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## **Patient Information Sheet: Proximal VMO Plication**

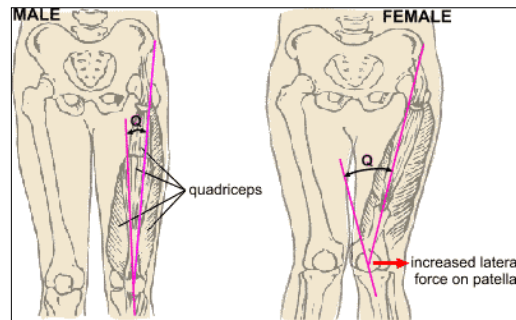
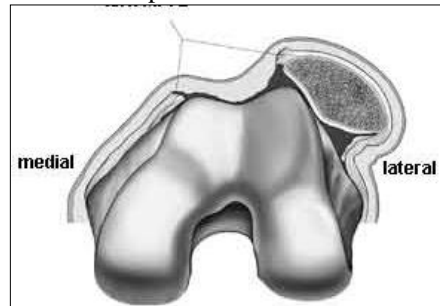
The patella is a bone that floats in space that is dependent upon muscle and ligaments to allow it to track within a groove (trochlea) during knee flexion and extension movements. The patella is analogous to a ball on a seals' nose in that the knee must constantly work to maintain normal patella and balance. With trauma such as a patella dislocation, the stabilizing structures are altered subsequently disrupting the tracking of the patella.

A twisting force of the knee joint is often responsible for patella dislocation. A force like this may occur during high level sports, such as soccer. A person's leg alignment may predispose them to such an injury. Females have an increased risk over males for patella dislocation, secondary to a wider pelvis.

The patella may spontaneously reduce or require reduction. X-rays taken at the time of injury are often negative. An MRI may be ordered to investigate the medial structures of the patella as well as examine for associated pathology.

Initial care consists of rest, ice, elevation and a compression wrap. Physical therapy will be utilized to reduce the joint swelling and return strength to the quadriceps musculature.

If physical therapy fails to achieve a stable patella, then a VMO Plication surgery is an option. This surgical procedure involves tightening the structures on the medial side of the patella thus adding stability.



### **Proximal VMO Plication Surgery:**

VMO Plication is a surgical procedure for the treatment of patella maltracking and instability. This procedure involves tightening the structures located on the medial portion of the patella. This tissue has been stretched or torn during patella dislocation. A knee arthroscopy and/or a lateral release may be conducted at the time of surgery. The lateral release involves making an arthroscopic incision of the lateral tissues of the patella to better balance patella tracking.

### Pre-Surgery:

Before surgery, patients are instructed to continue to be as active as the knee permits. Continue to participate in the home exercise program provided by your physical therapist.

- Anti-inflammatories such as ibuprofen or aspirin must be stopped 5 days prior to surgery. Utilize ice and elevation to control pain and swelling during this period.
- On the night before surgery, do not eat after midnight (no chewing gum or lozenges)
- On the morning of the surgery you may have your daily pills with a sip of water
- Your surgical time will be confirmed the day before the surgery by Pinellas Medical Associates. The original time may be adjusted based on patient needs and equipment availability.
- Patients should bring their MRI and X-rays to the surgery

### Surgery:

When you arrive at the hospital or surgical suites, a nurse will bring you into the pre-op area where you will have an IV placed and meet your anesthesiologist. General anesthesia is utilized to ensure a comfortable surgery. This means that you will be “asleep” and completely unaware of the surgery until you wake up in the recovery area. Most patients will have a small tube placed in their windpipe, formal intubation may not be required.

The length of the procedure is approximately one hour. The procedure will involve a knee arthroscopy to inspect the inside of the knee joint. Arthroscopic surgery involves using a video camera and small instruments through small incisions to see the anatomy of the knee joint. The video camera allows us to visually inspect the knee joint and specifically evaluate the patella cartilage and assess active patella tracking. Pictures of this will be taken and reviewed during your first post-op visit. After knee arthroscopy is completed, a VMO Plication will be preformed. The loose or torn structures located in the region of the medial patella will tighten subsequently returning stability to the patella

Risks to this surgery are rare and involve: blood clots (DVT) and infection.



### Post-Surgery:

After the surgery is completed, you will awaken in the operating room and be moved to the recovery area.

- **Pain Control:**

**Femoral Nerve Block:** Upon your consent, a femoral nerve block may be provided by an Anesthesiologist for pain control. This consists of an injection of marcaine (like novacaine) into the region around the femoral nerve and may decrease leg pain for up to 12 hours.

**Oral pain medicine:** A pain medication prescription will be provided to you prior to discharge. You may take the prescribed medication as directed. You should expect to experience minimal to moderate knee discomfort for several days and even weeks following the surgery. Patients often only need prescription narcotics for a few days following surgery and then can switch to over-the-counter medications such as Tylenol or Ibuprofen.

