



## **Knee Arthroscopy**

Thank you for choosing Mansfield Orthopaedics at Copley Hospital for your knee arthroscopy. Our mission is to provide the highest quality orthopaedic services with an individualized, personal touch. Our team and everyone at Copley Hospital is here to make your stay as pleasant and as brief as possible.

This booklet was developed to provide you with general information concerning your procedure. It explains the steps that you will need to take in preparation for your surgery. Although the booklet reviews the most common scenarios, each individual is unique and therefore specific instructions may vary depending upon your needs. There are numerous details that go into planning a successful surgical experience and we suggest that you read the entire booklet carefully.





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## What is Arthroscopy?

Arthroscopy is a common surgical procedure in which a joint (arthro-) is viewed (-scopy) using a small camera. Arthroscopy gives doctors a clear view of the inside of the knee. This helps them diagnose and treat knee problems.

Arthroscopy is done through small incisions. During the procedure, your orthopaedic surgeon inserts the arthroscope (a small camera instrument about the size of a pencil) into your knee joint. The arthroscope sends the image to a television monitor. On the monitor, your surgeon can see the structures of the knee in great detail.

## Why Arthroscopy?

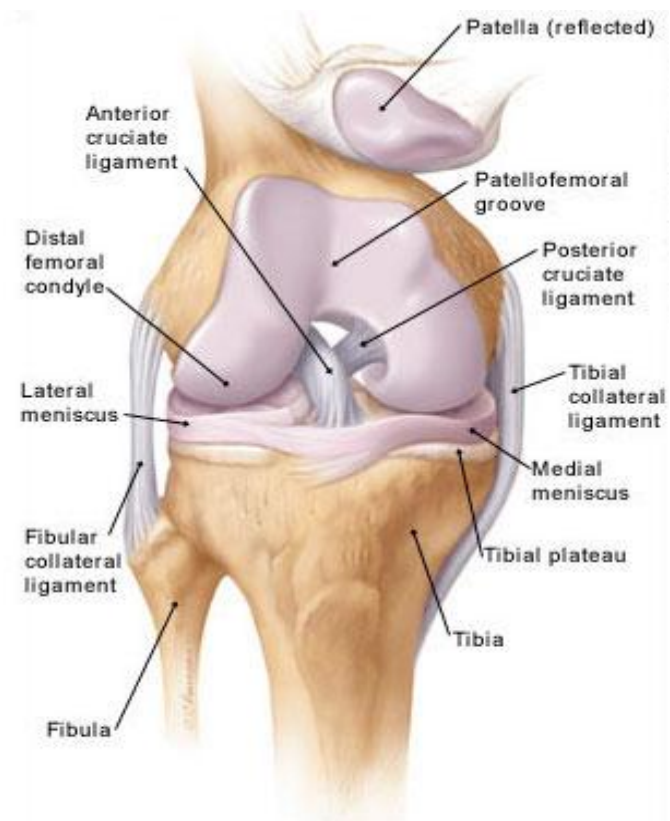
Your surgeon can use arthroscopy to feel, repair or remove damaged tissue. To do this, small surgical instruments are inserted through other incisions around your knee.

Arthroscopy for the knee is most commonly used for:

- Removal or repair of torn meniscal cartilage
- Reconstruction of a torn anterior cruciate ligament
- Trimming of torn pieces of articular cartilage
- Removal of loose fragments of bone or cartilage
- Removal of inflamed synovial tissue

## Knee Anatomy:

The knee is the largest joint in the body, and one of the most easily injured. It is made up of the lower end of the thigh bone (femur), the upper end of the shin bone (tibia), and the knee cap (patella), which slides in a groove on the end of the femur. Four bands of tissue—the anterior and posterior cruciate ligaments and the medial and lateral collateral ligaments—connect the femur and the tibia to provide joint stability. Strong thigh muscles give the knee strength and mobility



The surfaces where the femur, tibia, and patella touch are covered with articular cartilage. Articular cartilage is a smooth substance that cushions the bones and enables them to glide freely. Semicircular rings of tough fibrous cartilage tissue, called the lateral and medial menisci, act as shock absorbers and stabilizers.

