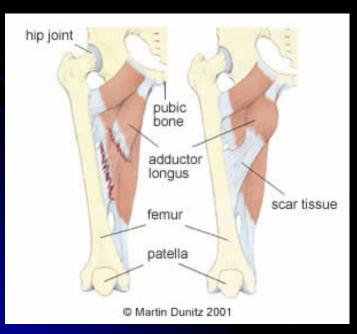


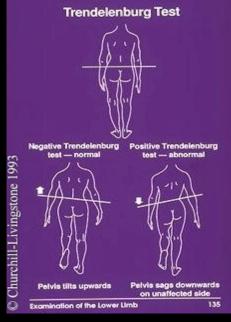


Hip Strains

- Hip flexors
- Adductors
- Abductors











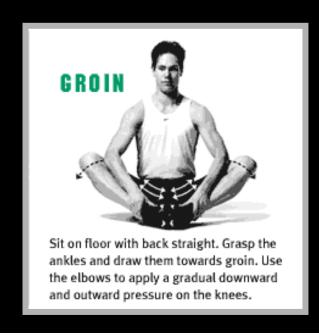
Causes of Groin Strains

- Overuse
- Inadequate warm-up prior to strenuous activity
- Sudden dynamic movements, such as initiating a sprint, changing direction powerfully, leaping to catch a ball, surging up a hill, or hitting the ground after a jump
- Poor mechanics
- A forceful contact with an external object
- Iliopsoas
 - Hyperextension of the hip joint
- Adductor longus
 - Abduction with external rotation



Prevention of the Groin Strain

- Proper warm up and stretching
- Gradually increase time and intensity of activity.
- Proper biomechanics



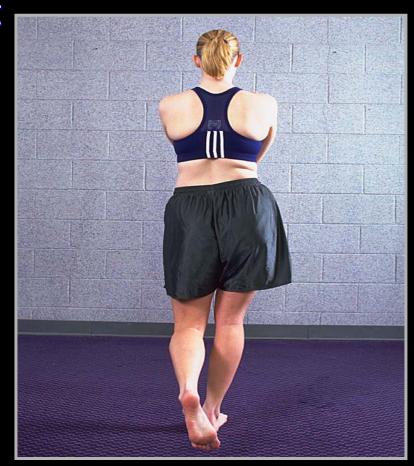
Special Tests

Gluteus medius weakness

 Results in an inability to abduct the hip and maintain level pelvis during gait

Characterized by a gluteus medius lurch or

Trendelenburg gait





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The 10 Phase Approach To Rehabilitation

Structural Integrity

- anatomical structures are intact
 - Rest, ice, compression, elevation
 - Crutches if needed
- Length of rest will depend on the severity of Injury
 - The athlete with a grade 1 strain might feel mild discomfort, possibly a little tenderness at a particular point but no swelling.
 - A grade 2 strain might feel more painful with swelling, pain to touch, reduced range of motion and interference with running.
 - A grade 3 strain may be very painful, lots of swelling and total inability to run or even walk

- Pain Free Joints and Muscles
 - ways to diminish pain
 - immobilization
 - therapeutic modalities
 - Muscle stimulation
 - Cryotherapy
 - Heat
 - Ultrasound
 - graded exercise (quad sets, isometric contractions..)



Joint Flexibility

- Decreased joint flexibility results from:
 - muscle spasm, pain (Therapeutic exercise with cold)
 - connective tissue adhesions (Therapeutic exercise with heat)
- When 80% of flexibility is restored rehabilitation <u>emphasis</u> moves to the development of muscular strength.



Muscular Strength

- Must perform a progressive resistive exercise on a regular basis.
- Each side of the body should be worked independently.
- Once strength in the injured side is 90% of the non-injured side, emphasis moves to the development of muscular endurance.



Muscular Endurance

- Stationary bike
- Running when tolerated (jog 400 meters first day and increase by 400 meters each 1 or 2 days)
- When athlete can run 1 mile <u>emphasis</u> should move to next phase

- Muscular Speed
 - high intense stationary bike
 - Cybex
- Muscular Power
 - Isokinetic devices
 - high- speed resistive work

Skill Patterns

- Participation in team drills at 2 speed
- Sport-specific skill patterns

Agility

- Participation in team drills at 3/4 speed to full speed
- skill patterns are performed quickly and speedily

Cardiovascular Endurance

 develop creative ways to maintain cardiovascular endurance throughout rehab.

