MENISCUS TEAR, SURGERY FOR

Indications (Who Needs Surgery, When, Why, and Goals)

- Surgery for meniscal tears is reserved for people who have symptomatic tears of the meniscus, including locking, recurrent swelling, and giving way of the knee, and for those in whom conservative treatment for the tear has failed. Occasionally it is also recommended for patients with pain along the knee joint where the meniscus is. It is also recommended for those with displaced tears that prevent full knee range of motion ("locked knee"), which is a sign of a "bucket handle" tear. A *bucket handle tear* is when the meniscus tears and flips to the center of the knee, like moving a bucket handle from one side of the bucket to the other.
- Surgery is performed electively, but locked knees should be operated on at the earliest convenient time. The success of meniscus repair has not been shown to be any better immediately after injury as compared with a couple of months later.
- Only the outer 10% to 30% of the meniscus cartilage has blood supplying it. Blood is needed to help a meniscus heal. Because of this, fewer than 20% of all meniscus tears are repairable by suturing (sewing) it together. The rest of the tears are treated by meniscectomy (removal of all or part of the meniscus).
- A torn meniscus usually does not heal itself, unless the tear is in the outer portion of the meniscus where the blood supply is. Thus most tears do not heal on their own. Further, meniscus cartilage that is removed does not regenerate. Once removed, it is gone.
- The success of meniscus repair (healing of the tear) is about 80% in knees with an intact anterior cruciate ligament (ACL). However, meniscus repair when the ACL is torn and not reconstructed is successful only 40% of the time. Thus if the meniscus tear is repairable, most surgeons also recommend reconstructing the ACL. The age of the patient has no effect on healing of a repair.
- Because one function of the meniscus is to distribute joint forces, loss of meniscus cartilage is associated with the early development of arthritis of the knee joint. Thus the goal of meniscal surgery is to eliminate the symptoms in your knee while trying to save as much of the meniscus cartilage as possible. This would be by repairing the meniscus, if possible, or removing as little of the meniscus as possible.
- Removing all or part of a torn meniscus allows for contouring of the cartilage and removal of torn edges that prevents (1) progression of the tear (making a smaller tear larger) and (2) displacement of the tear, causing recurrence of symptoms of locking, giving way, and swelling.
- Leaving a torn meniscus in the knee if it does not cause symptoms is usually not a problem. However, torn meniscus cartilage does not function and thus the development of arthritis or symptoms such as locking, swelling, and giving way still may occur. Further, tears may progress to become larger if left untreated.

Contraindications (Reasons Not To Operate)

- Infection of the knee
- Inability or unwillingness to complete the postoperative program (for meniscus repair) or to perform the rehabilitation necessary
- Pain or symptoms not related to the meniscus
- Arthritis of the knee with symptomatic meniscus tear

Risks and Complications of Surgery

- Infection
- Bleeding
- Injury to nerves (numbness, weakness, paralysis)
- Recurrence of symptoms (giving way, locking, or swelling), including tearing the remaining meniscus if menisectomy is performed, and retear or nonhealing of the meniscal repair
- Knee stiffness (loss of knee motion)
- Continued pain
- Weakness of the quadriceps muscles

Technique (What Is Done)

Arthroscopy has become the standard way of operating on meniscal tears. This is done on an outpatient basis (you go home the same day) and may be done under general anesthesia, spinal anesthesia, or local anesthesia. Small shavers and cutting instruments are used to remove and contour torn cartilage that is not repairable. For tears that are repairable, the edges of the tear are freshened; then sutures (to sew), anchors, or tacks are used to hold the torn edges together while the meniscus heals.

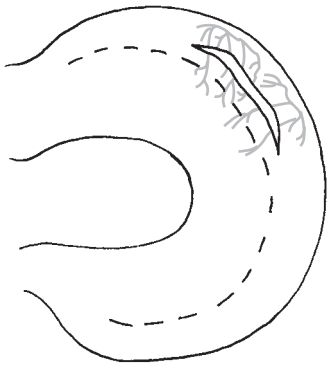


Figure 1
From Shankman GA: Fundamental Orthopaedic Management for the Physical Therapy Assistant. St. Louis, Mosby Year Book, 1997, p. 167.

