Q & A
Knee Arthroscopy

What is knee arthroscopy?

Arthroscopic surgery on the knee involves inserting a small camera, less than 1/4 inch in diameter, into the knee joint through a small incision. The camera is attached to a video monitor, which the surgeon uses to see inside the knee. For most knee arthroscopy, general anesthesia is employed for patient comfort and muscle relaxation to facilitate the surgery. Some procedures may be possible with local anesthetics and sedation.
After the camera is inserted, water is pumped in under pressure to expand the joint and help control bleeding. Some surgeons also use a tourniquet to prevent bleeding.
After looking around the entire knee for problem areas, the surgeon will usually make 1 to 4 additional small surgical cuts to insert other instruments. Commonly used instruments include:

- A blunt hook to pull on various tissues
- A burr to remove bone
- A shaver to remove damaged or unwanted soft tissues

A heat probe may also be used to remove inflammation (synovitis) in the joint.
At the end of the surgery, the water is drained from the knee. The incisions are closed, and a dressing is applied. Many surgeons take pictures of the procedure from the video monitor to allow the patient to see what was done.

Why is knee arthroscopy performed?

Arthroscopy may be recommended for knee problems, such as:

- A torn meniscus (either repair or remove)
- A torn or damaged ligament
- Inflamed or damaged lining of the joint (synovium)
- Mild arthritis
- Misalignment of the kneecap (patella)
- Small pieces of broken cartilage (loose bodies) in the knee joint

What is the Prognosis (outlook)?

Use of arthroscopy has reduced the need to surgically open the knee joint. This has resulted in:

- Decreased length (if any) of hospital stay
- Faster recovery time
- Fewer complications
- Less pain and stiffness

Expectations vary depending on the cause for the surgery. Surgery done for a meniscal tear or loose bodies with no other problems (like arthritis) is usually uncomplicated. Most patients can expect a full recovery. Having arthritis dramatically reduces the effectiveness of arthroscopy. Up to half of patients may not improve after surgery. Arthroscopic removal of the synovium (arthroscopic synovectomy) can be of great benefit to patients with rheumatoid arthritis. Arthroscopic or arthroscopic-assisted surgery to repair the meniscus or reconstruct ligaments in the knee is much more complicated, with a long recovery and varied results.

Q & A
Knee Arthroscopy

How long is recovery?

For a simple meniscal cleaning (debridement), recovery is usually fast. You may need to use crutches for a while to reduce weight placed on the knee joint and to control pain. You can manage pain with medications. For more complicated procedures where anything is fixed or reconstructed, you may not be able to walk on the knee for several weeks. Recovery may be anywhere from several months to a year. See "After Knee Arthroscopy" outlined below for more information on recovery.

What are the risks?

Knee arthroscopy is generally a very safe procedure, but as with any surgical procedure there can be complications.

Summary of Procedure: Knee arthroscopy is a surgical procedure in which a small camera is used to look directly into the joint to diagnose and treat knee disorders. During the procedure, the surgeon can insert instruments through small incisions to remove or repair damaged tissues. Arthroscopy is often indicated for persistent pain, catching or swelling in the knee.

Complications of knee arthroscopy: Arthroscopic knee surgery is generally very safe. Complications from surgery or that may arise during rehabilitation and recovery includes:

- Problems related to the surgery itself may include:
  - Numbness in the surgical scar area.
  - Infection in the surgical incisions.
  - Damage to structures, nerves, or blood vessels around and in the knee.
  - Blood clots in the leg.
  - The usual risks of anesthesia.
- Incomplete relief of pain. Your surgeon will do everything possible to repair your knee; however you may continue to have pain and/or swelling. A thorough rehabilitation program and a slow, gradual return to activities will reduce the likelihood of pain and swelling.
- Limited range of motion, usually at the extremes. For example, you may not be able to completely straighten or bend your leg as far as the other leg. This is uncommon, and sometimes manipulation under anesthesia can help. Rehabilitation usually attempts to restore a range of motion between 0 degrees (straight) and 130 degrees (bent or flexion). You may lack a few degrees at either end of the range of motion after surgery and rehabilitation.
- Re-injury. Your surgeon will leave healthy tissues inside the knee intact during surgery in most cases, and these can be injured in the future.
- In rare cases, chronic pain, tenderness, and swelling (complex regional pain syndrome) after the injury is healed.

Q & A
Knee Arthroscopy

What should I expect after knew arthroscopy?

- Diet: Start with clear liquids and advance to regular food if you tolerate the liquids without nausea.

- Bandages/Showers: Remove all surgical bandages on the 4th postoperative day. You may shower normally at this point (if you must bathe before this then sponge bathing is advised and please take care to keep you bandages dry prior to their removal). Please avoid soaking your knee, such as in a bath tub, swimming pool, or hot tub, until after suture removal and clearance by your physician. Band-Aids can be applied to the incision sites after the bandages have been removed.