The bones of the knee are surrounded by a thin, smooth tissue capsule lined by thin synovial membrane. The synovium releases a special fluid that lubricates the knee, reducing friction to nearly zero in a healthy knee.

### **Common Conditions Treated with Knee Arthroscopy**

- Meniscus Tear**
  - Removal
  - Repair
- ACL Tear**
  - Reconstruction
- Cartilage Wear**
  - Shaving
  - OCD microfracture
- Patella Issues**
  - “Smoothing”
  - Release
- Loose Body**
  - Removal



### **Anesthesia**

When you first arrive for surgery, a member of the anesthesia team will talk with you. Arthroscopy can be performed under local, regional, or general anesthesia.

- Local anesthesia numbs just your knee
- Regional anesthesia numbs you below your waist
- General anesthesia puts you to sleep

There are several anesthetic techniques utilized for knee surgeries. You and your Anesthesiologist or CRNA (Certified Registered Nurse Anesthetist) will decide on the day of your surgery which anesthetic technique or which combination of anesthetic techniques is most appropriate for you, based on your health history and surgery type. The anesthetic techniques, risks and benefits as they apply to you and your surgery will be explained in greater detail by a member of our anesthesia team on the day of your surgery.

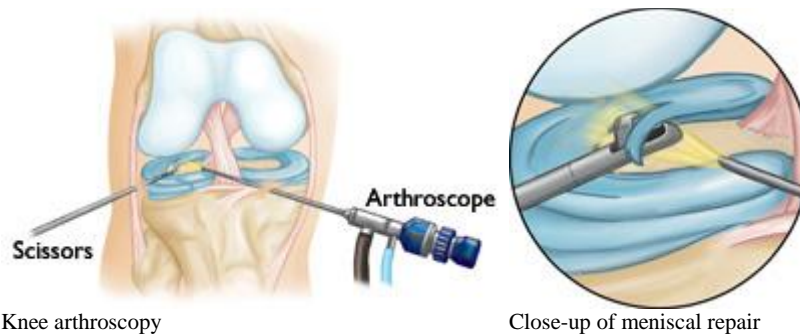


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Regardless of your anesthetic, a member of the anesthesia team will be in the operating room with you the whole time with extensive monitoring to ensure that you are safe and comfortable.

## Procedure

The orthopaedic surgeon will make a few small incisions in your knee. A sterile solution will be used to fill the knee joint and rinse away any cloudy fluid. This helps your orthopaedic surgeon see your knee clearly and in great detail.



Your surgeon's first task is to properly diagnose your problem. He will insert the arthroscope and use the image projected on the screen to guide it. If surgical treatment is needed, your surgeon will insert tiny instruments through another small incision. These instruments might be scissors, motorized shavers, or lasers.

This part of the procedure usually lasts 30 minutes to one hour. How long it takes depends upon the findings and the treatment necessary.

Your surgeon may close your incisions with a stitch or staples and cover them with a soft bandage.

You will be moved to the recovery room and should be able to go home within a few hours. Be sure to have someone to drive you home.

## Risks of Surgery

Potential postoperative problems with knee arthroscopy include infection, blood clots, and an accumulation of blood in the knee. These occur infrequently, and are minor and treatable. The risk of infection at Copley Hospital is less than 1%.





## **Reasonable Surgery**

## **Expectations after Arthroscopic**

After most arthroscopic surgeries, you can walk unassisted, weight bearing to tolerance. Your surgeon may advise you to use crutches, a cane, or a walker for a period of time after surgery. You can gradually put more weight on your leg as your discomfort subsides and you regain strength in your knee.

Physical exercise and rehabilitation will play an important role in your final outcome. A formal physical therapy program also may add something to your final result.

Returning to intense physical activity (basketball, soccer, football, etc.) should only be done under the direction of your surgeon.

It is reasonable to expect that by six to eight weeks you should be able to engage in most of your former physical activities.

Most people are able to return to office work within a week.

## **Preparing for Surgery**

If you decide to have knee arthroscopy, and if you have a history of Heart or Lung issues, you will need to have a pre-op visit or phone call with a Nurse and member of the Anesthesia staff at Copley Hospital.

Before surgery, tell your orthopaedic surgeon about any medications or supplements that you take. He or she will tell you which medicines you must stop taking before surgery.

