



TOTAL ANKLE REPLACEMENT PROTOCOL

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Based on – Kotela et al. (2017). Perioperative Physiotherapy for Total Ankle Replacement in Patients with Inherited Bleeding Disorders: Outline of an Algorithm. Med Sci Monit.

PRE SURGERY

Patients may be seen by the physiotherapist before surgery. During these sessions the following should be considered:

- Information about the rehabilitation (discuss mutual expectations). Emphasize that knee rehabilitation is more than strength-training of the lower-leg muscles alone. The rehabilitation addresses the whole lower extremity, core stability, proprioception, balance, and the preparation of upper limb strength for use of crutches.
- Decrease pain, swelling and inflammation.
- Achieve/maintain normal range of motion.
- Achieve/maintain normal gait pattern.
- Maintain muscle strength, prevent atrophy.
- Training of the first-days postoperative exercises (i.e. ankle ROM exercises, static glutes, straight-leg raising (SLR), static quadriceps, active knee extension/ flexion).
- Practice non-weight-bearing walking with crutches for the first 2-6 weeks postoperatively. Consider elbow crutch grip modifications to ease pressure on hands.

POST SURGERY

Precautions

- Crutches NWB for 2 weeks
- Plaster back-slab for 2 weeks then removable CAM boot
- FWB from week 2 after plaster back-slab is removed
- Keep wound dry and clean, limbo for washing purposes until wound healed and dry

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Phase 1 (0-2 weeks)

- POLICE - Control of pain and swelling
- Breathing exercises
- Ensure proper use of elbow crutches NWB
- Quadriceps activation - quadriceps sets and SLR if no lag
- Hip ROM exercises, static glutes
- Upper body and core strength as appropriate
- No isometric ankle exercises in back-slab

Phase 2 (week 2 to week 6)

- POLICE - continue to control pain and swelling. Optimise weight bearing status according to operation note, FWB in fixed walking boot
- Gait re-education
- Hip and knee AROM exercises

Phase 3 (week 6 - week 10)

- Weight bear as tolerated and wean off elbow crutches as able - use weight shifts, walking on the spot, pool walking to assist
- Wean out of boot into supportive shoe-wear
- Pain-free full range PROM ankle exercises, then progress to AAROM then AROM in sitting or lying
- Start ankle ROM exercises with dorsiflexion and plantar flexion, progress to supination and pronation when pain-free full range is attained

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- Continue exercises from phase 2
- Gait re-education
- Gastrocnemius stretching
- Resisted hip and knee AROM exercises (OKC)
- Cardiovascular exercises e.g. static bike with boot (non-resisted), swimming can be commenced when wound is fully healed

Phase 4 (week 10 to week 16)

- Gait re-education
- Continue exercises from Phase 3
- Loaded/ resisted functional exercises e.g. stepping, squatting
- Balance and proprioception training

Phase 5 (week 16+)

- Aim for balance and proprioception equivalent of unaffected leg
- Gradual return to functional activities

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