What to expect when you have Meniscus Surgery

Patient Guide
Introduction:
The meniscus is a C-shaped piece of cartilage in the knee between the femur (thigh bone) and the tibia (shin bone). There are two menisci in the knee, one on the lateral (outer) side and the other on the medial (inner) side the knee. The menisci act as important cushions between the femur and tibia and protect the articular cartilage, a protective layer on the surfaces of these bones. The menisci also help to keep the knee joint stable. Traumatic meniscus tears can occur with a sudden twist, or they can be pinched when the knee bends or flexes under a heavy load. One or both menisci often tear when other knee ligaments are injured. Degenerative meniscus tears are seen in older people whose menisci weaken as the knee ages.

The signs and symptoms of a meniscus tear include:
- A sudden sharp pain on the inner or outer part of the knee and often behind the knee
- Swelling after an initial painful episode and repeated swelling after exercise
- Pain with pivoting or squatting
Clicking or locking during walking or exercise:

Many tears, particularly degenerative tears in older athletes, can undergo a trial of nonoperative treatment before considering surgery. These treatments include rest, activity modification, oral or topical anti-inflammatory medications, a compression sleeve, corticosteroid (cortisone) injection, and physical therapy. If nonoperative treatment fails to relieve symptoms, surgery is often necessary to repair the meniscus or to remove a portion of it, depending on how it is torn. MRI studies can help to show how the meniscus is torn and can help to predict what type of surgical procedure will be needed. With degenerative tears, if there is already a lot of arthritis in the knee, it may be too late for the knee to be helped by meniscus surgery, and nonoperative treatment will need to be continued. Most traumatic tears, especially those in younger patients, and tears that occur with other ligament injuries will need surgery. Some tears can be repaired, or sewn back together, if they occur in or near the “red zone,” which has enough blood supply to allow for healing. Tears in the “white zone,” which has no blood supply, usually cannot heal are trimmed to prevent the torn portions from grinding against the protective layer of articular cartilage. Your surgeon will make every effort to preserve as much of the meniscus as possible in order to maintain maximum cushioning function and to keep the knee as stable as possible.
Pre-operative Rehabilitation:

Most patients will experience pain, swelling, stiffness, and or clicking. If the knee has been sore for a prolonged period of time, there may be weakness and loss of motion. When appropriate, your surgeon may recommend pre-operative rehabilitation, known as Pre-hab.

Signs that you may require rehabilitation before getting surgery include:

- Limitations in range of motion
  - The knee does not straighten all the way. It may not be possible to fully straighten the knee if a large piece of meniscus has moved into an area where it blocks the knee from coming out straight. These types of tears, often called “bucket handle tears,” need corrective surgery.
  - The knee does not bend to the same amount of degrees as the non-injured leg.
- Increased swelling
- Decreased strength
- Muscle guarding of the hamstrings and quadriceps
- Inability to weight bear on the injured leg or use crutches appropriately
Your physical therapist will provide you with exercises and treatment techniques to help decrease pain, increase range of motion, reduce swelling, increase strength, and improve your use of your knee as much as possible before surgery. Pre-hab recommendations are dependent on the limitations of your knee and how quickly you gain back what you have lost.

Some treatments and goals are listed below:

Modalities: The physical therapist may use modalities such as ultrasound and ice to reduce your pain and swelling. Neuromuscular Electric Stimulation units may also be used to get a good muscle contraction of the muscles of the thigh.

Range of motion: Your Physical Therapist will teach you and perform techniques to help you regain motion. The goal is to obtain motion at least 90-95% of your normal, uninvolved knee’s motion, so long as a large piece of meniscus tissue is not blocking motion (i.e. bucket handle tear).

Strength: Muscle weakness and atrophy develop quickly after an acute meniscus injury due to pain, swelling, and limited use. It takes 2 days to lose a full muscle grade of strength and 2 weeks to gain half of that grade back. We want you as strong as possible going into your surgery to help your early post-operative course. The therapists will address your hips, your knee, and your ankles when it comes to strengthening. Thigh strengthening activities may include quad sets and two-legged squats. These exercises will be some of the first you do after surgery as well. The hips being strong are vital because they control the amount of movement and stability at the knee.

Crutch education: In cases where the meniscus is repaired, you may need to use crutches for up to several weeks after your surgery. If you are not familiar with using crutches or feel unsafe using them, your physical therapist will teach you how to use them safely and effectively. They can teach you how to use crutches while walking, on stairs, in the community, in and out of a car and in and out of a chair. They will also fit you with the crutches so they are adjusted to your height and needs.
Day of surgery:

When you are planning your trip to the surgical center, be sure to wear loose-fitted, comfortable clothing. Shorts are recommended as you will come out of surgery with a bulky dressing around your knee. If a meniscus repair is performed, you may also be fitted with a knee brace. During cold weather months, baggy sweatpants are recommended. Also make sure you wear sneakers and are not wearing flip flops or sandals. If your meniscus is repaired, you will use crutches after surgery, and loose shoes can increase your risk of a trip and fall.

If the plan is to remove a portion of the torn meniscus, the surgery usually lasts around 30 minutes and is performed with general anesthesia. The anesthesia wears off quickly, and patients are usually alert within several minutes once they reach the recovery area. If a meniscus repair is planned, your surgery will last about one hour, and the anesthesia team may plan to perform a nerve block, which reduces pain immediately after surgery.

