

Knee Arthroscopy for Meniscus Injury

A knee arthroscopy with **meniscectomy** is a minimally invasive surgery where a surgeon **removes a damaged part of the meniscus**, the cartilage in your knee that helps absorb shock and stabilize the joint. The surgery is typically done to relieve pain and improve knee function when the meniscus is torn and causing problems.

Typical Surgery Process (Same day surgery):

1. **Preparation:**
 - You will be given either general anesthesia (where you're fully asleep)
 - The surgical site (your knee) is cleaned and sterilized to minimize the risk of infection.
2. **Incision and Arthroscopy:**
 - Small incisions (usually about 1 cm) are made around the knee.
 - A thin tube with a camera (arthroscope) is inserted through one of the incisions. The camera displays images of the inside of your knee on a screen, guiding the surgeon.
 - Special instruments are inserted through other incisions to remove or repair the damaged part of the meniscus.
3. **Meniscectomy:**
 - If the meniscus tear is irreparable or too damaged, the surgeon will remove the damaged portion of the meniscus. If the tear is repairable, the surgeon might opt for sutures or other methods to fix it.
 - The surgeon will then inspect the knee for any other damage, such as cartilage wear or ligament injuries, and treat them if necessary.
4. **Closing the Incisions:**
 - After the procedure, the small incisions are closed with stitches and adhesive strips.
 - A bandage or dressing is applied to the knee.

Recovery Course:

Immediate Post-Op (Day 1-3)

1. **Pain Management:**
 - Expect some pain and swelling post-surgery, but this can be managed with pain medication prescribed by your doctor.
 - Ice is recommended to reduce swelling and inflammation.
2. **Knee Immobilization:**
 - You might need to use crutches for a few days but you can put full weight on the leg to your tolerance.
 - You'll likely be instructed to keep your knee elevated as much as possible to reduce swelling.
3. **Physical Therapy:**
 - You may start gentle physical therapy exercises to regain range of motion and strength. This is typically recommended to start within the first few days after surgery.

*Short-Term Recovery (Week 1-2)***1. Rest and Gradual Weight-Bearing:**

- You will be encouraged to gradually increase weight-bearing on the knee, depending on how well you're healing.
- Continue using crutches or a brace if necessary.

2. Pain and Swelling Control:

- Continue managing swelling with ice and compression. Nonsteroidal anti-inflammatory drugs (NSAIDs) may be prescribed to help with pain and swelling.

3. Physical Therapy:

- You will likely attend physical therapy sessions multiple times a week. These will focus on regaining mobility, strength, and stability in the knee joint.

*Mid-Term Recovery (Week 3-6)***1. Increased Activity:**

- By this stage, you may be able to return to light daily activities and may gradually stop using crutches or a brace.
- Physical therapy will progress with exercises aimed at strengthening the quadriceps and hamstrings.

2. Knee Function:

- The goal is to achieve a full range of motion and reduce the risk of future injury or complications. Your physical therapist will help guide you in this process.

*Long-Term Recovery (6 Weeks-3 Months)***1. Full Activity and Strengthening:**

- By 6 weeks, most people are able to return to normal activities, but high-impact sports should be avoided for 3-6 months or longer, depending on the severity of the tear and the recovery process.
- Continue physical therapy to build strength and avoid re-injury.

2. Return to Sports:

- After 3 months, you may return to sports with your doctor's approval, but it may take longer if you had a more extensive meniscectomy or if complications arise.

Possible Complications to Watch For:

- **Infection:** Though rare, infection is a possibility, and the signs to watch for include increased redness, swelling, and pain.
- **Blood Clots:** Deep vein thrombosis (DVT) is a rare but serious complication, particularly if you're immobile for extended periods.
- **Knee stiffness:** Some patients may develop stiffness in the knee, which can affect mobility.
- **Meniscal Regeneration:** There is also a risk that the remaining meniscus tissue may wear down over time, especially if a large portion was removed. This can lead to increased risk of osteoarthritis in the knee joint.

Conclusion:

While knee arthroscopy with meniscectomy is generally effective at relieving pain and improving function, recovery times can vary depending on the individual and the extent of the

surgery. Following the post-surgical protocol, including pain management, physical therapy, and gradual return to activity, is key to a successful recovery. Always follow your surgeon's instructions closely and attend follow-up appointments to ensure optimal healing.

ALTERNATIVELY, Knee arthroscopy with **meniscus repair** is a minimally invasive surgical procedure where the surgeon **repairs a torn meniscus rather than removing it**. The meniscus is the cartilage in the knee that helps cushion the joint and distribute weight. If the tear is in a location that can heal, the surgeon will attempt to repair it rather than remove the damaged portion.