## **Time of Surgery**

Although the date of your surgery is prescheduled, the time will not be determined until the day before surgery.

The day before your surgery, please call Copley's Operating Room Scheduler between 1:00pm and 3:00pm Monday through Friday at 802-888-8255 to confirm your arrival time for surgery. Please call on Friday for Monday surgery.

## **Discharge Time**

Almost all arthroscopic knee surgery is done on an outpatient basis. This means you can go home the same day of Surgery.

Make sure you have arranged for someone to pick you up at the hospital.



## **Arriving at the Hospital**

### *Registration*

Upon arrival go to the Registration Desk located in the Main Lobby. Please bring with you your health insurance cards, along with any co-payment you are responsible for. Once registered, you, and one family member or one friend, will be directed to the Pre-Operative area.

For your convenience, you can complete a pre-registration form online at [copleyvt.org](http://copleyvt.org). You must still stop by Registration in the Main Lobby, but only to show your insurance card, confirm information and sign your forms.

### *Visitors and Waiting Information*

We welcome you as you are an important part of your loved one's recovery process. We understand that waiting for someone to have surgery can be a stressful time and want to make you as comfortable as possible. We have provided a comfortable space for you in the Reception Area located in the Main Lobby. For your convenience, the Area offers a television, magazines and wireless access (WIFI). You may also choose to wait in the Cafeteria located on the second floor, which also has WIFI access.

During registration, you, as the accompanying family member or friend, will be asked how you prefer to be reached: by Copley pager or your cell phone. If you prefer that we contact you by cell phone let us know the number. The surgeon will contact you after the surgery. As soon as medically appropriate, you will be contacted by our staff to join your relative or friend in the recovery room. Pagers work only while on Copley's campus. If you plan to leave the campus we ask that you let us know, and if you have a Copley pager, please leave it with the volunteer at the Information Desk. Upon your return please check-in at the Information Desk. The Desk is staffed Monday – Friday 8:00am-4:00pm.

The cafeteria is open daily for breakfast from 6:30-10:30am; lunch 11:30am – 1:30pm and dinner from 4:00-6:30pm. Drinks, snacks, fruit, soup and salad are available throughout the afternoon. The Copley Hospital Gift Shop is located adjacent to the main lobby and is open Monday through Friday 9:30am-3:30pm. You can reach the Gift Shop by calling 888-8229. You are also invited to use our Health Sciences Library, located on the first floor, across from Administration. Computers for public use are available in the Library.

Please be aware that, for confidentiality and patient care reasons, only one visitor will be allowed into the pre-operative or recovery room at a time. We ask that visitors silence their beepers and cell phones while visiting.

### *Pre-Operative Area*

- First, you will be asked to put on a hospital gown, and remove any make up, contact lenses, glasses, hair pieces and hair pins. These will be given to your family members, or placed in a personal belongings bag.



- Your  
at least one hour.  
the restroom,

your blood pressure, blood sugar (if you are diabetic), and skin condition.

- A sequential compression device will be placed on your leg to aid in circulation. This will continue to be used during your hospital stay until you are walking regularly.

- Your intravenous (IV) will be started by the nurse.

- Your surgeon or their assistant will visit you to mark your operative limb and discuss any questions.

- Your surgeon or their assistant will review the information on the consent form for your surgery. We will have you sign it at that time.

- Your anesthesiologist will visit you in pre-op and discuss your health, the type of anesthesia you will need.

- Lastly, a nurse will transport you to the operating room.

preoperative assessment will take  
This will include having you use  
listening to your lungs, checking

## **SURGERY**

### **Post Anesthesia Care Unit (Recovery Room)**

You will be taken to the Post Anesthesia Care Unit (PACU) to recover from anesthesia.

- Your vital signs, including heart rate, blood pressure, temperature and respiratory rate, will be frequently monitored.
- Your dressing, the circulation and movement in your toes and leg will also be checked.
- During this time, your surgeon will meet with your family.
- Once you have fully recovered from anesthesia, you will be able to go home.

### **Recovery**

Recovery from knee arthroscopy is much faster than recovery from traditional open knee surgery. Still, it is important to follow your orthopaedic surgeon's instructions carefully after you return home. You should ask someone to check on you the first evening you are home.



