

Non-operative treatment of Achilles tendon ruptures

PHASE I: WEEKS 0-2

GOALS:

- Protect tendon
- Control pain

PRECAUTIONS & MANAGEMENT

- Plaster cast with ankle plantar-flexed to approx. 20°
- Non-weight-bearing with crutches

PHASE IIA: WEEKS 2-4

GOALS:

- Protect tendon
- Regain ankle range of movement
- Manage swelling

PRECAUTIONS

- Avoid moving ankle beyond plantargrade dorsiflexion when performing any exercise.
- Use camboot with a 2-4cm heel lift. