



## Gluteus Medius Syndrome

### DESCRIPTION

Gluteus medius syndrome is characterized by inflammation and pain at the outer hip caused by strain of the gluteus medius muscle and its tendon attachment to the femur. The gluteus medius muscle attaches the pelvis to the outer hip and stabilizes the hip when walking, running, and jumping and when moving the leg and thigh away from the other leg and thigh. The syndrome is usually a grade 1 or 2 strain of the tendon. A *grade 1 strain* is a mild strain with a slight pull without obvious tearing of tissue (it is microscopic muscle-tendon tearing), no loss of strength, and the muscle-tendon unit is the correct length. A *grade 2 strain* is a moderate strain with tearing of fibers within the substance of the muscle-tendon unit or where the tendon meets the muscle or bone. The length of the whole muscle-tendon-bone unit is thereby increased, and strength is usually decreased. A *grade 3 strain* is a complete rupture of the muscle-tendon unit, which is rare.

### COMMON SIGNS AND SYMPTOMS

- Pain and often a limp with walking or running
- Tenderness over the outer hip
- Pain, tenderness, swelling, warmth, or redness over the outer thigh, often worsened by moving the hip
- Weakness of the hip, especially when spreading the legs and hips against resistance

### CAUSES

Gluteus medius syndrome may occur without any injury. It may be due to strain from a sudden increase in the amount or intensity of activity or overuse of the lower extremity. Usually, this condition is associated with tilting of the pelvis with running.

### FACTORS THAT INCREASE RISK

- Endurance sports (distance running, triathalons, race walking), especially running along street curbs and banked surfaces, or if the foot crosses the midline toward the other leg when running
- Poor physical conditioning (strength, flexibility)
- Inadequate warm-up before practice or play
- Legs of unequal length (affects the longer leg)
- Alignment problems of the lower extremity (wide pelvis, excessively knocked-knees)

### PREVENTIVE MEASURES

- Appropriately warm up and stretch before practice or competition.

- Maintain appropriate conditioning that includes hip, pelvis, and trunk strength; flexibility and endurance, and cardiovascular fitness training.
- Use proper running technique.
- Wear shoe lifts (orthotics) if legs are not equal in length.

### EXPECTED OUTCOME

Gluteus medius syndrome is usually curable with time and appropriate treatment. Healing time varies but usually averages 2 to 6 weeks.

### POSSIBLE COMPLICATIONS

- Prolonged healing time if not appropriately treated or if not given adequate time to heal
- A chronically inflamed tendon that causes persistent pain with activity that may progress to constant pain
- Recurrence of symptoms if activity is resumed too soon, with overuse, with a direct blow, or if using poor technique

### GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medication and ice to relieve the pain, stretching and strengthening exercises, and modification of the activity that initially caused the problem. These all can be carried out at home, although referral to a physical therapist or athletic trainer for further evaluation and treatment may be helpful. An orthotic (shoe lift) for those with legs of unequal length may be prescribed to reduce stress to the tendon. An injection of cortisone to the area of inflammation may be recommended, but surgery to remove the inflamed tendon lining or degenerated tendon tissue is rarely required and is often only considered after at least 6 months of conservative treatment.

### MEDICATION

- Nonsteroidal antiinflammatory medications, such as aspirin and ibuprofen (do not take for 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician, and contact your doctor immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers are usually not prescribed for this condition. If these are prescribed for you, use them only as directed, and take only as much as you need.
- Cortisone injections reduce inflammation, but they are used only in extreme cases. There is a limit to the

number of times cortisone may be given, because it weakens muscle and tendon tissue. Anesthetics given with the injection temporarily relieve pain.

### HEAT AND COLD

- Cold is used to relieve pain and reduce inflammation in acute and chronic cases. Cold should be applied for 10 to 15 minutes every 2 to 3 hours as needed and immediately after any activity that aggravates symptoms. Use ice packs or an ice massage.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

### WHEN TO CALL YOUR DOCTOR

- Symptoms get worse or do not improve in 2 weeks despite treatment.
- New, unexplained symptoms develop. Drugs used in treatment may produce side effects.

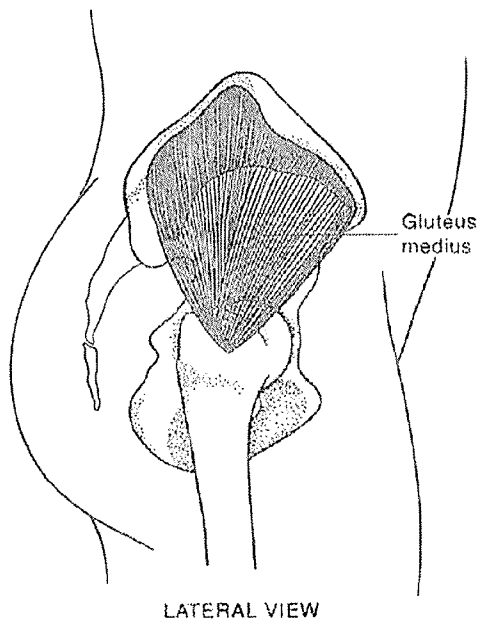


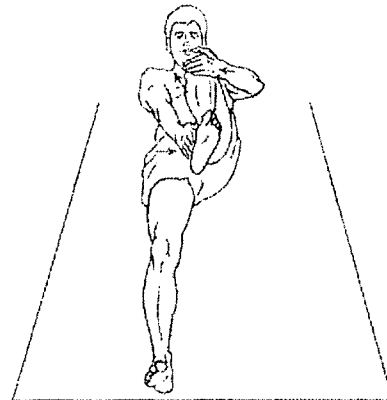
FIGURE 1 From Hislop HJ, Montgomery J: *Daniels and Worthingham's muscle testing: techniques of manual examination*, ed 6, Philadelphia, 1995, W.B. Saunders, p 182.

