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Shoulder, Elbow, Knee Arthroscopy
Shoulder Replacement Surgery

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DISCHARGE INSTRUCTIONS & PHYSICAL THERAPY PROTOCOL: ACL Reconstruction – Quad Tendon Autograft With or Without Meniscus Repair

- Recovery after knee surgery entails controlling swelling and discomfort, healing, return of range-of-motion of the knee joint, regaining strength in the muscles around the knee joint, and a gradual return to activities. The following instructions are intended as a guide to help you achieve these individual goals and recover as quickly as possible after your knee surgery.

- COMFORT

  - **Cold Therapy**
    - If you elected to receive the **circulating cooling device**, this can be used continuously for the first 3 days, (while the initial post-op dressing is on). After 3 days, the cooling device should be applied 3 times a day for 20-30 minute intervals.
    - If you elected to receive the **gel wrap**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the gel wrap.
    - If you elected to use **regular ice**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the ice.
  - **Medication**
    - **Pain Medication-** Take medications as prescribed, but only as often as necessary. Avoid alcohol and driving if you are taking pain medication.
      - You have been provided a narcotic prescription postoperatively. Use this medication sparingly for moderate to severe pain.
      - **You are allowed two (2) refills of your narcotic prescription if necessary.**
      - When refilling pain medication, weaning down to a lower potency or non-narcotic prescription is recommended as soon as possible.
      - Extra strength Tylenol may be used for mild pain.
      - Over the counter anti-inflammatories (Ibuprofen, Aleve, Motrin, etc.) shoulder be **avoided** for the first 4 weeks following surgery.

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- **Anti-coagulation medication:** A medication to prevent post-operative blood clots has been prescribed (Aspirin, Lovenox, etc.) This is the only medication that MUST be taken as prescribed until directed to stop by Dr. Forsythe.
- **Nausea Medication –** Zofran (Odansetron) has been prescribed for nausea. You may take this as needed per the prescription instructions.
- **Constipation Medication -** Colace has been prescribed for constipation. Both your pain medication and the anesthesia can cause constipation. Take this as needed.

❖ ACTIVITIES

- **Range-of-Motion** – Move your knee through range of motion as tolerated. This must be done while sitting or lying down.
  - **Note**: If you underwent a meniscal repair, you may have range of motion restrictions.
- **Locking Knee Brace** – The brace is to be worn for up to 5-6 weeks following surgery. It will be locked straight until bone healing and good knee strength have been achieved (usually 5-6 weeks after surgery). At that time, your doctor will determine if your leg has enough strength to allow your brace to be unlocked. You may unlock the brace while sitting but lock the brace before standing. Sleep with the brace on until directed by Dr. Forsythe.
- **Exercises** – These help prevent complications such as blood clotting in your legs. Point and flex your foot and wiggle your toes. Thigh muscle tightening exercises should begin the day of surgery and should be done for 10 to 15 minutes, 3 times a day, for the first few weeks after surgery.
- **CPM** – (Continuous Passive Motion Machine) – A Continuous Passive Motion (CPM) machine may be started the day **after** your surgery. This machine will be set at 30°. Motion on the machine should be increased at 10-15° per week, to a maximum of 90° in one month. The machine should be used 6 hours per day (i.e. 2 hours in the morning, 2 hours in the afternoon and 2 hours in the evening). Use of the machine will continue for 4-6 weeks, or until maximum flexion of the machine is reached (110°).

DO NOT WEAR BRACE OR COOLING DEVICE WHILE USING CPM MACHINE

- **Weightbearing** – You are allowed to put all of your weight on your operative leg using your brace in the **locked straight** position. Do this within the limits of pain. Two crutches should be used until directed to discontinue by Dr. Forsythe.
  - **Note**: If you underwent a meniscus repair (not a debridement), you will NOT be allowed to put full weight on your operative leg for 1 week. You will be allowed to put partial weight on your leg as instructed.

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- **Physical Therapy** – PT is usually started 1-3 days after surgery. You should call the physical therapist of your choice for an appointment as soon as possible after surgery. A prescription for physical therapy, along with physical therapy instructions (included in this packet) must be taken to the therapist at your first visit.
  - **Note**: If you underwent a meniscus repair, or if you have had multiple ACL reconstructions, you may not start PT immediately.
- **Athletic Activities** – Athletic activities, such as swimming, bicycling, jogging, running and stop-and-go sports, **should be avoided** until allowed by your doctor.
- **Return to Work** – Return to work as soon as possible. Your ability to work depends on a number of factors – your level of discomfort and how much demand your job puts on your knees. If you have any questions, please call your doctor.
- **Driving**
  - **Right knee surgery:** Driving is NOT permitted for the first 4-6 weeks following right knee surgery.
  - **Left knee surgery:** Driving is allowed when comfortable AND you are not taking narcotic pain medication.

❖ WOUND CARE

- **Bathing -** Tub bathing, swimming, and soaking of the knee **should be avoided** until allowed by your doctor - Usually 4-6 weeks after your surgery. Keep the dressing on, clean and dry for the first 3 days after surgery.
  - You may shower 3 days after surgery with WATERPROOF band-aids on. Apply new band-aids after showering. Incision should remain clean and dry.
- **Dressings -** Remove the dressing 3 days after surgery. Your stitches will be left in until about 1 week post-op and will be removed at your post op office visit. You may apply band-aids to the incisions around your knee.

❖ EATING

- Your first few meals, after surgery, should include light, easily digestible foods and plenty of liquids, since some people experience slight nausea as a temporary reaction to anesthesia.

