

**Charles E. Abrahamsen, MD**  
*Board-Certified Orthopaedic Surgeon*

(727) 724-6169



**Belcher Point**  
1801 N. Belcher Rd Suite B  
Clearwater, FL 33765  
Fax (727) 791-0470

## Rehabilitation Protocol Arthroscopic Knee Surgery, Less Aggressive

Charles E. Abrahamsen, MD

### **YOUR REHABILITATION PROGRAM**

#### ***PREPARATION FOR SURGERY:***

1. **Anesthesia**--arthroscopic knee surgery is performed under spinal or general anesthesia as the muscles surrounding the patient's knee must be totally relaxed to allow adequate visualization. Inability to open the joint space because of muscle guarding can cause unnecessary damage to the joint surface, leading to degenerative arthritis.
2. **Medical evaluation**—if a patient has significant medical problems, especially heart and lung disease, their family doctor or internist will usually be asked to provide a medical report assuring us that the surgery and anesthesia does not carry an unreasonable risk. Our nurse will make arrangements to contact the patient's medical doctor; occasionally a family doctor or internist will contact the patient to arrange for a preoperative office evaluation to ensure the surgery does not carry an undue risk.
3. **Exercises**—it is usually not necessary to perform any specific exercises prior to surgery; patients who cannot fully bend or straighten their knee are encouraged to simply bend and straighten the knee several times a day to regain as much motion as possible prior to surgery.
4. **Braces & Crutches/Walker**—braces are usually not necessary, unless there is an associated medial collateral ligament tear. However, if your knee feels unstable ("gives out") prior to surgery, we can prescribe a hinged knee brace for support. In extreme cases of pain and giving way, crutches or a walker may be necessary prior to surgery.
5. **Timing**—the hospital or surgery center will usually contact you 1-3 days before your surgery date to inform you what time you are to arrive the day of your operation.

### ***IMMEDIATELY AFTER SURGERY***

As soon as you wake up from anesthesia, you should begin ankle pumps, in the recovery room—move your feet as if pumping a gas pedal. Do this frequently, at least every hour while awake, for the first 2 days after surgery. Ankle pumps help prevent blood clots. Blood clots are rare if the exercise routine is followed, so rare that blood thinners are almost never warranted to prevent blood clots after arthroscopic knee surgery.

### ***ON ARRIVAL HOME***

Crutches or walker are necessary until you are comfortable and feel secure walking without them, usually for 3 days after surgery. You are to elevate your leg above your heart and use ice for the 1<sup>st</sup> 24 hrs. Use the ice continuously—no need to use it “on & off” if applied over the dressing--, and change the ice every 4 hours. After that use ice intermittently as needed for pain and swelling. Keep the dressing dry.

***DIET:*** Start with clear liquids then slowly progress to solids if you are not nauseated. *Be careful!!* Even if you feel "fine" eating too much too soon can lead to nausea and vomiting.

### ***1<sup>st</sup> DAY AFTER SURGERY***

Begin: 1. Quad sets (laying on back, straighten knee by pushing back of knee down), 2. Straight leg raises (stop if you experience back pain during this exercise), and 3. Heel slides (laying on back, slowly bend knee as far as pain allows then straighten). Do each exercise 2 sets of 20 repetitions, 3 times a day (less if the knee is painful or swollen). Continue the exercises until your 1<sup>st</sup> postoperative appointment.

You may not get the incisions wet until 5 days after surgery. To shower before 5 days, cover the leg & knee with a plastic trash bag (or plastic wrap such as Saran Wrap or Glad Press‘N’Seal). It is best to wrap a towel above the knee before covering with plastic in case any water gets inside the plastic bag or wrap.

### ***3<sup>rd</sup> DAY AFTER SURGERY***

You may remove your dressing (but do not remove any Steri-Strips if present). The incisions may be left open to air or covered with band-aids. Call the office if there is any drainage, or if you have severe pain or unexpected redness or swelling.