Typical Surgery Process (same day surgery):

1. **Preparation:**
 - **Anesthesia:** You will be given general anesthesia (where you are fully asleep). A nerve block may be administered prior to surgery.
 - **Sterilization:** The surgeon will clean and sterilize the knee area to reduce the risk of infection.
2. **Incision and Arthroscopy:**
 - The surgeon makes several small incisions (about 1 cm) around the knee.
 - A thin tube with a camera (arthroscope) is inserted through one of the incisions. The camera sends images of the inside of your knee to a screen, helping the surgeon see the tear and plan the repair.
 - Special instruments are inserted through the other incisions to repair the meniscus tear. The surgeon may use sutures or other techniques (such as anchors) to stitch the meniscus back together.
3. **Repairing the Meniscus:**
 - If the tear is in an area with a good blood supply (like the outer portion of the meniscus), it is more likely to heal after repair.
 - The surgeon may stitch the meniscus back together, using a variety of techniques depending on the type and location of the tear.
 - In some cases, the tear might be debrided (cleaned up), but the goal is to preserve as much of the meniscus as possible.
4. **Closing the Incisions:**
 - Once the repair is complete, the incisions are closed using stitches or adhesive strips.
 - A sterile bandage or dressing is applied to the knee.

Recovery Course:

Immediate Post-Op (Day 1-3)

1. **Pain Management:**
 - You may experience pain, swelling, and bruising in the knee after surgery, which can be managed with prescription pain medications provided by your surgeon
 - Ice is used to reduce swelling, and your surgeon may also recommend elevating your knee.
2. **Weight-Bearing Restrictions:**
 - For the first few days, you will likely need to use crutches to avoid putting weight on the knee.

- A knee brace will be used at near all times to help stabilize the joint, even while sleeping
- 3. **Initial Physical Therapy:**
 - Physical therapy may start on the day after surgery or within the first few days to help with gentle range-of-motion exercises. The goal is to prevent stiffness and maintain flexibility without stressing the meniscus repair.

Short-Term Recovery (Week 1-4)

1. **Rest and Elevation:**
 - Continue to rest and elevate your knee to reduce swelling. It is essential to avoid excessive movement in the knee joint to allow the meniscus repair to begin healing.
2. **Weight-Bearing and Crutches:**
 - Depending on the type and location of the tear, your doctor may allow partial weight-bearing on the knee with crutches or may have you remain non-weight-bearing for a period of time.
 - If you're allowed to bear weight, use crutches and gradually increase your weight-bearing capacity, as directed by your surgeon.
3. **Physical Therapy:**
 - Your physical therapy will focus on regaining knee motion, particularly bending and straightening the knee.
 - Stretching and strengthening exercises may also begin, but weight-bearing exercises will be avoided at first.

Mid-Term Recovery (Week 4-8)

1. **Increased Activity:**
 - As your knee heals, you will begin to gradually increase your activity level. However, high-impact activities like running, jumping, or pivoting should be avoided during this period.
 - You may be allowed to increase your walking distance and might even begin gentle biking or swimming, if approved by your doctor.
2. **Continued Physical Therapy:**
 - Therapy will intensify, with a focus on strengthening the quadriceps, hamstrings, and calf muscles.
 - Your therapist will guide you through exercises that will improve knee stability and function while avoiding excessive strain on the meniscus repair.

Long-Term Recovery (2-6 months)

1. **Gradual Return to Activities:**
 - At around 6 weeks to 3 months, you may start incorporating more weight-bearing exercises and functional activities (e.g., walking without crutches or brace).
 - High-impact sports should be avoided for several months, especially if you have a significant tear or if the repair is in the more complex areas of the meniscus.
2. **Physical Therapy:**
 - The goal of therapy during this time is to increase strength, improve stability, and prevent long-term stiffness.
 - Advanced exercises may involve more intense strengthening and functional training to prepare for a return to sport or daily activities.
3. **Healing of the Meniscus:**
 - Full healing of the meniscus may take up to 6 months, and during this time, the knee's strength and function continue to improve.

- Regular check-ups with your surgeon will ensure that the meniscus is healing properly and that there are no complications, such as infection or re-injury.

4. **Return to Sports:**

- After 6 months or more, once you have achieved sufficient strength and mobility and your surgeon gives approval, you can return to high-impact sports or activities.
- The timeline can vary depending on the severity of the tear, the repair, and your overall recovery.

Possible Complications to Watch For:

- **Infection:** As with any surgery, there's a risk of infection, though it is relatively rare. Signs include fever, increased redness, and swelling around the incision.
- **Blood Clots:** Post-surgical blood clots (DVT) can form, especially in the first few weeks, so it's essential to move your ankle and foot frequently and follow your doctor's advice.
- **Stiffness:** Some patients may develop stiffness, especially if they do not follow physical therapy guidelines.
- **Re-Tear:** In rare cases, the meniscus repair can fail, especially if too much stress is placed on the knee before full healing has occurred.

Conclusion:

Knee arthroscopy with meniscus repair is designed to save the meniscus and restore knee function. Recovery requires a careful, gradual progression of rest, physical therapy, and limited activity to allow for the meniscus to heal. Patience is essential, as it may take up to 6 months to fully recover. Following your surgeon's and physical therapist's instructions will greatly improve the chances of a successful outcome and full recovery.