SEMIMEMBRANOSUS TENDINITIS

Description

Semimembranosus tendinitis is characterized by inflammation and pain at the knee joint on the back part of the inner side of the knee at the semimembranosus tendon. The semimembranosus tendon is the tendon attachment of one of the hamstring muscles from the hip to the leg. This structure is important for straightening your hip and bending your knee. It is also important for running and jumping. Semimembranous tendinitis may occur by itself or with other knee disorders. This is usually a grade 1 or 2 strain of the tendon. A *grade 1 strain* is a mild strain. There is a slight pull without obvious tearing (it is microscopic tendon tearing). There is no loss of strength, and the tendon length is normal. A *grade 2 strain* is a moderate strain. There is tearing of fibers within the substance of the tendon or at the bone-tendon junction. The length of the muscle-tendon-bone unit is increased, and there is usually decreased strength. A *grade 3 strain* is a complete rupture of the tendon.

Common Signs and Symptoms

- Pain, tenderness, swelling, warmth, or redness over the semimembranosus tendon at the inner knee toward the back of the knee
- Pain that is worse during and after strenuous activity
- Pain with running or bending the knee against resistance
- Crepitation (a crackling sound) when the tendon is moved or touched

Causes

- Strain from sudden increase in amount or intensity of activity or overuse of the lower extremity, usually in middle-aged endurance athletes
- Compensation for other knee injuries, such as cartilage tears

Risk Increases With

- Endurance sports (distance running, triathlon, race walking) or activities that require bending, lifting, or climbing
- Training that requires running down hills
- Poor physical conditioning (strength and flexibility)
- Inadequate warm-up before practice or play
- Flat feet or improper alignment of the lower extremity, in which your knees point toward each other while your feet are straight ahead

Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Allow time for adequate rest and recovery between practices and competition.
- Maintain appropriate conditioning:
  - Ankle and leg flexibility
  - Muscle strength and endurance
  - Cardiovascular fitness
- Use proper technique.
- Those with flat feet should wear arch supports (orthotics).

Expected Outcome

This condition is usually curable within 6 weeks if treated appropriately with conservative treatment and resting of the affected area.

Possible Complications

- Prolonged healing time if not appropriately treated or if not given adequate time to heal
- Chronically inflamed tendon, causing persist 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 when 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

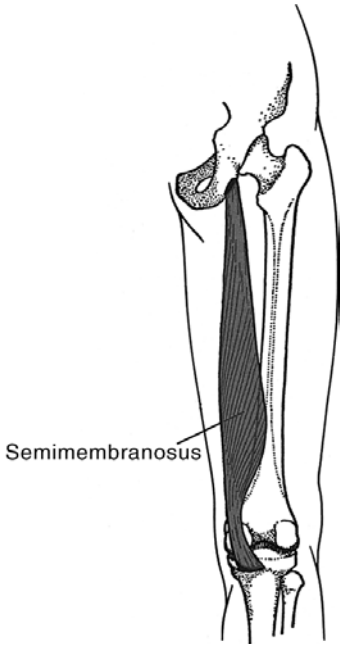


Figure 1

From Hislop HJ, Montgomery J: Daniels and Worthingham's Muscle Testing—Techniques of Manual Examination, 6th ed. Philadelphia, WB Saunders, 1995, p. 176.

therapist or athletic trainer for further evaluation and treatment may be helpful. An orthotic (arch support) may be prescribed for those with flat feet to reduce stress to the tendon. A knee sleeve or bandage may help keep the tendon warm during activity and reduce some of the symptoms. An injection of cortisone to the area of tendon insertion into bone may be recommended. Surgery to remove the inflamed tendon lining or degenerated tendon tissue and move the tendon is rarely necessary and usually is only considered after at least 6 months of conservative treatment. Surgery to correct other knee problems that may be contributing to this tendinitis may be recommended before surgery for the tendinitis itself.

Medication

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Pain relievers are usually not prescribed for this condition. If your physician does prescribe pain medication, use only as directed.
- Cortisone injections reduce inflammation. However, this done 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 temporarily relieve pain.

Heat and Cold

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every 2 to 3 hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used before performing prescribed stretching and strengthening activities. Use a heat pack or a warm soak.