#### **Swelling**

Keep your leg elevated as much as possible for the first few days after surgery. Apply ice as recommended by your doctor to relieve swelling and pain.

#### **Dressing Care**

You will leave the hospital with a dressing covering your knee. Keep your incisions clean and dry. Your surgeon will tell you when you can shower or bathe, and when you should change the dressing.

Your staples will be removed at Mansfield Orthopaedics 1 week after surgery.



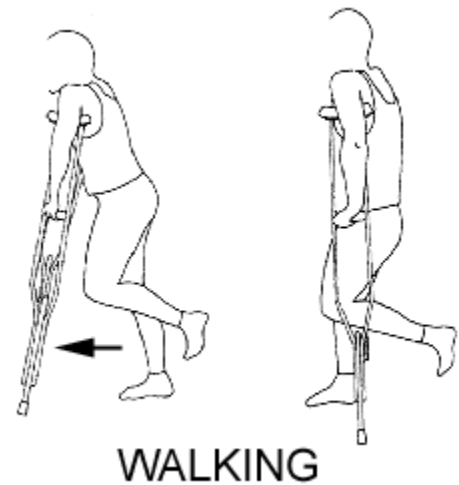


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## Bearing Weight

Most patients need crutches or other assistance after arthroscopic surgery. Your surgeon will tell you when it is safe to put weight on your foot and leg. If you have any questions about bearing weight, call your surgeon.

- Meniscus Tear**
  - Removal
    - Weight Bearing to Tolerance
  - Repair
    - Non-Weight Bearing
- ACL Tear**
  - Reconstruction
    - Non-Weight Bearing x 1 month
- Cartilage Wear**
  - Shaving
    - Weight-Bearing to Tolerance
  - OCD microfracture
    - Non-Weight Bearing
- Patella Issues**
  - “Smoothing”
    - Partial Weight Bearing
  - Release
    - Partial Weight Bearing
- Loose Body**
  - Removal
    - Weight-Bearing to Tolerance



## Driving

Your doctor will discuss with you when you may drive. This decision is based on a number of factors, including:

- The knee involved
- Whether you drive an automatic or stick shift
- The nature of the procedure
- Your level of pain
- Whether you are using narcotic pain medications
- How well you can control your knee.

Typically, patients are able to drive from 1 to 3 weeks after the procedure.



## Medications

Pain is unique to each individual. You will go home with a prescription for two medications to help with pain. Most people are able to stop taking their pain medications within 1-2 weeks.

## Exercises to Strengthen Your Knee



You should exercise your knee regularly for several weeks after surgery. This will restore motion and strengthen the muscles of your leg and knee. Therapeutic exercise will play an important role in how well you recover. A formal physical therapy program may improve your final result.

## Warning Signs

Call Mansfield Orthopaedics at (802) 888 – 8405 or to the Emergency Room if you experience any of the following:

- Fever 102°F or above
- New or unusual drainage on your dressing
- Redness, swelling, or drainage from your incisions
- Swelling or pain in your calf of your affected leg
- Chest pain or shortness of breath
- Pain not relieved by taking prescribed pain medicine, raising your leg, or applying ice
- Discoloration, numbness, or tingling in the affected leg

## Outcome

Unless you have had a ligament reconstruction, you should be able to return to most physical activities after 6 to 8 weeks, or sometimes much sooner. Higher impact activities may need to be avoided for a longer time. You will need to talk with your doctor before returning to intense physical activities.

If your job involves heavy work, it may be longer before you can return to your job. Discuss when you can safely return to work with your doctor.



The final outcome of your surgery will likely be determined by the degree of damage to your knee. For example, if the articular cartilage in your knee has worn away completely, then full recovery may not be possible. You may need to change your lifestyle. This might mean limiting your activities and finding low-impact exercise alternative.

*The use of this information by Mansfield Orthopaedics has been granted from the American Academy of Orthopaedic Surgeons (AAOS).*



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## FREQUENTLY ASKED QUESTIONS (FAQ'S)

### **When will I go home?**

You will be ready for discharge from the hospital a few hours after your surgery.

### **Can I do Outpatient Therapy?**

Yes. This decision is usually made with your doctor.