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❖ CALL YOUR PHYSICIAN IF:

- Pain in your knee persists or worsens in the first few days after surgery.
- Excessive redness or drainage of cloudy or bloody material from the wounds (Clear red tinted fluid and some mild drainage should be expected). Drainage of any kind 5 days after surgery should be reported to the doctor.
- You have a temperature elevation greater than 101°
- You have pain, swelling or redness in your calf.
- You have numbness or weakness in your leg or foot.

❖ RETURN TO THE OFFICE

- Your first return to our office will likely be within the first 1-2 weeks after your surgery. You can find your appointment date and time for the first post-operative visit in this folder.

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REHABILITATION PROGRAM:
Anterior Cruciate Ligament Reconstruction
Quadriceps Tendon Autograft

NOTE: The following instructions are intended for your physical therapist and should be brought to your first physical therapy visit.

- INTRODUCTION
  - The anterior cruciate ligament is noted in the stabilizing ligaments of the knee. Loss this ligament, need to functional instability during work or sports and can also lead to development of knee arthrosis. These guidelines were developed for patients after ACL surgery using quadriceps tendon autograft.
  - The goals of ACL construction are:
    - To provide functional stability of the knee
    - Return the patient to his/her previous level of activity
    - Prevent development are of arthrosis
  - Moderate methods of arthroscopic reconstruction of the ACL can successfully return to functional stability to the knee. The most worrisome complication following the surgery is the development of arthrofibrosis with its inherent loss of motion and weakness in the operative extremity.
  - The goal of ACL post reconstruction rehabilitation is to return to normal motion, strength, and function to the knee while not compromising the integrity of the reconstructed ACL. Total body conditioning should be utilized throughout this protocol

GENERAL PROGRESSION OF ACTIVITIES OF DAILY LIVING

Patients may begin the following activities at the dates indicated (unless otherwise specified by the physician):

- Bathing/showering without brace- after suture removal
- Sleep with brace locked in extension for 6 weeks
- Brace locked in extension for 6 weeks for ambulation
- Use of crutches, brace for ambulation for 6 weeks
- Weightbearing as tolerated immediately post op (unless meniscus repair, then partial weightbearing for one week post op)

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REHABILITATION PROGRESSION

The following is a general guideline for progression of rehabilitation following ACL quadriceps tendon autograft reconstruction. Progression through each phase should take into account patient status (e.g., healing, function) and physician advisement. Please consult the physician if there is any uncertainty concerning advancement of a patient to the next phase of rehabilitation.

PHASE I: Mobilization

Early Mobilization: 0-2 Weeks

Goals:

- Protect graft fixation (assume 8 weeks fixation time)
- Decrease pain and swelling
- Full extension range-of-motion
- Educate patient on rehabilitation progression
- **ROM as tolerated**
    - **Limit to 90 degrees the first 4 weeks if meniscus repair performed**

Brace:

- Week 0-6: Locked in full extension for ambulation, sleeping.
- Weeks 4-6: Locked for ambulation and sleeping. May unlock when patient has achieved no lag with straight leg raise

Weightbearing Status:

- 0-6 weeks: Weightbearing as tolerated with two crutches as needed in locked brace.
- **If meniscus was repaired, toe touch weight bearing for one week**.

Therapeutic Recommendations:

Ice
AROM, PROM, CPM
Prone lying with legs off edge of bed achieving full knee extension
Quad sets
Patellar mobilizations, especially superiorly
Straight leg raises
Full arc quads without weights
Multidirectional hip PREs
Prone knee flexion

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Calf and hamstring stretching
Locked knee brace, except when performing exercises

Late Mobilization: 2-6 Weeks

Goals:

- Good quad control
- Normal gait
- Full extension

Therapeutic Recommendations:

Continue all exercises begun in phase 1, early mobilization, add weights as tolerated
Mini squats
Wall slide mini squats
Partial arc quads, 60 to 90 degrees, with weights as tolerated
Toe raises with weights as tolerated
Step ups, 2 inches and progress 2.
Locking knee brace when ambulating, may unlock while sitting and when performing exercises, may not remove for sleeping. May unlock brace for ambulation when good quad control is achieved (not before 4 weeks).

PHASE II: Strengthening

Early Strengthening (3 Weeks to 6 Months)

Goals:

- Strength 60% of opposite limb
- Reemphasize full range of motion and normal gait

Therapeutic Recommendations:

Continue with exercises from Phase 1, Mobilization
Begin more closed chain activities, e.g. step ups, mini squats, stairmaster, bike riding, PNF, etc.
Continue gait training, both fast feet and slow speed, for good control and strengthening of muscles
May begin supervised jogging at 4 months
Discontinue locking knee brace

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Late Strengthening (3 -5 Months)

Goals:

Strength 80% of opposite limb

Therapeutic Recommendations:

Continue with exercises from previous phases increasing resistance as tolerated
Increase intensity of plyometrics
Increase jogging/running intensity
Jump rope

PHASE III: Functional (6-9 Months)

Goals:

Return to full activity, sport, or work

Therapeutic Recommendations:

Progressive plyometrics
Incline plyometrics
Jogging
Running
Bounding
Skipping
Hopping
Sport simulation

Criteria for Return to Sport Activities

One leg hop test 90% of opposite leg
Jog without a limp
Full speed run without a limp
Shuttle run without a limp
Figure 8 running without a limp
Single leg vertical jump 90% of opposite limb
Squat and rise from squat

Criteria for Return to Work Activities

Perform simulated work activity to 90% level