Notify Our Office If

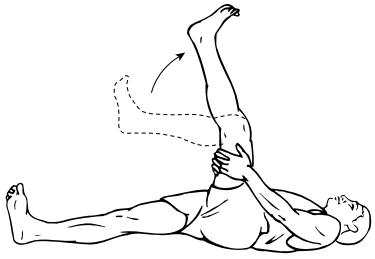
- Symptoms get worse or do not improve in 2 weeks despite treatment
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

EXERCISES

➢ **RANGE OF MOTION AND STRETCHING EXERCISES** · Semimembranosus Tendinitis

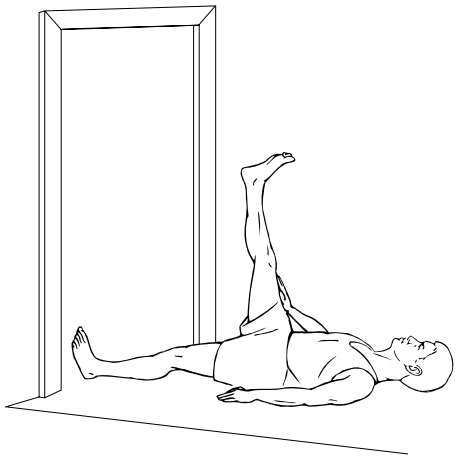
These are some of the ***initial*** exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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.



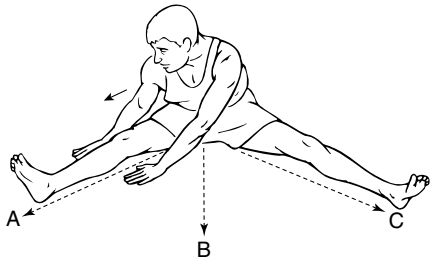
FLEXIBILITY · Hamstrings

1. Lie on your back with your leg bent and both hands holding on to it behind the thigh as shown.
2. Your hip should be bent to ***90 degrees*** and the thigh pointing straight at the ceiling.
3. Straighten out your knee as far as you can. Keep your thigh pointing straight toward the ceiling.
4. Keep the other leg flat on the floor.
5. Hold this position for _____ seconds.
6. Repeat exercise _____ times, _____ times per day.



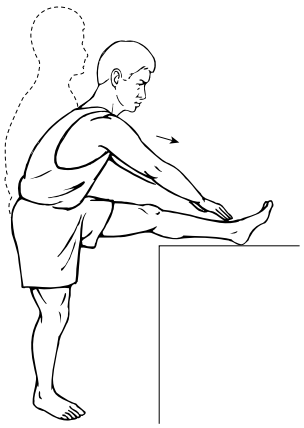
FLEXIBILITY · Hamstrings, Doorway

1. Lie on your back near the edge of a doorway as shown.
2. Place the leg your are stretching up the wall keeping your knee straight.
3. Your buttock should be as close to the wall as possible and the other leg should be kept flat on the floor.
4. You should feel a stretch in the back of your thigh.
5. Hold this position for _____ seconds.
6. Repeat exercise _____ times, _____ times per day.



FLEXIBILITY · Hamstrings/Adductors, V-Sit

1. Sit on the floor with your legs spread as wide as possible in front of you. Your knees must be straight.
2. Lean over one leg with both hands. Keep your chest upright and reach for your toes. (Position A)
3. Hold this position for _____ seconds. Relax and return to your starting position.
4. Now reach forward between your legs. (Position B)
5. Repeat for Position C.
6. Repeat exercise _____ times, _____ times per day.



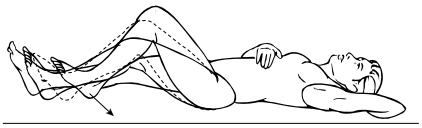
FLEXIBILITY · Hamstrings, Ballet

1. Stand and prop the leg you are stretching on a chair, table, or other stable object.
2. Place both hands on the outside of the leg you are stretching.
3. Make sure that your hips/pelvis are also facing the leg you are stretching.
4. Slide your hands down the outside of your leg.
5. Lead with your chest/breast bone. Keep your chest upright and back straight. Do not hunch over at the shoulders. Keep your toes pointing up.
6. You should feel a stretch in the back of your thigh.
7. Hold this position for _____ seconds.
8. Repeat exercise _____ times, _____ times per day.

➢ **STRENGTHENING EXERCISES** · Semimembranosus Tendinitis

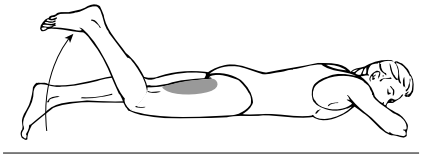
These are some of the ***initial*** exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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 · Hamstring, Isometrics

1. Lie on your back on the floor or a bed.
2. Bend your knee approximately _____ degrees.
3. Pull your heel into the floor or bed as much as you can.
4. Hold this position for _____ seconds. Rest for _____ seconds.
5. Repeat exercise _____ times, _____ times per day.



STRENGTH · Hamstring, Curls

1. Lie on your stomach with your legs out straight.
2. Bend knee to 90 degrees. Hold this position for _____ seconds.
3. Slowly lower your leg back to the starting position.
4. Repeat exercise _____ times, _____ times per day.

Additional Weights: OK TO USE DO NOT USE!!!

If *okay'd by your physician, physical therapist, or athletic trainer,* a ____ pound weight may be placed around your ankle for additional weight.

Notes: (Up to 4400 characters only)

Notes and suggestions