### **When should I return for my first visit after surgery?**

You will be prescheduled for your first post-op appointment 1 week after surgery. You will have another appointment 4 weeks after surgery.

### **When should I change my bandage?**

Your dressing will be changed one week after surgery at your first post-operative appointment.

### **When will my staples be removed?**

At approximately 7-10 days from your surgical date. Mansfield Orthopaedics will perform this for you.

### **Is swelling of my knee, leg and ankle normal?**

Yes, it is normal for your leg to be swollen for around few week. To decrease swelling, elevate your leg as often as possible (four to five times a day) and apply ice for 15 minutes each time.

### **When can I resume my exercise program?**

You should discuss this with your surgeon before doing any form of exercise other than walking or the exercises your physical therapist has prescribed.

### **May I bear full weight after surgery?**

Yes, you may begin full weight bearing immediately after surgery. For some individual cases, less than full weight bearing may be recommended by your surgeon.

### **How do I adjust my pain medication?**

Pain medicine is unique to each individual. Some patients do not require any pain medication. On the other hand, some need 1-2 weeks of pain medicine.

### **How long will I need to use assistive devices (crutches, walker or a cane)?**

You may need some type of assistive device after a knee arthroscopy. Follow the weight bearing program according to the procedure you had performed.

### **May I go outdoors prior to my first follow-up appointment?**

Yes, we encourage you to do so.

### **May I ride or drive in a car prior to my first follow-up appointment?**

You may begin driving when walking without assistive devices and off pain medications.

### **Why is my leg bruised?**

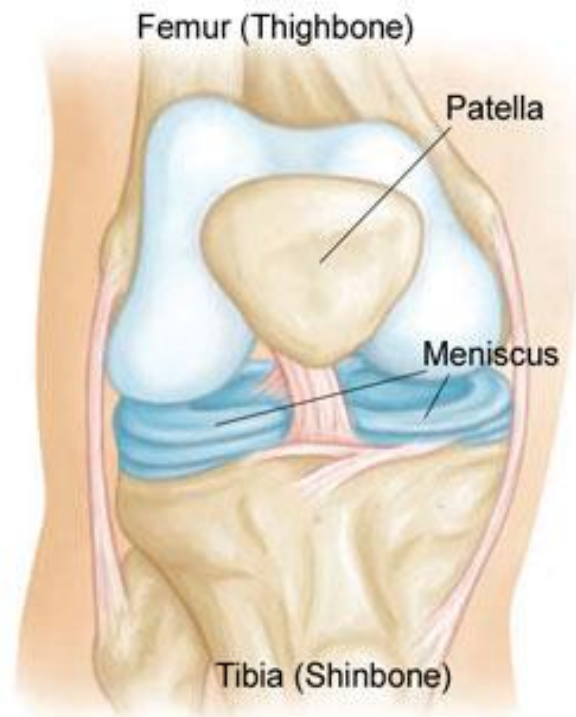
It is common to see bruising on the skin. It is from the normal accumulation of blood after your surgery.

## Meniscal Tears

Your knee is the largest joint in your body and one of the most complex. Because you use it so much, it is vulnerable to injury. Because it is made up of so many parts, many different things can go wrong.

Meniscal tears are among the most common knee injuries. Athletes, particularly those who play contact sports, are at risk for meniscal tears. However, anyone at any age can tear a meniscus. When people talk about torn cartilage in the knee, they are usually referring to a torn meniscus.

