



THE STONE CLINIC
ORTHOPAEDIC SURGERY, SPORTS MEDICINE AND REHABILITATION
ARTICULAR CARTILAGE TRANSPLANTATION
TO 1st METATARSAL JOINT (Big Toe)
Post Operative Rehabilitation Protocol

General Considerations:

- Non weight bearing status for 4 weeks post-operative.
- Patients may need a posterior splint to remind them not to bear weight through foot with aide of crutches, or can use a post operative shoe which puts weight in heel of foot only.
- Regular manual treatment should be conducted to decrease the incidence of fibrosis. No scar mobilization until 4 weeks post operative.
- Light to no resistance stationary cycling is okay at 2 weeks post-operative with heel contact only.
- Low impact activities for 4 months post-operative.
- *Use of the continuous passive motion machine (CPM) for 6-8 hours a day for 4 weeks is imperative.

Week 1:

- Nurse visit day 2 to change dressing and review home program.
- Icing and elevation every 2 hours for 15 minute sessions during wake hours.
- CPM (continuous passive motion machine) at home for at least 6 hours every day.

Manual: -Soft tissue treatments, effleurage for edema, gentle range of motion.

- Ther Ex:** -Extremity non weight bearing strengthening exercises (i.e. lying, seated, and standing straight leg raise exercises, isometrics, well-leg stationary cycling, upper body conditioning).
- Ankle exercises, core strengthening.

Goals:

Decrease pain, edema.
Gait non weight bearing x 4 weeks.
Range of motion full unless otherwise indicated by MD

Weeks 2 - 4:

- Nurse visit at 14 days for suture removal and check-up.

Manual: - Soft tissue treatments, effleurage for edema, range of motion.

- Manual resisted (Proprioceptive neuromuscular facilitation patterns) of ankle and hip.

- Ther ex:** -Non weight bearing aerobic exercises (i.e. unilateral cycling, UBE, Schwinn Air-Dyne noninvolved limb and arms only).
- AFTER 2 weeks, bilateral cycling with light to no resistance, slow cadence; heel contact only.

Goals:

Decrease pain, edema.
Gait non weight bearing x 4 weeks.

3727 BUCHANAN STREET, SAN FRANCISCO, CA 94123

Tel.: (415) 563-3110. Fax: (415) 563-3301. E-mail: trish@stoneclinic.com



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Weeks 4 - 6:

-M.D. visit at 4 weeks, will progress to partial weight bearing and discontinue use of splint. Progression to full weight bearing is dependent on demonstration of good gait mechanics.

Manual: Continue with soft tissue mobilizations, range of motion, and okay to add light joint mobilizations.

Ther ex: -initiate resistance to 1st digit toe flexion/extension.

Incorporate functional exercises (i.e. squats, lunges, Shuttle/leg press, calf exercises, step-ups/lateral step-ups).

-light to no resistance toe on peddle stationary cycling, slow cadence, pain-free.

-Balance/proprioception exercises, seated calf raises.

-Slow to rapid walking on treadmill (preferably a low-impact treadmill).

-Pool/deep water workouts after incisions closed with the use of the splint.

Goals:

Gait partial weight bearing to full weight bearing per quality.

Range of motion 80% of non-surgical limb.

Weeks 6 - 8:

-Increase the intensity of functional exercises (i.e. add stretch cord for resistance, increase weight with weightlifting machines).

-add standing calf raises.

Goals:

Full range of motion.

Full weight bearing, good gait mechanics.

Weeks 8 - 12:

-Out door cycling, initiating with flat surfaces, slow cadence with slow progression to hills.

-Sports test 1 at 12 weeks.

-Low-impact activities until 16 weeks.

-Patients should be pursuing a home program with emphasis on sport/activity-specific training.

Goals:

Complete and pass Sports test 1.

***No cutting, running, jumping, or explosive type exercises for 5-6 months post operative.**

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