- Ice bags and elevation should be utilized both in the hospital and after discharge to decrease swelling and pain. Keep ice on for 20 minutes and off for 45 minutes every 4 hours. Utilize ice as much as you can during the first 10 days after surgery. Be careful not to burn your skin with excessive cold exposure.
- At the completion of surgery, you will have a brace placed on your leg. The brace should be maintained in the locked position with all ambulation. The brace may only be removed when sitting with your leg elevated in an extended position.



- Activity: You should be comfortable walking independently with crutches before leaving the hospital. You will be able to put as much weight as tolerated on your knee with brace locked in extension. You should participate in the home exercise program provided at the end of this packet until outpatient physical therapy is started.
- If the bandage is draining, reinforce it with additional dressings for the first 48 hours. After 48 hours remove the bandage and leave the steri-strips in place. If drainage continues or restarts after 3 days please call the office.
- You may shower on post-op day two. Keep incision covered when showering for up to three days post-op. You may shower with the wound exposed once the wound is completely dry.
- Skin numbness often occurs around the incision. This usually returns but may be permanent
- Take one 325 mg (full strength) aspirin daily for 21 days (unless otherwise instructed) to prevent blood clots.
- Eat a regular diet as tolerated and please drink plenty of fluids.
- **First post-op appointment is 10-14 days after the surgery.**
- You may drive once you establish full control of your extremity (able to perform a straight leg raise, etc.). If your right knee was operated on, this may take a week or more to achieve.
- Call office for Temperature >102 degrees, excessive swelling, pain or redness around the incision sites.
- Plan at least 1 week away from work or school. Utilize this time to decrease swelling and participate in your home exercise program. You may be able to resume work once the pain and swelling resolves (this varies based on job activity).

# Post-Op Rehabilitation Protocol – VMO Plication Surgery

## **PHASE 1 (WEEKS 0-2):**

**Goals:** Minimize effusion, progress range of motion, utilize brace

**Treatment plan:**

- 1) Progress range of motion to full
- 2) Swelling control with ice and compression wrap
- 3) Brace in place and locked in extension with all ambulation
- 4) Initiate quadriceps and hamstring muscle activation and general leg control
  - Quad setting, SLR, heel slides, isometric hamstring/quadriceps contraction
  - Ankle pumps
- 5) WBAT (weight bearing as tolerated) with crutches

## **PHASE 2 (WEEKS 2-6):**

**Goals:** Full knee ROM in extension and flexion, progress quadriceps/hamstring strengthening, independent mobility

**Treatment plan:**

- 1) Continue with swelling control
- 2) Full knee ROM (half to full revolution on exercise bike)
- 3) PRE (go easy with direct quadriceps strengthening until 6 weeks post-op)
- 4) Continue brace locked in extension with all ambulation until post-op week 6

## **PHASE 3 (WEEKS 6-12):**

**Goals:** Full lower extremity strengthening/conditioning program, full activity in gym avoiding open chain full arc exercises

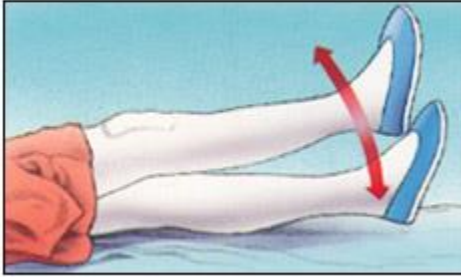
**Treatment plan:**

- 1) Progress CKC strengthening
- 2) Progress dynamic balance training

## Early Post-Operative Exercises

*Start the following exercises as soon as you are able. You can begin these in the recovery room shortly after surgery. You may feel uncomfortable at first, but these exercises will speed your recovery and actually diminish your post-operative pain.*

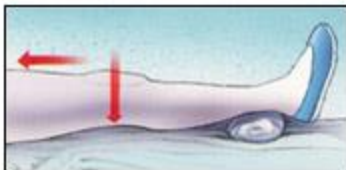
**Quad Sets** - Tighten your thigh muscle. Try to straighten your knee. Hold for 5 to 10 seconds. Repeat this exercise approximately 10 times during a two minute period, rest one minute and repeat.



**Straight Leg Raises** - Tighten the thigh muscle with your knee fully straightened on the bed, as with the Quad set. Lift your leg several inches. Hold for 5 to 10 seconds. Slowly lower. Repeat until your thigh feels fatigued.



**Ankle Pumps** - Move your foot up and down rhythmically by contracting the calf and shin muscles. Perform this exercise periodically for two to three minutes, two or three times an hour in the recovery room. Continue this exercise until you are fully recovered and all ankle and lower-leg swelling has subsided.



**Knee Straightening Exercises** - Place a small rolled towel just above your heel so that it is not touching the bed. Tighten your thigh. Try to fully straighten your knee so that the back of your knee touches the bed. Hold fully straightened for 5 to 10 seconds. Repeat until your thigh feels fatigued.



**Bed-Supported Knee Bends** - Bend your knee as much as possible while sliding your foot on the bed. Hold your knee in a maximally bent position for 5 to 10 seconds and then straighten. Repeat several times until your leg feels fatigued or until you can completely bend your knee.