### Anatomy

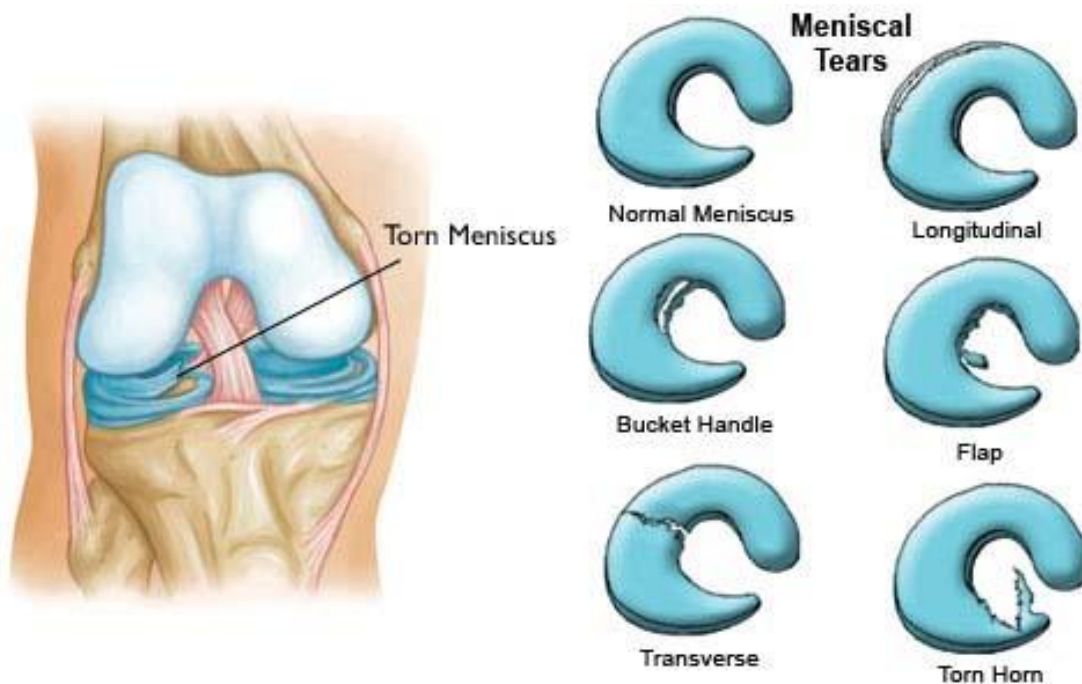


Three bones meet to form your knee joint: your thighbone (femur), shinbone (tibia), and kneecap (patella).

Two wedge-shaped pieces of cartilage act as "shock absorbers" between your thighbone and shinbone. These are called meniscus. They are tough and rubbery to help cushion the joint and keep it stable.

## Description

Menisci tear in different ways. Tears are noted by how they look, as well as where the tear occurs in the meniscus. Common tears include longitudinal, parrot-beak, flap, bucket handle, and mixed/complex.



Common types of tears

Sports-related meniscal tears often occur along with other knee injuries, such as anterior cruciate ligament tears.

## Cause

Sudden meniscal tears often happen during sports. Players may squat and twist the knee, causing a tear. Direct contact, like a tackle, is sometimes involved.

Older people are more likely to have degenerative meniscal tears. Cartilage weakens and wears thin over time. Aged, worn tissue is more prone to tears. Just an awkward twist when getting up from a chair may be enough to cause a tear, if the menisci have weakened with age.

## Symptoms

You might feel a "pop" when you tear a meniscus. Most people can still walk on their injured knee. Many athletes keep playing with a tear. Over 2 to 3 days, your knee will gradually become more stiff and swollen.

The most common symptoms of meniscal tear are:

- Pain
- Stiffness and swelling
- Catching or locking of your knee
- The sensation of your knee "giving way"
- You are not able to move your knee through its full range of motion

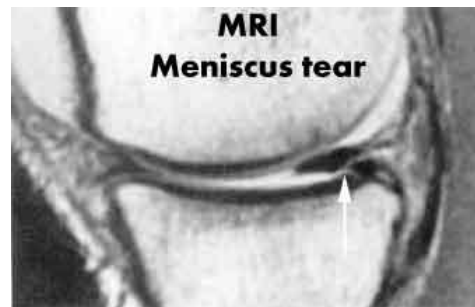
Without treatment, a piece of meniscus may come loose and drift into the joint. This can cause your knee to slip, pop or lock.

### **Imaging Tests**

Because other knee problems cause similar symptoms, your doctor may order imaging tests to help confirm the diagnosis.

**X-rays.** Although X-rays do not show meniscal tears, they may show other causes of knee pain, such as osteoarthritis.

**Magnetic resonance imaging (MRI).** This study can create better images of the soft tissues of your knee joint.



### **Treatment**

How your orthopaedic surgeon treats your tear will depend on the type of tear you have, its size, and location.