Postoperative Course

- Keep the wound clean and dry in the initial postoperative period.
- Keep the foot and ankle elevated above heart level as much as possible for the first 1 to 2 weeks after surgery.
- You will be given pain medications by your physician.
- Icing the knee will help reduce swelling.
- You may put as much weight on the operated leg as possible, although often you will be given crutches after surgery until you can walk without a limp.
- For meniscus repair, you may be given a brace and possibly be allowed to bear full weight on the operated leg while you are wearing the brace on your operated leg for varying periods (depends on your physician).
- Postoperative rehabilitation and exercises are very important to regain motion and then strength.

Return To Sports

- Return to sports depends on the type of sport and the position played.
- It may take 6 weeks before sports can be resumed after meniscectomy (although may be as early as 1 to 2 weeks) or 6 to 9 months after a meniscus repair.
- Full knee motion and strength are necessary before sports can be resumed.

Notify Our Office If

- You experience pain, numbness, or coldness in the foot
- Any of the following sings of infection occur after surgery: fever, increased pain, swelling, redness, drainage, or bleeding in the surgical area
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

Do not eat or drink anything before surgery. Solid food makes general anesthesia more hazardous.

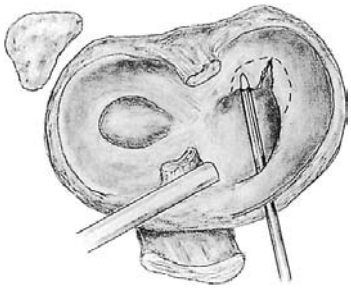
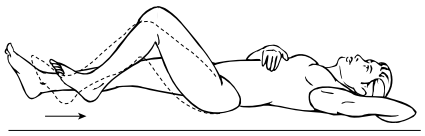


Figure 2
From Nicholas JA, Hershman EB: The Lower Extremity and Spine in Sports Medicine. St. Louis, Mosby Year Book, 1995, p. 765.

➢ **RANGE OF MOTION AND STRETCHING EXERCISES** • Meniscus Tear, Surgery For—Phase I

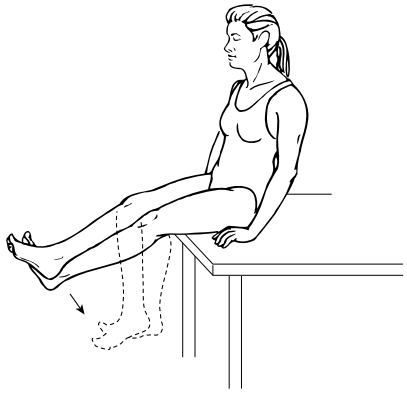
These are some of the ***initial*** exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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.



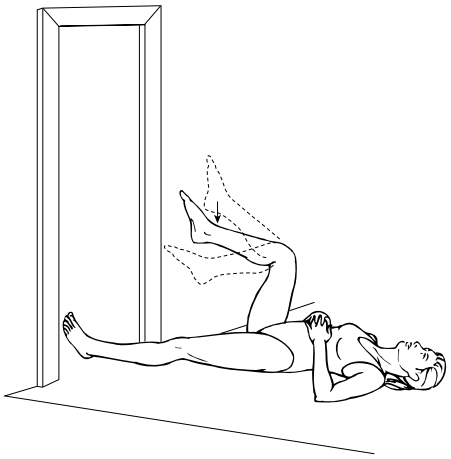
RANGE OF MOTION • Knee Flexion

1. Lie on your back with your legs out straight.
2. Slowly slide your heel toward your buttocks. Bend your knee as far as is comfortable to get a stretching sensation.
3. Hold for _____ seconds.
4. Return your leg to the starting position.
5. Repeat exercise _____ times, _____ times per day.