You may discard the crutches or walker if you are comfortable and feel safe walking without them. Expect to have a slight limp until 1 or 2 weeks post-op. Limit time on your feet to an hour or less 3 times a day until 1-2 weeks post-op. Too much time on your feet may lead to muscle fatigue & buckling, as well as swelling and pain. At times swelling & pain from overactivity in the early post-op period require removal of fluid in the office for pain relief.

### ***5<sup>th</sup> DAY AFTER SURGERY***

You may get the incisions wet 5 days after surgery, in a shower only (no soaking the knee in a tub). Exercises should be performed 2-3x a day so that the knee moves from nearly full extension to 90 degrees flexion by 3-5 days after surgery.

**WEEK 1-2**

1. **WEIGHT BEARING:** Bear as much weight on the operated leg as pain allows and use your crutches as needed. Crutches may be discarded when the knee is comfortable enough to walk on.
2. **RANGE OF MOTION:** Increase active motion using heel slides for flexion and quad sets or prone stretching for extension within the tolerance of comfort.
3. **STRENGTHENING:** Strengthen the knee using straight-leg-raises and isometric quadriceps and hamstring exercises. Rehabilitate the hip by doing abduction (laying on the opposite side), flexion (sitting), and extension (prone) exercises against gravity. When doing strengthening exercises, use ankle weights, start with 1 or 2 lbs. & work your way up to 5 lbs.,
4. **WOUND CARE:** Sutures, if present, are generally removed the 1<sup>st</sup> post-op office visit, 6 days after surgery. Most patients will have dissolvable sutures under the skin that do not need to be removed. Do not remove Steri-Strips—they will usually fall off on their own. If still present 2 weeks post-op they may be gently pulled off. Do not soak the knee in a bathtub, hot tub, or swimming pool until 2 weeks after surgery. Don't be surprised if bruising develops 3 to 7 days after the operation in the back of the thigh, calf, and ankle.
5. **GOAL:** By two weeks the knee should move from almost full extension to nearly full flexion and may continue to be sore, stiff, and swollen. Swelling is best controlled by limiting activities such as walking for exercise, as well as ice after exercise or activity.
6. **PHYSICAL THERAPY:** Some patients are too busy with the demands of work and family to participate in a formal physical therapy program that requires regular attendance at therapy sessions at inconvenient times during the day. Fortunately, in some cases, the majority of the rehabilitation can be done at home or while traveling. You may use a stationary bicycle, pool, or exercise equipment at a health club if available. A physical therapist's treatment and supervision is often recommended for optimal results. Physical therapy visits are typically 3 times a week in the 1<sup>st</sup> 2-3 weeks then twice a week for the 2<sup>nd</sup> 2-3 weeks.

**WEEK 2-4**

1. **WEIGHT BEARING:** You should be walking with no limp
2. **RANGE OF MOTION:** You may use a stationary bicycle if available; exercising on a stationary bicycle can help improve motion. Begin with the seat elevated and initially do not apply any resistance to the wheel. Lower the seat as motion increases and add resistance as tolerated. Try to bicycle once or twice a day for 10 to 15 minutes.
3. **STRENGTHENING:** You may walk and swim as your comfort permits. Do not stay on your feet all day long until at least 4 weeks post-op. Continue quad sets, straight leg raises in neutral (toes pointing up) & external rotation (toes pointing out 30 degrees), progressing from 1 to 3 pounds ankle weight as pain allows. If you are not experiencing significant pain (no pain pills), add wall slides (mini or shallow squat

leaning against a wall or door jamb) or mini squats holding onto the back of a chair for support 90 degrees (right angle) to 45 degrees only. Don't bend your knees more than a right angle.

4. **GOAL:** By four weeks the knee should extend nearly equal to the opposite knee and flex to at least 120 degrees. It is not unusual to still have some fluid or swelling in the knee, which may limit motion. Do not be discouraged if some fluid persists.

