
HEEL CORD LENGTHENING PROTOCOL

Disorders of the Achilles tendon represent a spectrum of conditions that include painful Achilles tendonitis, gastrocnemius equinus contracture, forefoot and midfoot overload, diabetic foot ulcers, metatarsalgia, hallux valgus, posterior tibial tendon deficiency, and plantar fasciitis. When conservative measures fail to provide relief, surgical intervention may be used. Risks of surgery include intermittent calf cramping as your leg accommodates new tension, calf atrophy, early weakness that improves over time, and possible numbness and tingling along the outside of calf and foot that typically resolves in 2 to 3 months following surgery. Depending on your activity level, associated pain and discomfort, and severity in limitation in range of motion, your surgeon will perform Strayer gastrocnemius recession, Baumann gastrocnemius recession, proximal medial head gastrocnemius recession, or percutaneous tendoachilles lengthening.

The goal of gastrocnemius recession is to lengthen the tight heel cord that contributes to the patient's pain and deformity. Following gastrocnemius recession for isolated foot pain, 93% of patients are satisfied with the procedure, 92% would have the opposite leg done if necessary, and 93% would recommend this procedure for isolated foot pain to a friend.¹

****Please note that this is a general guideline, and may be tailored to specific patient needs and conditions****

Preoperative Physical Therapy

Pre surgical Gait Training, Balance Training, Crutch Training and Knee Scooter Training

Phase 1: Protection and Healing (0-2 Weeks)

GOALS:

- High tide walking boot for 2 weeks at all times.
- Elevated, ice, and use prescribed medications to control pain and decrease swelling
- Provide optimal conditions for wound healing
- Initiate gentle range of motion (ROM) activities
- Immediate weightbearing at tolerated (WBAT) in boot at all times

WEEK 0-2:

- WBAT in boot (Boot to protect incision)
- Elevate leg above heart 23 hours/day
- Ice behind knee to control pain and swelling. Minimize activity and focus on rest (Vasculotherm or ice bag)
- Acetaminophen (e.g. Tylenol) 500mg every 6 hours alternating with ibuprofen 600mg every 6 hours or meloxicam 15mg once daily. Narcotic pain medication (hydrocodone or oxycodone) should be reserved for breakthrough pain as second line medication. Do not take over 4,000mg of acetaminophen per day.

WEEK 2-3: Sutures out

- Active motion protocol-begin ankle dorsiflexion/plantar flexion (move ankle up and down) out of boot/splint, 5 minutes, 5 times per day
- Physical therapy may begin A/AROM exercises
- Compression stocking to be worn to control swelling along with ice/elevation (16 hours per day)
- Keep incision completely dry for first 2 weeks; may then shower but do NOT immerse in water (no pools, tubs, lakes, oceans, etc) for 6 weeks

Phase 2: Recovery (2-12 Weeks)

GOALS:

- Return to normal gait pattern
- Pain and edema control
- Progress functional ROM

WEEK 2:

- Wean from boot to shoes. SLOWLY transition to regular shoe wearing initially around the house, then increase to outside activities
- Physical therapy may be progressed to home exercise program (HEP)/ gym program if gait is normal and pain and edema are minimal.
- Initiate static balance activities as tolerated

WEEK 4:

- Initiate gentle passive dorsiflexion at 4 weeks
- Initiate light resistance bands (level 1)

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- Continue modalities and manual for pain, desensitization, scar mobility

Phase 3: Return to Function (6 to 8 Weeks)

GOALS:

- Improve functional mobility with stairs.
- Improve tolerance for ambulation
- Strength and ROM to within normal limit (WNL)
- Progress to return to prior level of activity/ sport

WEEKS 6-8:

- Progress progressive resistance exercises (PRE) as tolerated with focus on eccentric control with plantar flexion
- Progress closed chain activities
- Progress walking program, may progress to walk/ jog when able to perform minimum 15- 20 single leg toe raises with good control

PHYSICAL THERAPY: start between 2-3 weeks post op, focus on motion and swelling at first, then gait training and strengthening

DRIVING:

- Right foot: may drive when able to perform single limb stance
- Left foot-may drive when off pain meds if automatic transmission vehicle

BIKING/SWIMMING: may return to activity as tolerated

RUNNING/HIGH IMPACT: may begin 4-6 months after surgery

FULL ACTIVITY: Return to sports may begin when you can come up and down on your toes (single heel rise) or hop (single leg hop) on the surgical side. This may take 6 months to a year. There is no guarantee on outcome. All conservative management options have risk of worsening pain, progressive irreversible deformity, and failing to provide substantial pain relief. All surgical management options have risk of infection, skin or bone healing issues, and/or worsening pain. Our promise is that we will not stop working with you until we maximize your return to function, gainful work, and minimize pain.

SHOWERING: You may shower with soap and water 1 day after surgery. Avoid lotions, creams, or antibiotic ointments on surgical site until directed by your orthopaedic surgeon. No baths or submerging operative site under water until incision has completely healed.

SKIN CARE: Steristrips are typically placed on your incision at your follow up appointment. Steristrips will typically fall off on their own. Remove steristrips in shower after 3 weeks if they remain on incision. Incisions may become sensitive. Some surgical incisions based on their location and patient factors are more likely to require postoperative scar desensitization with physical therapy. You may use Mederma or other skin protectant lotion once incisions have completely healed and approved by your orthopaedic surgeon. Do not place cortisone or other steroid on your incision unless directed by your orthopaedic surgeon. Incisions and surgical site scars are more prone to burn by ultraviolet radiation when out in the sun. Always apply sun screen onto the healed incision once fully healed.

STOOL SOFTENERS: While on narcotic pain medication (e.g. Norco/hydrocodone or Percocet/oxycodone) especially within first 72 hours of surgery, you should take stool softener (e.g. Miralax, docusate, senna). Discontinue if you develop loose stool or diarrhea.

REFERENCES:

1. Maskill JD, Bohay DR, Anderson JG. Gastrocnemius Recession to Treat Isolated Foot Pain. FAI 2010
2. Sammarco GJ, Bagwe MR, Sammarco VJ, Magur EG. The Effects of Unilateral Recession. FAI 2006
3. Kiewiet NJ, Holthusen SM, Bohay DR, Anderson JG. Gastrocnemius Recession for Chronic Noninsertional Achilles Tendinopathy. FAI 2013

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