- Pain Control: Initially, you will experience some swelling and discomfort in the knee for a few days postoperatively. Crutches are provided for you comfort. It is safe to bear weight on your knee after arthroscopy unless your surgeon tells you otherwise.

    - Elevation of your knee above the level of your heart is helpful in decreasing swelling and discomfort and you should plan your schedule so that much of your time can be spent in this position for the first 48 hours after your surgery and intermittently thereafter.
    - Ice packs are also very effective for improving comfort and decreasing inflammation. They should be used for 20-30 min at a time. A thin towel or T-shirt under the ice pack will help prevent condensation reaching the bandages and will protect the skin after bandages have been removed.
    - You will most likely be given a prescription for pain medication. It is advisable to use the pain medication on a regular schedule for the first 48 hours then switch to using it as needed. Pain medication is best tolerated when taken with meals. An anti-inflammatory medication such as ibuprofen or naproxen may be used along with your prescribed pain medication in most cases.

Will I need Rehabilitation?

Yes. After undergoing knee arthroscopy, it is important to begin exercising your knee immediately to restore strength and full range of motion. Initial exercises should be nonweightbearing in nature, and should focus on gentle strengthening of the muscles surrounding the knee as well as increasing joint range of motion.

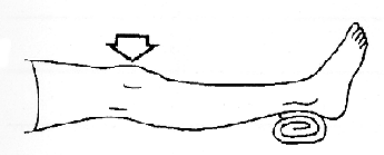
You should expect to feel a gentle stretch while performing your beginning exercises, but you should not experience any pain. Any activity that causes significant discomfort should be stopped immediately. It is also a good idea to ice and elevate your leg after performing these exercises to decrease any increase in swelling.

The following exercises are appropriate for immediate post-arthroscopy rehabilitation. The movements should be gentle and steady. Bouncing or overstretching should be avoided.

Q & A
Knee Arthroscopy

Quadriceps Contractions

Lay on your back on a flat surface. Place a rolled towel under your ankle between you and the surface. Push your ankle down into the towel roll. This will cause your knee to straighten as it rises off the surface you are laying on. Straighten your knee as much as possible and hold the position for five seconds. (Avoid any type of bouncing motion!) Relax and repeat 10 more times.



Hamstring Contraction

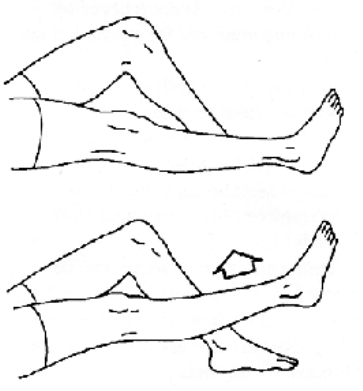
Lie on your back with your knees bent in a 10 to 15 degree angle. Without moving your leg, pull your heel into the floor. This will cause the muscles on the back of your thigh to contract. Hold this for five seconds. Relax and repeat 10 more times.

Gluteal Sets

Lie on your back with your knees bent in a 10 to 15 degree angle. Squeeze your buttock muscles together. Hold for five seconds. Relax and repeat 10 more times.

Straight Leg Raises

Lay on your back on a flat surface. Bend the knee of your uninvolved leg (the one that wasn't operated on) to a 90-degree angle with your foot flat on the surface. Keep your involved leg straight without the knee bent. Slowly lift the involved leg six inches off the floor. (by contracting the front thigh muscles). Hold for five seconds. Slowly lower your leg to the floor. Relax and repeat 10 more times. (The knee of the raised leg should remain straight throughout this exercise. Focus on lifting by using the muscles on the front of your hip joint.)



Knee Range of Motion

Sit on a flat surface and slightly bend your knee. Place a towel under the heel of the foot and hold on to the ends of the towel. Using your arms to pull gently, bend the knee up and hold 3-5 seconds and then straighten to a more comfortable position. Because of swelling and your recent surgery the knee can be quite stiff and painful as you force it to bend. The best thing to do is go-slow and do not use heavy force to stretch. Usually the more you do the further it bends without additional discomfort. Repeat 10 stretches with 5 second hold, 3-6 times per day.

Stationary Biking

Q & A
Knee Arthroscopy

Once good control of swelling has occurred and the knee bends past 90 degrees, stationary biking can offer good range of motion exercise. The resistance should be near the lowest setting and the pedaling rate should be slow and steady 30-60 revolutions per minute. Seat adjustment is critical. If the seat is too low, the knee will over bend at the top of the revolution and will cause some pain. If the seat is too tall the knee will over stretch at the bottom of the revolution. The knee should easily tolerate the revolution at both top and bottom. It may take several trials of seat adjustment to get it right. Start with 3-5 minutes several times per day and increase to 15 minutes if it is helpful.

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