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Lateral Retinacular Lengthening — Pre-Operative Information

About Your Condition

The lateral retinaculum is a band of tissue on the outer side of your kneecap (patella) that helps control how it moves when you bend and straighten your leg. When this tissue becomes too tight, it pulls the kneecap toward the outside of the knee, causing it to track abnormally in the groove of the femur called the trochlea. This is called patellar maltracking.

Patellar maltracking causes pain in the front of the knee, especially with stairs, sitting for long periods, squatting, or activity. You may feel grinding or pressure under the kneecap. Over time, abnormal tracking can wear down the cartilage on the underside of the kneecap and contribute to patellofemoral arthritis.

This condition is different from patellar instability (where the kneecap dislocates or subluxates out of the groove). In your case, the kneecap stays in the groove but is being compressed too firmly against the outer wall, which causes pain.

Surgery is recommended after conservative treatments — such as physical therapy focused on the inner quadriceps (VMO), activity modification, bracing, and anti-inflammatory medications — have not provided adequate relief.

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About Your Surgery

Lateral retinacular lengthening is an arthroscopic procedure performed through one incision on the top the knee. Rather than cutting the lateral retinaculum completely (a "lateral release"), this procedure lengthens it using a Z-plasty technique. This preserves the tissue's integrity while reducing the tightness that is pulling your kneecap to the outside.

The advantage of lengthening over a complete release is that it maintains the structural support of the lateral retinaculum while correcting the tracking. A complete release can sometimes lead to the kneecap shifting too far to the inside, causing new problems. Lengthening avoids this complication.

The knee is examined arthroscopically to confirm the diagnosis and evaluate the cartilage surfaces. The lateral retinaculum is then carefully lengthened to allow the kneecap to sit more centrally in the groove. The amount of correction is checked during surgery by observing the patellar tracking in real time.

Surgery typically takes about 30–45 minutes. This is an outpatient surgery performed at the Proliance Surgery Center at Valley (PSCV). You will go home the same day.

Risks of surgery include stiffness, infection, blood clots, numbness around the incisions, continued pain, swelling, bleeding into the knee (hemarthrosis), and incomplete correction of tracking. In rare cases, the retinaculum may re-tighten with scar tissue, requiring additional treatment. We will work together to optimize your recovery and minimize these risks.

What happens on the day of surgery: A couple of days before surgery, the nursing staff will call you to confirm your check-in time and when to stop eating and drinking. On the day of surgery, check in at the front desk at your assigned time. You will go to the pre-op area with your family where our nurses will help you get changed, start an IV, and review your health history. You will meet with me to review the plan, and the anesthesia team will explain their approach. When the operating room is ready, you will walk back with a nurse. After anesthesia is given, you will not remember anything until the recovery room.

While you are in surgery, your family can pick up your post-operative medications at the pharmacy next to the surgery center. If you are under 18, one family member must stay at the surgery center during the entire surgery. In the recovery room, you will be monitored until you are awake, have some crackers and juice, and be made comfortable. Once ready, you will change into your clothes and be wheeled to your car. **You will need someone to drive you home and stay with you for the first 24 hours.**

After Surgery — What to Expect

After surgery it is normal to experience pain, swelling, and limited motion in the knee. These are expected and will improve over time. Unlike many knee surgeries, you will not need a brace and can put full weight on your leg from Day 1 with the assistance of crutches for comfort.

Physical therapy should start within the first week after surgery, typically 2 times per week. You will receive a PT referral at your pre-operative clinic visit. Please schedule your first PT appointment before your surgery date.

The single most important exercise after this surgery is medial patellar mobilization — gently pushing your kneecap toward the inside of your knee. This must start within the first 1–2 days after surgery and continue throughout your recovery. This prevents the lengthened tissue from scarring back in the tight position and is essential for a successful outcome.

The timeline below answers the most common questions about recovery. Your recovery may be faster or slower depending on your overall fitness and any additional factors. The key message is that medial patellar mobilization and VMO strengthening are the priorities.

Timeframe	What to Expect
1–2 weeks	First clinic visit to check incisions and early recovery. Pain, swelling, and limited motion are normal. Weight bearing as tolerated with crutches for comfort. Begin patellar mobilization exercises and quad activation. PT starts within the first week (2x/week).
2–4 weeks	Wean off crutches as comfort allows. Continue patellar mobilization and VMO strengthening. Range of motion should reach 90° or more. May return to desk work or school.
4–8 weeks	Second clinic visit around 6 weeks. Range of motion improves to 120° and beyond. Begin functional exercises such as mini-squats, step-ups, and stationary bike. Swelling continues to decrease.
8–14 weeks	Advance to lunges, leg press, and higher-level strengthening. Most daily activities are comfortable. Continue VMO and quad focus.
14–20 weeks	Return to sport activities with PT guidance. Full recovery typically occurs around 3–4 months for most patients.

Driving: If surgery was on your right leg, typically 1–2 weeks. If your left leg, a few days. You must be off narcotic pain medications before driving.

Preparing for Surgery

Pre-surgical physical therapy (prehab): Physical therapy before surgery is recommended to strengthen the VMO (inner quadriceps), improve range of motion, and decrease swelling. This prepares your knee for surgery and leads to a faster recovery afterward.

Nutrition: A good diet with increased protein and collagen supplementation helps speed your recovery and prevent muscle weakness after surgery. Vitamin C can help with inflammation and stiffness. Start these before surgery and continue through your recovery.

Ice Machine — My #1 Recovery Recommendation

I highly recommend purchasing an ice machine to help your recovery. An ice machine is the single best investment you can make — it allows for continuous icing without the risk of frostbite and is far easier than using ice bags or gel pads. Our clinic staff can fit you for one before surgery and show you how to get the most out of it. Stock up on bags of ice — the machine can go through a bag a day when used regularly.

Prepare your home: Remove throw rugs or obstacles that might catch a crutch and cause a fall. Make sure you have clean sheets and comfortable clothes ready. Stock the refrigerator with healthy food and buy bags of ice for the ice machine.

Handicap placard: You will be given a handicap parking pass application at your clinic visit. Get this at a DMV office before your surgery so you do not have to deal with it while recovering.

Day-of-Surgery Checklist

- ☐ Verify your check-in time and follow instructions on when to stop eating and drinking
- ☐ Schedule Physical Therapy for 5–7 days after surgery (do this before surgery)
- ☐ Wear comfortable clothes (sweatpants work well)
- ☐ No perfume or lotion on your skin
- ☐ Remove or leave jewelry at home
- ☐ Have the ice machine and bags of ice ready at home for when you return

Contact Information

Questions about your surgery:	(425) 656-5060
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