



Lateral Release Protocol

Defined

- a. Arthroscopic release of the lateral retinaculum of the patella.
- b. A lateral release is occasionally combined with another procedure on the medial retinaculum.
- c. Indicated for patients with persistent anterior knee pain that is not resolved with conservative invention. Patients often present with a tight lateral retinaculum, lateral patellar tilt and decreased medial patellar glide.

2. Goals

- a. Restore motion within the limitations of healing tissues
- b. Control swelling
- c. Reestablish appropriate extension mechanism function
- d. Reduce patellofemoral contact forces
- e. Restore lower extremity control

3. Rehabilitation Principles

- a. Patient progression is time and function based and any deviation from clinical guidelines should be relayed to physician and documented.
- b. Initiate early weight-bearing and ROM with heavy emphasis on obtaining full, early extension.
- c. Limit muscular inhibition and atrophy from effusion.
- d. Initiate early activity of quads (isometric, isotonic, resistive) with e-stim and biofeedback.
- e. Address limb confidence issues with progression of unilateral activity
- f. Address limb velocity issues during gait with verbal and tactile cueing
- g. Incorporate comprehensive lower extremity (hip and calf) muscle stabilization and strengthening activities as well as core strengthening activities
- h. Identify motion complications early and begin low-load, long duration stretching activity.
 - i. Range of motion expectations
 1. Week 1 - 0° to 90°
 2. Week 2 - 0° to 115°
 3. Week 3 - 0° to 125°
 4. Week 4 full flexion (heel to buttock)

- i. Initiate early proprioceptive and kinesthetic techniques: Low to high, sagittal to frontal, bilateral to unilateral, stable to unstable, slow to fast, fixed to unfixed surface
- j. Constantly monitor for signs and symptoms of patellofemoral irritation.
- k. Encourage life-long activity modification to include low impact cardiovascular activity and patellofemoral protection strategies.
- l. Incorporate sports-specific performance into rehab.

4. Post op functional guidelines

a. All Physician dependent

- i. Refer to physician preferences

b. Driving

- i. Refer to physician preference
- ii. No research to support recommendations for return to driving
- iii. Typically 7-14 days
- iv. Refer patient to drug precautions
- v. Refer patient to auto insurance coverage
- vi. Dependent on
 - 1. extremity involved
 - 2. adequate muscle control for braking and acceleration
 - 3. proprioceptive/reflex control
 - 4. adequate, functional ROM to get into driver's side
 - 5. confidence level

c. Work

- i. Refer to physician preference
- ii. Sedentary up to 1-2 weeks
- iii. Medium to high physical demand level 8-12+ weeks which will be communicated with MD

d. Jogging on the treadmill

- i. Check physician preference
- ii. 6-8 weeks
- iii. Observe and minimize limb velocity asymmetry
- iv. Encourage lower impact activity

e. GAP program

- i. Check physician preference
- ii. 6-8 weeks

f. Acceleration training

- i. Check physician preference
- ii. 2-3 months

g. Sports

- i. 4-6 months
 - 1. dependent upon:
 - a. full motion
 - b. good quad control
 - c. 80% strength compared with opposite leg
 - d. Minimal to no pain or swelling

5. Post op equipment guidelines

- a. **Polar care**
 - i. Physician dependent
 - ii. As needed for pain and inflammation
- b. **Post-op Brace** –only used by some MD’s
 - i. Used for 2-4 weeks
 - ii. Initially locked in full extension, removed for rehabilitation
 - iii. At 3 weeks discontinue while sleeping and unlock from 0-60 degrees.
 - iv. Some MD’s will use a “J-brace”
- c. **Crutches**
 - i. Post-op amb with bilateral crutches WBAT
 - ii. Full WB with no crutches by 2 weeks
 - iii. Dependent upon adequate quad control, full extension ROM, no observed gait deviations, no change in pain or swelling.

6. Clinical Restrictions

- a. No abduction SLR until 3 weeks to minimize the lateral pull on the patella
- b. Do not use bicycle to increase ROM, only use once the patient has achieved appropriate ROM
- c. Watch for patellofemoral compressive forces with exercise

7. Rehabilitation for an arthroscopic lateral release

- a. **Week 1-2**
 - i. **Clinical Guidelines**
 1. Control post-op swelling and effusion
 2. Restore ROM
 3. Inhibit post-op muscle shut down (e-stim, biofeedback,, verbal/tactile cueing)
 4. Progress comprehensive, lower-extremity stretching program
 5. Progress bilateral, closed-chain activity to improve limb-confidence
 6. Progress bilateral proprioceptive activity and reactive neuromuscular training (RNT)
 7. Progress hip, calf and core strengthening activities
 8. Cue for proper gait – progressing away from crutch dependence
 9. Initiate patella mobilization (when tolerated)
 - ii. **Clinical Expectations by the end of week 2**
 1. ROM: 0° to 115
 2. Visible quad contraction (rated fair to fair+) (home stim if poor)
 3. Independent straight leg raise without extensor lag

4. Independent ambulation with 2 or less axillary crutches without deviation
5. Swelling and pain under control

b. Week 3-5:

i. Clinical guidelines

1. Make sure patient achieves good control of quadriceps and VMO for proper patellar tracking.
2. Initiate unilateral closed-chain activity to improve limb confidence
3. Initiate unilateral proprioceptive activity and RNT
4. Initiate unilateral flexion under weight-bearing activity (i.e. step up)

ii. Clinical Expectations by the end of weeks 3-5

1. ROM: 0° to 125°
2. Visible/moderate intensity quad contraction (fair + to good)
3. Full independent ambulation

c. Week 6 and beyond:

i. Clinical guidelines

1. Progress bilateral and unilateral, closed chain activity to improve limb confidence
2. Progress bilateral and unilateral proprioceptive activity, reactive neuromuscular training (RNT), and plyometrics as tolerated and with good form
3. Progress patient muscle and cardio endurance
4. Work to achieve full lower extremity flexibility
5. Incorporate core stability

ii. Clinical Expectations by the end of formal therapy

1. Patient participating in running progression if appropriate
2. Patient has full ROM
3. Patient has achieved 80% of strength of opposite leg
4. Pain and swelling are under control
5. Patient has a stable patella that tracks properly