Center for Athletic Medicine
Dr. Preston Wolin
Compartment Release Protocol
Adapted from UW Health Sports Rehabilitation
Please call 773-248-4150 with any and all questions

Phase I Protection and Mobility (surgery to 2-3 weeks after surgery)

Rehabilitation Goals / Therapeutic Exercise:

- Physical Therapy begins 5-7 days after surgery
- Minimize postoperative swelling: lower extremity circumference within 2 cm of uninvolved side at mid-calf
- Instruction in safe positioning and limb self-management. Elevation, compression, icing, and active muscle pumping for swelling control.
- Avoid any activity which causes increased swelling. Avoid any impact activity including running, jumping, or hopping for 6-8 weeks
- Able to lift leg involved in all directions in standing without pain or compensation
- Use crutches for gait with progressive WBAT. Progress towards normalized gait such as restoring ability to control leg in open and closed kinetic chain during gait
- Restore normal knee and ankle range of motion. Begin with AROM of ankle immediately. Progress to open kinetic chain ankle strengthening with theraband as able.
- Quadriceps sets
- Leg lifts for hip strength
- Gentle distal-to-proximal massage to assist with venous return and swelling. Avoid any friction on new scar.
- Upper body circuit training or upper body ergometer, as able

Phase II: Light Strengthening (begin after meeting Phase I criteria, usually 2-3 weeks following surgery)

Rehabilitation Goals / Therapeutic Exercise:

- Lower extremity circumference within 1 cm of uninvolved side
- Incision well healed
- Minimize muscle atrophy and flexibility deficits in involved compartment
- Full flexibility/mobility of gastrocnemius/ankle
- Perform active or gentle resisted exercises of the hip of the operated lower extremity and resistance exercises of the upper extremities
- Proper lower extremity control and alignment with no pain during functional double leg squats
- Non-antalgic gait on level surface with full weight bearing and no assistive device
- Scar massage/mobility and desensitization. Avoid over-stressing new scar formation by avoiding any friction over tissue

- Gentle stretching and nerve mobilizations to tissue in involved compartment
- Progress open kinetic chain ankle strengthening as tolerated
- Balance and proprioception exercises: progression of bilateral to unilateral balance activities first on a level, firm surface, then on a soft/unstable surface
- Gait drills: begin with sagittal plane and progress to frontal and transverse planes
- Avoid eccentric loading
- Avoid post-activity swelling by limiting prolonged weight bearing activity as appropriate; if swelling occurs, manage with rest, ice, elevation and compression
- Upper body circuit training, upper body ergometer
- May begin stationary biking if wound is healed
- Begin treadmill or track walking if wound is healed; progress time and speed as able
- May swim or water walk if would is FULLY healed

Phase III: Progression of Strengthening (begin after meeting Phase II criteria, usually 4-6 weeks after surgery)

Rehabilitation Goals / Therapeutic Exercise:

- Prevent post-operative recurrence of symptoms with all activity
- Tolerate 15-30 minutes of continuous aerobic activity without the onset of symptoms/pain
- Reinforce self-monitoring and review signs of recurrence and complications
- Normal (rated 5/5) ankle strength and pain free
- Proper lower extremity control and alignment and no pain with single leg functional movements including squats and lunges
- No residual swelling 12-24 hours following all physical activity (including impact exercises)
- No pain 1-2 hours following physical activity (including impact exercises)
- Avoid friction over scar tissue (as per Phases I and II)
- No strenuous activity until wound is fully healed
- Lower extremity stretching and nerve mobilizations as appropriate (as per Phase II)
- Lower extremity myofascial stretching/foam rolling
- Progression of lower extremity closed chain functional strengthening including lunches, step-backs, and single leg squats
- Progress heel rise to single leg
- Progress gait drills
- Initiate or progress swimming or water walking if wound is fully healed (as per Phase II)
- Progress walking time and speed (as per Phase II)
- May begin elliptical trainer as tolerated

- Initiate plyometric exercises (with focus on lower extremity control and alignment at hip, knee, and ankle) at 6 weeks; begin with 2 feet to 2 feet (jumping) progressing from 1 foot to other (leaping) and then 1 foot to same foot (hopping); and focus on proper landing/deceleration mechanics
- Light jogging can be initiated at 6-8 weeks; initially begin on level surface while avoiding hills and speed work; runners should consider interval training involving walking; progress job interval times, incline, and speed as appropriate for return to sport/activity goals; and for those returning to multi-planar sport, consider progression of multi-planar activity

Phase IV: Impact/Sport Training (begin after meeting Phase III criteria, approximately 8-12 weeks following surgery)

Rehabilitation Goals / Therapeutic Exercise:

- Proper dynamic neuromuscular control and alignment with eccentric and concentric multi-plane activities (including impact) for return to work/sports, without pain, instability or swelling
- Within 90% of pain free plantarflexion and dorsiflexion strength
- Avoid pain with any exertional activity and post-activity swelling
- Instruct in proper return to activity progression (incremental running, biking, etc.)
- Progressive strengthening exercises using higher stability, and neuromuscular control with increased loads and speeds and combined movement patterns; begin with low velocity, single plane activities and progress to higher velocity, multi-plane activities; and begin with forward and backward, progress to side-to-side, diagonals and transverse plane movements
- Integrate movements and positions into exercises that stimulate functional activities; and initiate sport-specific training with low-intensity simulated movements
- Replicate sport or work specific energy demands

Progression Criteria:

- Patient may return to sport/work if they have met the above stated goals and have approval from the sports rehabilitation provider or physician*
- Precautions to reduce the risk of re-injury when returning to sports or high-demand activities as appropriate; if collision/contact sport, may consider protective padding over area of scar tissue