Post-operative care:

Most meniscus surgery procedures involve removing a torn portion of meniscus, and the postoperative pain is relatively mild without the need for crutches. You will be prescribed a limited supply of pain medicine to be taken as needed. Often times the pain can be controlled with Tylenol or non-steroidal anti-inflammatory medications. You should be able to walk and to get up and down stairs immediately after your surgery. Moving your ankle and tightening your thigh muscles several times per hour help to circulate your blood and to preserve your muscle strength. You may be asked to wear battery-operated compression sleeves on your calves to assist with circulation. You can remove your surgical dressing at home two to three days after surgery begin to shower. It is common to limp for a few weeks after the surgery and to experience some tightness due to normal postoperative swelling. If you are not using the prescription pain medicine, and if your knee motion permits, you can drive your vehicle as early as the day after surgery. Low-impact exercising such as walking, moderate strength training, stationary biking, and elliptical training can be performed as tolerated by the knee. High-impact
exercises such as running and jumping often need to be delayed for several weeks. After routine meniscus surgery, most patients return to school or work within a few days. People with physically-demanding jobs may need work restrictions until their knees are comfortable enough to perform their normal work tasks. If a meniscus repair is done, you will be given a brace, and crutches and will be provided with specific instructions on how to use them. You will be seen in the office seven to 10 days after surgery to discuss the details of your surgery and to determine your future treatment course.

Rehabilitation:

Meniscus procedures that simply remove a piece of torn meniscus usually do not require formal physical therapy. You can resume your normal activities during the weeks that follow your surgery as your knee becomes more comfortable. If your surgery involves repair of the meniscus, treating other knee ligament injuries, atrophy and weakness of the leg muscles, trouble regaining full knee motion, or persistent swelling will require rehabilitation, your surgeon will prescribe physical therapy in order to help you achieve the best possible result.
**Functional testing:**

A series of specialized evaluations that are implanted at key points throughout your recovery. These evaluations will look at strength, range of motion, movement, balance, and your ability to generate power or forces throughout your body. These key measurements were designed to better you as a whole individual and help in reducing your body's risk of injury and promote a safe and effective return to function and to sport.

A few of our tools that help us with functional testing include state-of-the-art strength testing equipment, a 3D motion capture system that helps us look at your body performing a specific movement such as a golf swing, throwing a baseball, running or hopping, as well as force plates which allow us to see how much power or force your body can create. Gathering this information from the motion lab helps the team decide the best treatment plan and to optimize your outcome and your performance.

**Treating the whole athlete:**

Hartford Healthcare Sports Medicine Specialists believe there is more to your treatment than the knee. We have specialists in Behavioral Health and Sports Nutrition to help optimize your recovery as well.
Behavioral health:

There is a newly emerging theme in the scientific literature on recovery from injury regarding the athlete’s mindset toward recovery. Some of these findings indicate that lack of psychological readiness to return to sport may contribute to risk of re-injury. Recovery from a knee injury can be challenging for athletes for a variety of reasons including: lack of engagement is active coping via sport, disconnect from social network, and perceived loss of identity. As such, behavioral health services can assist throughout an athlete’s recovery from a knee injury by addressing the following:

- Normalize an athlete’s emotional response to injury via supportive discussion.
- Teach skills to cope with emotional distress associated with recovery pre- and post-surgery.
- Provide collaborative care to assist athlete in navigating pain sensations through different phases of care.
- Educate family and supports to best assist athlete in psychologically recovery from injury.
Sports nutrition:

Nutrition is one method which may counter the negative impact of exercise induced injury. The field of nutrition support for exercise induced injury is a newly emerging topic in the scientific literature. It is clear that deficiencies in energy (calories), protein and other nutrients should be avoided. While somewhat obvious and intuitive the current literature concerning proper nutrition is extensive but the evidence remains unclear as to its specifics.

Energy expenditure for athletes during sport is significant. After injury the level of exercise decreases significantly and with it a decrease in energy expenditure. However, the stress of surgery and the healing process does increase energy expenditure by as much as 15% to 50% depending on the type and severity injury over baseline levels. For instance, when on crutches the energy needed to move around is 2-3x higher than walking without them. Protein is the most prominent nutrient analyzed for nutrition support for injuries. Reduction in protein intake is detrimental to muscle metabolism. A great starting point for athletes is consuming at least 1.6 gram/kilograms of athlete’s bodyweight of protein to maintain protein synthesis following the injury.
Careful evaluation of the athlete’s situation and injury with nutritional services from a registered dietitian can assist throughout an athlete’s recovery from an ACL tear via the following:

• Assessment of energy intake and avoiding energy deficit.

• Assessment of overall protein intake as well as bioavailability of sources.

• Provide individualized care to assist athlete with individualization of nutritional needs based on religious/cultural dietary needs, dietary eating style (vegetarian, etc.), food allergies and more.

• Advise to limit (exclude) variety of nutrients which may delay healing process (ex. alcohol).

• Educate family to best support athlete with nutritional needs to recovery from injury.

• Assist athletes with meal preparation and meal ideas which meets energy and protein needs with use of food processing database software.
We are here to help.

The Bone & Joint Institute Sports Medicine Specialists are here to help you become not only as good, but better than you were before your injury.

Call for a referral to one of our:
- Orthopedic Surgeons
- Physical Therapists
- Athletic Trainers
- Strength & Conditioning Specialists
- Sports Psychologists
- Sports Neurologists
- Sports Cardiologists
- Sports Dentists
- Integrative Medicine Providers
- Sports Nutritionists
- Biomechanists

Functional testing available:
Golf swing, tennis, throwing, running, and vocational training

Our Team of Experienced Providers
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