

**Orthopaedic Research Clinic of Alaska (ORCA)**  
**MEDIAL ANKLE OLT-LATERAL ANKLE STABILIZATION CARTILAGE REPAIR WITH OSTEOTOMY**  
**REHAB PROTOCOL**

**Immediate Post-Operative Phase (0-4 weeks)**

**Precautions:**

- NO NSAIDS
- Boot walker or hinged walker
- NWB for 4-6 weeks
- Avoid end-range of ROM
- Stay elevated for ROM
- PF/DF only
- Do not overload the graft
- Range of motion in Sagittal plane only until 6 weeks
- May progress activities within phase if able to perform prior activities pain free

**Goals:**

- Edema control
- Pain control
- Early motion
- Protection of the cartilage
- Prevent contractures
- ROM: DF: 10-15 degrees, PF: 45 degrees (or within 80% of pre-op)
- Toe touch weight bearing (TTWB) at 4 weeks (if cleared by MD)
- Desensitization

**Exercises/Activities:**

*Pain/Edema Control*

- Elevation
- Manual lymphatic drainage/soft tissue mobilization
- High volt E-stim – High volt E-stim/SportsTX unit for home use
- Cool pack (caution regarding macerated wound)
- Rehab juice

*Range of Motion/Motor recruitment/strength*

- Grade I – II subtalar joint neuro re-education mobs
- General supervised ROM in sagittal plane
- Toe crunches
- Stationary bike, no resistance
- Active assisted range of motion with sagittal plane

- Quad, hamstring, calf sets with SLF
- Whirlpool as soon as wound heals

*Core Training*

- Core stabilization

**Physician Notification:**

The physician will be notified if the patient:

1. Fails to meet goals for each phase
2. Presents with persistent joint effusion
3. Exhibits chronic regional pain syndrome symptoms
4. Drainage and/or wound breakdown
5. Infection
6. Deformity
7. Exhibits continued difficulty with ambulation
8. Develops other complications associated with osteotomy and fracture healing

**NOTES:**

- Do not progress until cleared by MD (satisfactory radiographs)
- MD visits: 7-10 days to remove sutures/staples and 3-4 weeks for X-Rays
- Large defect repair will heal in 6 weeks
- Small defect repair will heal in 4 weeks
- Medial osteotomy – protect posterior tibialis sheath
- Lateral osteotomy – protect peroneal tendon sheath and monitor peroneal nerve

**Late Post-Operative Phase (4-8 weeks) – Progression to this phase after satisfactory radiographs (MD approval)**

**Precautions:**

- NO NSAIDS
- No impact activities
- Decrease intensity if onset of pain or swelling
- May progress activities within phase if able to perform prior activities pain free
- Progressive weight bearing status per MD
- Ankle sleeve for support and kinesthetic feedback per MD recommendation
- Sagittal plane activities only until 6 weeks
- Begin pool program contingent on MD recommendation

**Goals:**

- Full WB
- Full ROM
- No pain
- Normalized gait pattern
- Wean off crutches for slow gait velocity
- No swelling
- Adequate proprioception

**Exercises/Activities:**

*Pain/Edema Control*

- Appropriate modalities

*Range of Motion/Motor recruitment/strength*

- Gentle manual PNF
- Neuro re-education
- Leg press
- Toe raises
- BAPS board in sitting until 6 weeks
- Calf strengthening

*General Conditioning*

- Core strengthening
- General conditioning
- Uninvolved leg conditioning

*After 6 weeks progress to:*

- Stationary bike, low resistance
- Tandem stance challenges sagittal plane
- Thera-tubing all planes
- Unloaded TM
- Pool

**Early Rehabilitation Phase (8-12 weeks)**

**Precautions:**

- NO NSAIDS
- Decrease intensity if onset of pain or swelling
- May progress activities within phase if able to perform prior activities pain free

**Goals:**

- Normalized gait pattern
- Improved proprioception > or = 50% of contra limb
- Optimize subtalar joint accessory motion

**Exercises/Activities:**

*Pain/Edema Control*

- Appropriate modalities
- Soft tissue mobilization

*Range of Motion/Motor recruitment/strength*

- Joint mobilization to optimize ankle/subtalar joint biomechanics
- Lateral stability training (side steps, carioca, etc.)
- Squats – level surface
- Uneven surface balance training/single leg stance

*Core Training*

- Conditioning – bike, treadmill (increasing load), upper body ergometer (arm bike)

- Core strengthening

### **Late Rehabilitation Phase (12-16 weeks)**

#### **Precautions:**

- NO NSAIDS
- Decrease intensity if onset of pain or swelling
- May progress activities within phase if able to perform prior activities pain free

#### **Goals:**

- Normalized gait pattern
- Improved proprioception > or = 75% of contra limb
- Optimize subtalar joint accessory motion

#### **Exercises/Activities:**

##### *Pain/Edema Control*

- Appropriate modalities

##### *Range of Motion/Motor recruitment/strength*

- Lateral stability training (side steps, carioca, etc.)
- Bilateral body weight
- Squats – level surface
- Uneven surface balance training/SLS
- Joint mobilization to optimize ankle/subtalar joint biomechanics
- Soft tissue mobilization

##### *General Conditioning*

- Conditioning – bike, treadmill, upper body ergometer (arm bike), rowing machine
- Core strengthening

### **Sports Specific Phase (4-8 months) – Return to competitive sports at 6-8 months**

#### **Precautions:**

- NO NSAIDS UNTIL APPROVED BY MD
- Initiate sport specific activities after MD verified cartilage healing
- May progress activities within phase if able to perform prior activities pain free

#### **Goals:**

- Increase strength
- Progress cardiovascular training
- 90-95% of ankle star excursion test
- Introduction of sport specific skills
- Normalization of gastrocnemius, hamstring, hip flexor, and hip adductors flexibility
- Return to sport and/or unrestricted activity

#### **Activities:**

- Stair stepper
- Running at 6 months

- Jumping (sports specific)
- Advanced balance drills
- Sports cord activities
- Fitter/slide board