RANGE OF MOTION • Knee Flexion and Extension

1. Sit on the edge of a table or chair.
2. Use the uninjured/unaffected leg to straighten (extend) and bend (flex) the injured/affected leg.
3. ***Flexion—***Cross your ankles, placing the uninjured or unaffected leg on top of the injured/affected leg. Pull your heel(s) backward under the surface you are sitting on to increase the amount you can bend your knee.
4. ***Extension—***Cross your ankles, placing the uninjured or unaffected leg under the injured/affected leg. Pull your heel(s) backward under the surface you are sitting on to increase the how much you can straighten your knee.
5. Repeat exercise _____ times, _____ times per day.



RANGE OF MOTION • Gravity Knee Flexion

1. Lie on the floor as shown with your toes/foot lightly touching the wall.
2. Allow your toes/foot to slide down the wall, allowing gravity to bend your knee for you.
3. Obtain a "comfortable" stretching sensation.
4. Hold this position for _____ seconds. Then return the leg to the starting position.
5. Repeat exercise _____ times, _____ times per day.

RANGE OF MOTION • Knee Extension Sitting

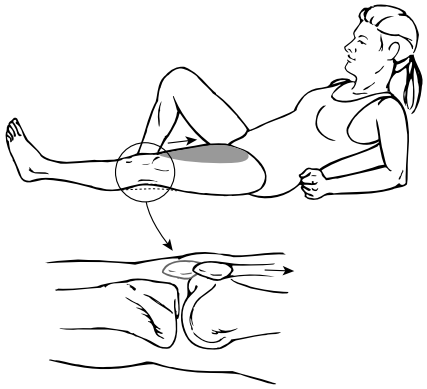
1. Sit with your leg/heel propped on another chair as shown. You may also prop your foot up on a rolled-up towel, a table, or a foot stool.
2. Relax, letting gravity straighten out your knee.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.

Note: If *authorized by your physician, physical therapist, or athletic trainer,* you may place a _____ pound weight on your thigh just above your kneecap to obtain a more effective stretch.

➢ **STRENGTHENING EXERCISES** • Meniscus Tear, Surgery For—Phase I

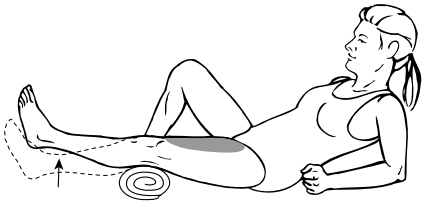
These are some of the ***initial*** exercises you may start your rehabilitation program with until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. Please remember:

- 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 • Quadriceps, Isometrics

1. Lie flat or sit with your leg straight.
2. Tighten the muscle in the front of your thigh as much as you can, pushing the back of your knee flat against the floor. This will pull your kneecap up your thigh, toward your hip.
3. Hold the muscle tight for _____ seconds.
4. Repeat this exercise _____ times, _____ times per day.

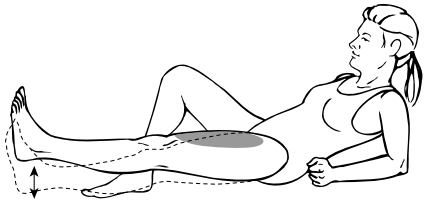


STRENGTH • Quadriceps, Short Arcs

1. Lie flat or sit with your leg straight.
2. Place a _____ inch roll under your knee, allowing it to bend.
3. Tighten the muscle in the front of your knee as much as you can, and lift your heel off the floor.
4. Hold this position for _____ seconds.
5. Repeat exercise _____ times, _____ times per day.

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

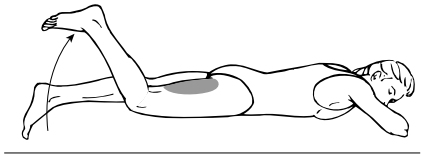
If *okay'd by your physician, physical therapist, or athletic trainer,* a _____ pound weight may be placed around your ankle for additional weight.



