



## Patellar / Quadriceps Tendon Ultrasound Guided Percutaneous Tenotomy

### Phase 1 – Protective Phase (0 – 1 weeks)

#### Goals for Phase 1

- Minimize atrophy
- Improve range of motion
- Minimize and reduce pain
- Minimize and reduce swelling

#### Criteria for Progression to Phase 2

- Controlled pain
- Perform AROM minimal pain or compensation

#### Other Considerations

- Use crutches as directed
- Use brace as directed by MD if provided

#### Weight Bearing

- Bring your crutches (and brace if you were given on) to your procedure.
- 1-3 days Post Op: NO weight bearing on the treated knee. Used the crutches to get around.
- 4-7 days Post Op: Transition to partial weight bearing with the crutches. Some discomfort is normal, but walking should not make pain worse.

#### Brace

- 1-3 days Post Op: Use knee immobilizer if given and then wean from brace between 4-7 days Post Op.

#### Activity and Rehab

- 1-3 days: Rest and keep leg elevated to reduce swelling.
- 4-7 days: Begin gentle range of motion to increase knee flexion. Begin heel slides and isometric strengthening with quad sets 3 times per day.

#### Modalities

- Ice maybe used for 15 – 20 minutes at time 3 times day.



## Phase 2 – Range of Motion (2-6 weeks)

### Goals for Phase 2

- Minimize swelling and pain
- WBAT as tolerated without crutches
- AROM near normal limits with minimal pain
- Able to perform initial balance, stretching and strengthening exercises

### Criteria for Progression to Phase 3

- Able to walk with normal gait in home and community

### Brace

- Weaned fully from brace as long as pain and swelling controlled with good quad function.

### Weight Bearing

- Day 8-14: Continue partial weight bearing on crutches, focusing on having a normal walking stride.
- Week 3: In your home, walk without crutches as you feel comfortable. In the community, continue partial weight bearing with crutches.
- Week 4: Weight-bearing: As you feel comfortable, walk normally in your home and community. Mild soreness is normal.

### PROM/AROM

- Day 8-14: Begin stationary bike to increase ROM and knee flexion. Use your untreated leg to pedal and let the treated leg go along for the ride.
- Week 3: Continue knee range of motion and add gentle quadriceps stretching.
- Week 4: Continue knee range of motion and stretching.

### Manual Therapy

- Pain dominant mobilizations
- Progress toward motion dominant mobilizations as pain allows
- No soft tissue mobilization directly over area for 8 weeks

### Strengthening

- Day 8-14: Continue quad sets and begin SLR.
- Week 3: Begin active, unweighted knee extension.
- Week 4: Progress strengthening exercises, using a leg press first, then add body weight mini-squats. Increase intensity of the stationary bike to build strength, pedaling equally with both legs.
- Week 5: Progress intensity of strengthening exercises as directed by your care team. Once you are walking normally in your home and community, you may use an elliptical machine (no incline and low resistance at first) and increase walking pace for aerobic exercise.

### Proprioception

- Week 3: Begin balance exercises like single-leg stance

### Modalities

- Ice and elevate knee as needed to reduce swelling.



## Phase 3 – Strengthening (6-11 Weeks)

### Goals for Phase 3

- Full range of motion
- Functional strength
- Normal gait home and community

### Criteria for Progression to Phase 4

- Pain free motion
- Good functional strength

### PROM

- Full Passive Range of Motion.

### AROM

- Full Active Range of Motion.

### Manual Therapy

- Initiate soft tissue mobilizations as needed.
- Initiate joint specific mobilizations as needed.

### Cardiovascular

- Increase intensity of biking, swimming, elliptical.
- Can start fast/incline walking.

### Strengthening

- Continue with progression of strengthening.
  - Leg press double, single
  - Hip strength
  - Open and closed chain
  - Core activation

### Proprioception

- Progression of higher-level balance activities single leg, unstable surface.

### Modalities

- Ice may be used as needed.



## **Phase 4 – Full Return to Function (12 Weeks beyond)**

### **Goals for Phase 4**

- Ability to perform impact without pain
- Resume normal work and recreational activities
- Functional strength
- Progress repetitive and plyometric strength
- Maintain full pain free range of motion
- Increase volume and intensity of activities to prepare for return to work or sport

### **Criteria for Return to Work, Function, Sport**

- No pain
- Full ROM
- Strength 5/5
- If patient is looking to return to sports patient should complete return sport testing at Aurora BayCare Sports Medicine and meet the tested criteria with <10% side to side difference in all testing.

### **Other Considerations**

- Patient should have a gradual return to activity plan – work with your Therapist and Doctor to develop this plan
- Return to high impact activities is typically > 12 weeks based on the recommendations of your care team and individual progression through rehabilitation

### **AROM**

- Full without restriction.

### **Manual Therapy**

- Pain and stiffness dominate as needed.

### **Strengthening**

- Progress isotonic strengthening as tolerated.

### **Proprioception**

- Continue with focus on balance.
- Progress to impact and multidirectional activities.

### **Gait Training**

- Alter G training progressions.
- Retro jogging and multidirectional jog.
- Transition to 100% weight bearing jog-sprint.

### **Modalities**

- Ice maybe used for 15 – 20 minutes at time 3 times day or after activity.



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The ultrasound guided percutaneous tenotomy procedure allows what was once major surgery to be performed quickly through a small incision. Although post-procedure care will be tailored to fit your individual needs, the following guidelines are designed to help you and your physical therapist after the procedure.

## **Things to Avoid Before and After your Procedure**

- Anti-inflammatory medicine like ibuprofen (Advil™, Motrin™) and naproxen (Aleve™, Naprosyn™): Avoid 1 week before and 2 weeks after your procedure.
- Alcohol: Avoid 48 hours before your procedure. Do not consume alcohol while you are taking prescription pain medications.
- Tobacco and nicotine: Consider talking to your physician about stopping- these products impair your ability to heal and might reduce the beneficial effects of the procedure.
- Diet: There is no need to fast before your procedure. You may eat normal meals before your procedure and resume your regular diet when you feel able. A well-balanced diet will promote healing. If you are interested in more details, we can arrange a consultation with a dietician.

## **Bracing**

If your care team gave you a knee immobilizer, wear it for the first 3 days after your procedure.

## **Discomfort**

Some pain after your procedure is expected for the first few weeks. Use an ice pack on the painful area for 15 minutes as needed; in the first 2-3 days consider icing 3 times daily. In some circumstances your care team may prescribe pain medicine. If you are concerned about your pain, please contact your care team.

## **Therapist-directed soft tissue treatment**

Soft tissue work with and without tools may begin 6 weeks after the procedure.

## **Dressing**

- Remove dressing after 24-48 hours. Replace with simple bandage.
- Keep compression sleeve on for 2 days. It should be snug, but not tight.
- Sterile strip bandages can be removed when they begin peeling off or after 7 days. Keep bandages and procedure area clean and dry.

## **Bathing**

Do not soak/submerge knee in water for 1 week. Showering is OK.



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## **Follow-up Appointment**

You will be scheduled for follow-up appointments approximately 2 weeks and 6 weeks after your procedure. In some circumstances, a care team member may follow-up with you over the telephone or electronically. If you have questions about your appointments, call office during normal clinic hours.

## **When to Call your Provider**

If you notice increasing redness, warmth, pain, fever, drainage from the wound or other problems that concern you, call office during normal clinic hours. Otherwise seek care at your local emergency room.



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