



**Dr. Matthew Crawford**

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## Achilles Tendon Repair Rehabilitation Protocol

This rehabilitation protocol was developed for patients who have had a repair of an acute achilles tendon rupture. Dependent upon the patient and quality of the repair, weight bearing status post-operatively as well as the intensity and time frame of initiation of functional activities will vary. The protocol is divided into phases. Each phase is adaptable based on the individual patients and special circumstances.

The **overall goals** of the repair and rehabilitation are to:

- Control pain and swelling; mobilize soft tissues and incision
- Regain normal ankle range of motion
- Regain a normal gait pattern and neuromuscular stability for ambulation
- Regain normal lower extremity strength
- Regain normal proprioception, balance, and coordination for daily activities
- Achieve the level of function based on the orthopedic and patient goals

The physical therapy should be initiated within 3 to 5 days post-op. It is extremely important for the supervised rehabilitation to be supplemented by a home fitness program where the patient performs the given exercises at home or at a gym facility.

**Important post-op signs** to monitor:

- Swelling of the ankle or surrounding soft tissue (including thigh and calf -DVT)
- Monitor incision for signs of infection (drainage, swelling, redness)
- Abnormal gait pattern, with or without assistive device
- Limited range of motion
- Weakness in the lower extremity musculature
- Insufficient lower extremity flexibility

**Return to activity** requires both time and clinic evaluation. To safely and most efficiently return to normal or high level functional activity, the patient requires adequate strength, flexibility, and endurance. Isokinetic testing and functional evaluation are both methods of evaluating a patient's readiness to return to activity. Return to intense activities such as impact loading, jogging, and ankle plantar flexion may increase the overall chance of re-rupture of the achilles repair.

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## Achilles Repair Rehab

### Phase I

#### 3 days – 2 weeks

##### **WEIGHT BEARING**

- Non-Weight Bearing

##### **BRACE / SPLINT**

- OK to come out of splint for PT and home exercise

##### **ROM**

- Gentle PROM & AROM from 20° of plantar flexion to neutral extension
- Instruct patient to perform the above AROM at home 4-5 times per day

##### **STRENGTH**

- Toe curls
- Toe spreads
- SLR
- Knee flexion / extension

##### **MODALITIES**

- E-stim/biofeedback as needed
- Soft tissue treatments
- cryotherapy

##### **GOALS OF PHASE:**

- Control pain, swelling, and inflammation
- Initiate gentle ROM
- Report signs of wound infection (drainage, swelling, redness) or signs of DVT (swelling, pain, palpable cords, erythematous streaks) to Dr. Crawford.

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## Achilles Repair Rehab

### Phase II

#### 2 weeks – 4 weeks

##### WEIGHT BEARING

- Advance from toe-touch to PWB (in Boot) as tolerated

##### BRACE / SPLINT

- Hinged Walking Boot (Set ROM: full plantar flexion to 10° equinus)

##### ROM

- Gentle PROM & AROM from 30° of plantar flexion to 10° extension
- Instruct patient to perform the above AROM at home 4-5 times per day
- Isometrics of uninvolved muscles, light active dorsiflexion of the ankle until gentle stretch of Achilles.
- *Slowly* increase the intensity and ranges of isometrics of Achilles within the range of the boot.

##### STRENGTH

- Isometrics of uninvolved muscles
- light active dorsiflexion of the ankle until gentle stretch of Achilles
- *Slowly* increase the intensity and ranges of isometrics of Achilles within the range of the boot

##### MODALITIES

- Proprioception exercises
- Intrinsic muscle strengthening
- Proprioceptive Neuromuscular Facilitation (PNF) – (not to achilles).
- Continue soft tissue treatments

##### GOALS OF PHASE:

- Slow progression of ROM
- Soft tissue management
- Isometric strengthening

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## Achilles Repair Rehab

### Phase III

#### 4 weeks – 6 weeks

##### **WEIGHT BEARING**

- PWB in Boot (slowly advance to FWB by 6 weeks)

##### **BRACE / SPLINT**

- Hinged Walking Boot (Set ROM: full plantar flexion to NEUTRAL equinus)

##### **ROM**

- Gentle PROM & AROM from 30° of plantar flexion to NEUTRAL extension
- Instruct patient to perform the above AROM at home 4-5 times per day
- Isometrics of uninvolved muscles, light active dorsiflexion of the ankle until gentle stretch of Achilles.
- Increase the intensity and ranges of isometrics of Achilles within the range of the boot.

##### **STRENGTH**

- Isometrics of uninvolved muscles
- light active dorsiflexion of the ankle until gentle stretch of Achilles
- *Slowly* increase the intensity and ranges of isometrics of Achilles within the range of the boot

##### **MODALITIES**

- Proprioception exercises
- Intrinsic muscle strengthening
- Proprioceptive Neuromuscular Facilitation (PNF) – (not to achilles).
- Continue soft tissue treatments

##### **GOALS OF PHASE:**

- Slow progression of ROM
- Soft tissue management
- Isometric strengthening

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### Phase IV

#### 6 weeks – 8 weeks

##### WEIGHT BEARING

- FWB

##### BRACE / SPLINT

- Open boot all the way
- Progress out of boot over these weeks

##### ROM

- Gentle PROM & AROM from 30° of plantar flexion to NEUTRAL extension
- PROM to achieve gentle stretch on achilles
- Increase the intensity and ranges of isometrics of Achilles within the range of the boot.

##### STRENGTH

- Isometrics of all muscles
- *Slowly* increase passive ROM and stretch on achilles.

##### MODALITIES

- Proprioception exercises
- Intrinsic muscle strengthening
- Proprioceptive Neuromuscular Facilitation (PNF) – (not to achilles).
- Continue soft tissue treatments

##### GOALS OF PHASE:

- Slow progression of ROM
- Soft tissue management
- Isometric strengthening

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