STRENGTH • Quadriceps, 7 Count

The quality of the muscle contraction in this exercise is what counts the most, not just the ability to lift your leg!

1. Tighten the muscle in front of your thigh as much as you can, pushing the back of your knee flat against the floor.
2. Tighten this muscle ***harder***.
3. Lift your leg/heel 4 to 6 inches off the floor.
4. Tighten this muscle ***harder again.***
5. Lower your leg/heel back to the floor. Keep the muscle in front of your thigh as tight as possible.
6. Tighten this muscle ***harder again.***
7. Relax.
8. 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!!!

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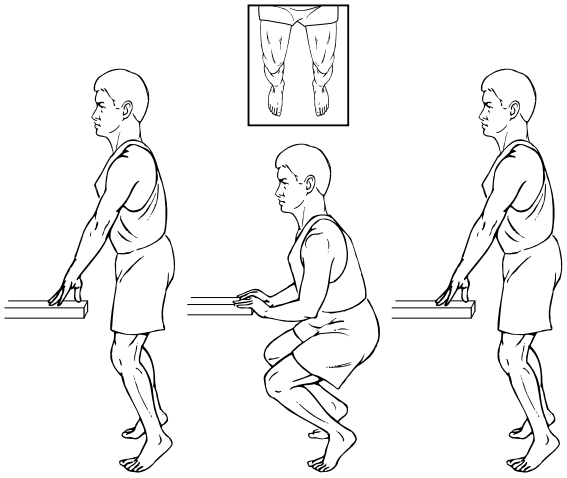
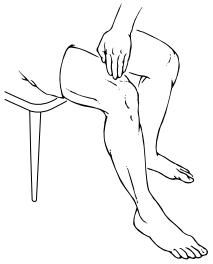


STRENGTH · Quads

1. Stand with your feet shoulder-width apart and place equal weight on both legs.
2. Keep your kneecaps in line with your toes.
3. Slowly bend both knees, keeping ***equal weight*** on both legs, and return to a standing position.
4. ***Do not bend your knees more than 90 degrees.***
5. You may use the edge of a table or counter for balance if needed.
6. Repeat exercise _____ times, _____ times per day.



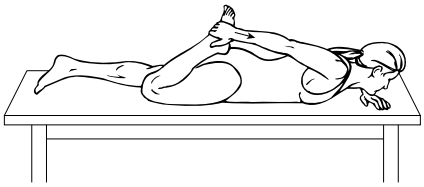
STRENGTH · Isometric Quad/VMO

1. Sit in a chair with your knee bent 75 to 90 degrees as shown in the drawing.
2. With your fingertips, feel the muscle just above the kneecap on the inside half of your thigh. This is the VMO.
3. Push your foot and leg into the floor to cause the thigh muscles to tighten.
4. Concentrate on feeling the VMO tighten. This muscle is important because it helps control the position of your kneecap.
5. Tighten and hold for _____ seconds.
6. Repeat exercise _____ times, _____ times per day.

➢ **RANGE OF MOTION AND STRETCHING EXERCISES** · Meniscus Tear, Sugery For—Phase II

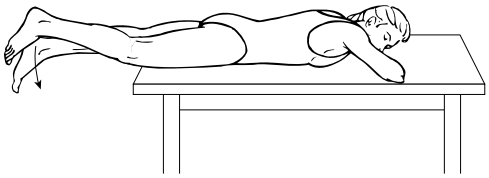
These are some of the exercises you may ***progress to in*** your rehabilitation program. *Do not progress to these until you have been authorized to do so by your physician, physical therapist, or athletic trainer.* You may continue with all exercises started in Phase I also. Please remember:

- 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.



STRETCH · Quadriceps, Prone

1. Lie on your stomach as shown.
2. Bend your knee, grasping your toes, foot, or ankle. If you are too "tight" to do this, loop a belt or towel around your ankle and grasp that.
3. Pull your heel toward your buttock until you feel a stretching sensation in the front of your thigh.
4. Keep your knees together.
5. Hold this position for _____ seconds.
6. Repeat exercise _____ times, _____ times per day.