### RANGE OF MOTION AND STRETCHING EXERCISES

Gluteus Medius Syndrome

These are some of the *initial* exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms resolve. Please remember:

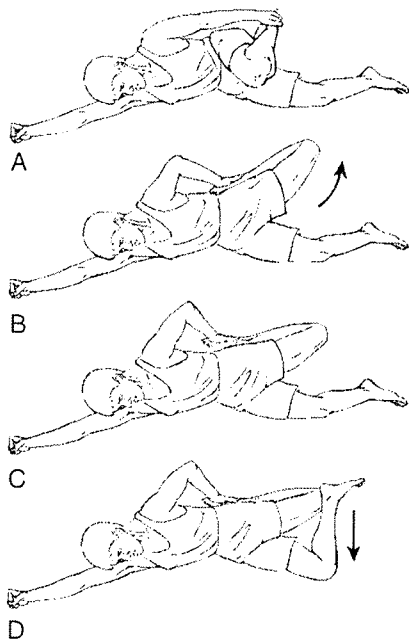
- Flexible tissue is more tolerant of the stresses placed on it during activities.
- Each stretch should be held for 20 to 30 seconds.
- A *gentle* stretching sensation should be felt.



### FLEXIBILITY • Hip Rotation

1. Lie on your back and bend your hip and knee up as shown.
2. Grasp your knee with both hands and pull it toward your opposite shoulder. You will feel a stretch on the outside of your hip near your buttocks.
3. Hold this position for \_\_\_\_ seconds.
4. Repeat this exercise \_\_\_\_ times, \_\_\_\_ times per day.

## 432 GLUTEUS MEDIUS SYNDROME

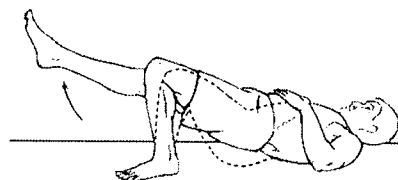
**FLEXIBILITY • Iliotibial Band Stretch**

1. Lie on your side as shown. The muscle and iliotibial band to be stretched should be on top.
2. Grasp your ankle, pull your heel to your buttocks, and bend your hip so that your knee is pointing forward as in the top drawing (A).
3. Rotate your hip up so that your thigh is away from your body as shown and in line with your body. Keep your heel to your buttocks (B).
4. Bring your thigh back down and behind your body. Do not bend at the waist, and keep your heel pressed to your buttocks (C).
5. Place the heel of your opposite foot on top of your knee, and pull your knee down farther. You should feel a stretch on the outside of your thigh near your kneecap (D).
6. Hold this position for \_\_\_\_ seconds.
7. Repeat this exercise \_\_\_\_ times, \_\_\_\_ times per day.

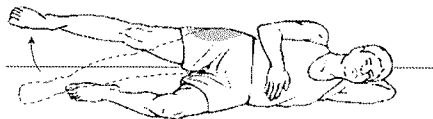
**STRENGTHENING EXERCISES**  
 Gluteus Medius Syndrome

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- Strong muscles with good endurance tolerate stress better.
- Do the exercises as *initially* prescribed by your physician, physical therapist, or athletic trainer. Progress slowly with each exercise, gradually increasing the number of repetitions and weight used under their guidance.

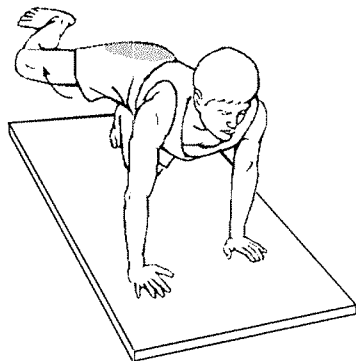
**STRENGTH • Hip Extension**

1. Lie on your back with your knees bent and your feet flat on the floor.
2. Push down, raising your hips and buttocks off the floor.
3. Keep your pelvis level, and do not allow it to rotate.
4. You may do this exercise with both legs together, which is easier, or with just one leg as shown. Hold this position for \_\_\_\_ seconds.
5. *Slowly* lower yourself back down to the starting position.
6. Repeat this exercise \_\_\_\_ times, \_\_\_\_ times per day.



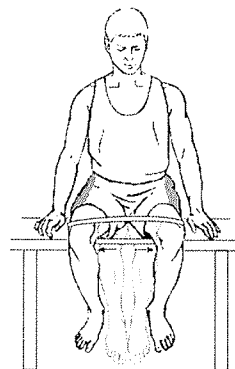
### STRENGTH • Hip Abduction

1. Lie on your side as shown with your weak leg on top.
2. Bend your bottom knee slightly for balance, and roll your top hip slightly forward.
3. Lift your top leg straight up, leading with your heel. Do not let it come forward. Hold this position for \_\_\_\_ seconds.
4. *Slowly* lower your leg to the starting position.
5. Repeat this exercise \_\_\_\_ times, \_\_\_\_ times per day.



### STRENGTH • Hip Abduction in Quadruped

1. Position yourself on your hands and knees as shown.
2. Keeping your knee bent, lift it up and out to the side. Hold this position for \_\_\_\_ seconds.
3. *Slowly* lower your knee to the starting position.
4. Repeat this exercise \_\_\_\_ times, \_\_\_\_ times per day.



### STRENGTH • Hip Abduction

1. Sit on a chair or table as shown.
2. Place the rubber band/tubing around your thighs just above your knees.
3. Spread your legs as widely as possible. Hold this position for \_\_\_\_ seconds.
4. *Slowly* return to the starting position.
5. Repeat this exercise \_\_\_\_ times, \_\_\_\_ times per day.