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ANKLE FRACTURE OPEN REDUCTION INTERNAL FIXATION POST-OPERATIVE GUIDELINES

Acute Care Phase 1: Weeks 0-2

PRECAUTIONS
- **Non-weightbearing with crutches/walker in postoperative splint**
- Avoid having lower extremity in prolonged dependent position
- Keep splint dry at all times

CONSIDERATIONS
- LE must be elevated on at least two pillows for 80%-90% of the time
- Walking is for functional home mobility and short distances only- wheelchair or knee scooter should be used for longer distances

TREATMENT RECOMMENDATIONS
- Transfer training: in and out of bed and sit to stand- chair, toilet
- Gait training with appropriate device on level surfaces while maintaining NWB status
- Stair training if required NWB with crutch and rail or seated bump up method
- ADL training and home modifications
- Cryotherapy for pain control over soft portion of splint and/or proximally
- Elevation of LE to prevent swelling (educate patient in “toes above nose”)
- Promotion of knee extension while elevated
- Therapeutic exercise with focus on maintaining non-operative LE and bilateral UE motion, flexibility and strength
- Active range of motion, self-mobilization of hip, knee

CRITERIA FOR ADVANCEMENT
- Understanding of elevation protocol and other precautions
- Safe ambulation NWB with appropriate device on level surfaces independently or with assistance of family member/friend if consistently present at home
- Safe stair negotiation if required while maintaining NWB status independently or with assistance of family member/friend if consistently present at home
- Independent with transfers
- Discharge home within 1-2 days when goals have been achieved and with MD clearance
- Note that acute care phase protocol is maintained for approximately 4 weeks (until patient is cleared by MD to begin outpatient physical therapy)

EMPHASIZE
- Control swelling - Elevation protocol
- Gait training NWB

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ANKLE FRACTURE OPEN REDUCTION INTERNAL FIXATION POST-OPERATIVE GUIDELINES

Post-Operative Phase 2: Weeks 2-6

PRECAUTIONS
- **Non-weightbearing with crutches/walker in cast / boot**
- Avoid having lower extremity in prolonged dependent position

CONSIDERATIONS
- LE must be elevated on at least two pillows for 80%-90% of the time
- Walking is for functional home mobility and short distances only- wheelchair or knee scooter should be used for longer distances

TREATMENT RECOMMENDATIONS
- Gait training with appropriate device on level → uneven surfaces while maintaining NWB
- Cryotherapy
- Promotion of knee extension while elevated
- Therapeutic exercise with focus on maintaining non-operative LE and bilateral UE motion, flexibility and strength
    - Proximal strengthening – prone, sidelying glute sets, abd/adduction
    - Quad sets, SLR
- Active range of motion, self-mobilization of hip, knee
- If in boot – begin gentle ankle and subtalar joint A/PROM out of boot
- Incorporate Blood Flow Restriction Therapy if accessible

CRITERIA FOR ADVANCEMENT
- Independent with transfers
- Proper maintenance of NWB status

EMPHASIZE
- Control swelling - Elevation protocol
- Gait training NWB
- Proximal strengthening, SLR

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ANKLE FRACTURE OPEN REDUCTION INTERNAL FIXATION POST-OPERATIVE GUIDELINES

Post-Operative Phase 3: Weeks 7-10

PRECAUTIONS
• **Advancement of WB status at discretion of MD based on 6-wk postoperative radiographs to assess healing of the fracture**
• Advance to WBAT with crutches/walker until gait normalizes
• Continue boot until gait normalizes, then advance to athletic shoe

TREATMENT RECOMMENDATIONS
• Scar mobilization, silicone strips, moisturizing when wound is healed
• Joint mobilizations with focus on talocrural and tibiofibular joints when wound is closed
• Progressive gait and stair training
• Ankle and toe A/PROM
  - Focus on seated and closed chain motion
• Progress to standing flexibility exercises
  - Runner's gastrocnemius stretch with rear LE
  - Progress to toe articulation (push off motion with rear foot)
  - Progress to soleus stretch
  - Long toe flexor stretch against wall
  - Bilateral mini-squats
• Progress hip flexibility with emphasis on extension
• Initiate balance/proprioception exercise training respecting WB status
  - Multidirectional wobble board
  - Weight shifting (use scale to assess load)
  - Tandem stance
• Strengthening
  - Proximal LE
  - Bilateral heel raise progression: seated, seated with load, leg press, standing with upper body support, standing unsupported
  - Intrinsics
• Stationary bike
• Aquatic exercise when incision healed and cleared by MD – deep water jogging → advance

CRITERIA FOR ADVANCEMENT
• Stable/controlled swelling
• Bilateral standing heel raises
• Full weight bearing (FWB) in from controlled ankle motion (CAM) boot → athletic shoe

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ANKLE FRACTURE OPEN REDUCTION INTERNAL FIXATION POST-OPERATIVE GUIDELINES

Post-Operative Phase 3: Weeks 11+

PRECAUTIONS

• Avoid weaning off assistive device and CAM boot when excessive pain or compensatory movements persist

CONSIDERATIONS

• Optimize mid to late stance phase of gait cycle

TREATMENT RECOMMENDATIONS

• Edema management – Compression garments
• Forward step up/down progression
• AROM/PROM and mobilizations of ankle and toes
  - Half-kneel, step stretching, flat footed squat with knees over toes and UE support, squat on toes
  - Lunging with elastic band or strap for talocrural self-mobilization
• Progress unilateral static and dynamic standing balance/proprioceptive exercises
  - Unstable surfaces e.g. foam, rocker board
  - Single leg activities with attention to equal weight bearing on 3 points of foot tripod
• Strengthening
  - Progress from bilateral to unilateral standing exercises, e.g. heel raises with proper eccentric control
  - Progress to dynamic, closed chain proximal LE strengthening
• Progress cardiovascular conditioning
  - Elliptical (forward and backward)
  - Encourage gym program
  - Retro treadmill
• If pain or gait deviations are persistent consider aquatic exercises or antigravity treadmill
• Scar mobilization, silicone strips, moisturizing when wound is healed

CRITERIA FOR ADVANCEMENT

• Functional Ankle/toe ROM to allow for symmetrical gait
• Community ambulation FWB without CAM boot and assistive device as appropriate
• Ascend/descend 6-inch steps reciprocally