RANGE OF MOTION · Knee Extension, Prone

1. Lie on your stomach on a bed or sturdy table with your knee and leg off the table. The kneecap should be off the edge of the bed or table.
2. Allow gravity to straighten your knee for you.
3. Hold this position for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.

Note: If *authorized by your physician, physical therapist, or athletic trainer,* you may place a _____ pound weight on your ankle to obtain a more effective stretch.

➢ **STRENGTHENING EXERCISES** · Meniscus Tear Surgery For—Phase II

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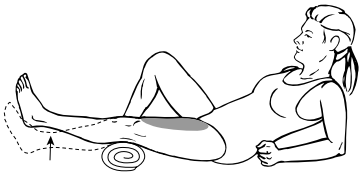

STRENGTH · Quadriceps, Short Arcs

1. Lie flat or sit with your leg straight.
2. Place a _____ inch roll under your knee, allowing it to bend.
3. Tighten the muscle in the front of your knee as much as you can, and lift your heel off the floor.
4. Hold this position for _____ seconds.
5. Repeat exercise _____ times, _____ times per day.

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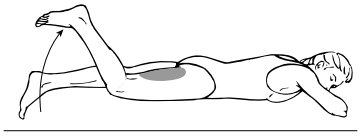

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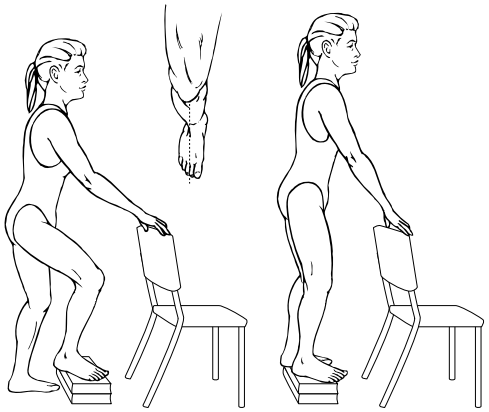
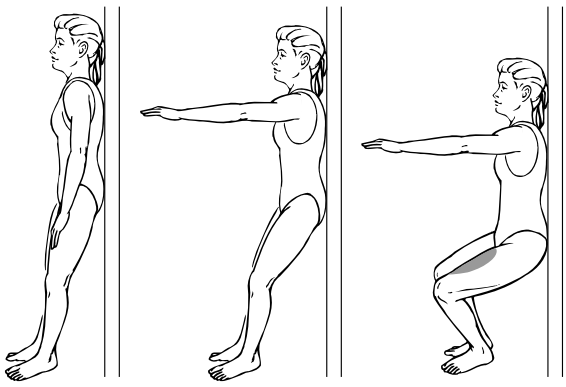


STRENGTH · Quadriceps, Step-Ups

1. Use a step or books.
2. Place your foot on the step or books approximately _____ inches in height. Make sure that your kneecap is in line with the tip of your shoe or your second toe.
3. Hold on to a hand rail, chair, wall, or another object for balance if needed.
4. Slowly step up and down. Make sure that the kneecap is always in line with the tip of your shoe or your second toe. Lightly touch the heel of the opposite leg to the floor and return to the starting position.
5. Repeat exercise _____ times, _____ times per day.



STRENGTH · Quadriceps, Wall Slide

1. Stand with your back against the wall. Your feet should be shoulder-width apart and approximately 18 to 24 inches away from the wall. Your kneecaps should be in line with the tip of your shoes or your second toe.
2. Slowly slide down the wall so that there is a _____ degree bend in your knees. *(Your physician, physical therapist, or athletic trainer will instruct you how to progress the amount of bend based on your symptoms and diagnosis.)*
3. Hold this position for _____ seconds. Stand up and rest for _____ seconds.
4. Repeat exercise _____ times, _____ times per day.

Notes: (Up to 4400 characters only)

Notes and suggestions