The outside one-third of the meniscus has a rich blood supply. A tear in this "red" zone may heal on its own, or can often be repaired with surgery. A longitudinal tear is an example of this kind of tear.

In contrast, the inner two-thirds of the meniscus lacks a blood supply. Without nutrients from blood, tears in this "white" zone cannot heal. These complex tears are often in thin, worn cartilage. Because the pieces cannot grow back together, tears in this zone are usually surgically trimmed away.

Along with the type of tear you have, your age, activity level, and any related injuries will factor into your treatment plan.



## **Nonsurgical Treatment**

If your tear is small and on the outer edge of the meniscus, it may not require surgical repair. As long as your symptoms do not persist and your knee is stable, nonsurgical treatment may be all you need.

**RICE.** The RICE protocol is effective for most sports-related injuries. RICE stands for Rest, Ice, Compression, and Elevation.

- **Rest.** Take a break from the activity that caused the injury. Your doctor may recommend that you use crutches to avoid putting weight on your leg.
- **Ice.** Use cold packs for 20 minutes at a time, several times a day. Do not apply ice directly to the skin.
- **Compression.** To prevent additional swelling and blood loss, wear an elastic compression bandage.
- **Elevation.** To reduce swelling, recline when you rest, and put your leg up higher than your heart.

**Non-steroidal anti-inflammatory medicines.** Drugs like aspirin and ibuprofen reduce pain and swelling.

## **Surgical Treatment**

If your symptoms persist with non-surgical treatment, your doctor may suggest arthroscopic surgery.

**Procedure.** Knee arthroscopy is one of the most commonly performed surgical procedures. In it, a miniature camera is inserted through a small incision. This provides a clear view of the inside of the knee. Your orthopaedic surgeon inserts miniature surgical instruments through other small incisions to trim or repair the tear.

**Rehabilitation.** After surgery, your doctor may put your knee in a cast or brace to keep it from moving.

Once the initial healing is complete, your doctor will prescribe rehabilitation exercises. Regular exercise to restore your knee mobility and strength is necessary. You will start with exercises to improve your range of motion. Strengthening exercises will gradually be added to your rehabilitation plan.

For the most part, rehabilitation can be carried out at home, although your doctor may recommend physical therapy.

## **Recovery**

Meniscal tears are extremely common knee injuries. With proper diagnosis, treatment, and rehabilitation, patients often return to their pre-injury abilities.





## Medial Meniscus Repair Rehabilitation Protocol

- ✓ 1-7 days post-op
  - Brace locked at 0° at all times
  - Partial weight bearing with crutches to tolerance with a straight leg
  - Elevate knee and use cryocuff as needed for pain and swelling
- ✓ 7-10 days post-op
  - Brace set at 0-30° flexion
  - You may wean from your crutches but must still walk with the brace and a straight leg
  - Brace must remain on for exercises
- ✓ 2 weeks post-op
  - You may begin to work on Range of Motion (ROM) 0-90° only \* DO NOT GO BEYOND 90° OF FLEXION!
  - Brace remains at 30° maximum for walking
  - Brace remains on for exercises
- ✓ 3 weeks post-op
  - You may take the brace off for exercises
  - ROM still limited to 90°
  - When walking, continue to use the brace
- ✓ 4 weeks (1 month) post-op
  - You may progress ROM to 0-120°
  - Brace must remain on for walking
- ✓ 6 weeks post-op
  - You may now wean out of brace for walking
  - You may add up to 10 lbs with all strengthening exercises
  - Swimming and Nordic Track is allowed
- ✓ 8 weeks (2 months) post-op
  - You may start stationary biking and Stairmaster
  - Balance exercises initiated
  - Closed chain exercises initiated
- ✓ 12 weeks (3 months) post-op
  - There is now a 30 lb weight restriction for all strengthening exercises
  - Isotonic weight equipment may be used following the 30 lb weight and 60-0° ROM restriction
  - You may begin jogging and biking outside on level ground
- ✓ 4 months post-op
  - You may begin agility drills
    - Run in figure 8, increasing speed/decreasing size
    - Carioca- one foot in front of other then behind
    - Box jumping, jumping forward then back, side-to-side, jump in pattern of square
  - Gradual return to sport with approval of your doctor
  - Isotonic exercises no longer have a weight or ROM restriction