### ***WEEK 4-8***

5. **WEIGHT BEARING:** You may be on your feet all day long if swelling is minimal or none.
6. **RANGE OF MOTION:** You may continue to use a stationary bicycle if available. Add IT (iliotibial) band stretching, laying down or sitting—turn your lower body & legs to one side and twist your body to the opposite side, holding the knees down with your hand or arm.
7. **STRENGTHENING:** You may walk and swim as your comfort permits. Continue quad sets, straight leg raises in neutral (toes pointing up) & external rotation (toes pointing out 30 degrees), progressing from 5 pounds ankle weight as pain allows. Continue wall slides (mini or shallow squat leaning against a wall or door jamb) or lunges holding onto the back of a chair for support 90 degrees (right angle) to 45 degrees only. Add abdominal crunches (hip flexor strengthening)—lie on your back, lift your head up slightly with your hands, then lift both legs off the floor 6”.
8. **GOAL:** By 8 weeks the knee should extend & flex equal to the opposite knee. Swelling should be minimal. You should be able to climb and descend stairs normally.

### ***WEEK 8-12***

1. **STRENGTHENING:** You may use any exercise equipment available to you in your home, gym, and health club as long as swelling and pain are not a problem. Use lower weight and a higher number of repetitions (20 to 30) to build endurance. Try to exercise 1/2 hour a day 3 to 5 times per week.
2. **GOAL:** By 12 weeks the range of motion of the knee should equal the normal side and feel well enough to resume most normal activities and pastimes such as golf. After 12 weeks irritability from surgery has usually subsided, and by then persistent pain or swelling is unusual, unless significant degenerative arthritis was found during the arthroscopic procedure.

### ***SPORTS ACTIVITIES***

Activities such as jogging are gradually resumed after 3 months post-op. Sports such as tennis, soccer, football, and basketball are also gradually resumed after 3 months post-op, in 3 phases. The 1<sup>st</sup> phase is solo training, 50% speed maximum. The 2<sup>nd</sup> phase is training

with teammates, 75% speed maximum. The 3<sup>rd</sup> phase is scrimmaging with teammates, 100% speed, light contact (e.g no 50-50 balls if playing soccer). The 4<sup>th</sup> phase is competitive play (unlimited activity). Each phase normally requires 2 weeks or more. Pay attention to swelling, and slow the progression of activity if swelling occurs.

## **ANSWERS TO COMMON QUESTIONS:**

### ***How long will I be in the hospital or surgery center?***

Surgery is performed as an outpatient, under general or spinal anesthesia (patient's choice—the anesthesiologist will discuss the options with you just before surgery if you ask). Local anesthesia in many cases doesn't allow proper visualization inside the knee and can lead to a less-than-optimal result. Patients go home 2-3 hours after surgery when they can eat and walk with crutches or walker. If you have your own crutches please bring them to the hospital with you. If not, crutches can be provided at the surgery center or hospital. Many patients, especially older patients, prefer a walker.

### ***How long does the surgery take to perform?***

The surgery usually requires 1/2 to 1 hour to perform.

### ***When can I drive a car?***

When you feel safe and confident behind the wheel so you can avoid getting into an accident. Generally, driving is often resumed within the first 2 weeks after surgery, but may take longer if you have to work a clutch. Do not drive when you are taking pain pills.

### ***When can I return to work or school?***

Motivated people who have a sitting or desk job can usually be back at work by 5-10 days after surgery. Construction workers take 2-3 months.

### ***What is the success rate of the surgery?***

The most important predictor is the degree of associated arthritis or joint surface damage. 90% of patients with little or no joint surface damage/arthritis will have a knee nearly equal to the normal knee and will be able to return to full unrestricted activities without any brace.

### ***Can I reinjure the meniscus?***

Of course, remember that you tore your own natural meniscus, and the surgery does not remove the entire meniscus; thus it is theoretically possible to re-tear the meniscus in a different area. Fortunately, re-tearing of the meniscus is uncommon.

***Can my therapist watch the operation?***

Yes, the therapist can call (727) 724-6169 x203 and let our medical assistant know if they would like to observe the surgery. It is a hospital policy that non-medical personal are not permitted in the operating room; this includes family and friends.

*If you have any more questions, please write them down in the space below and call and present the question(s) to our medical assistant, 724-6169 x203.*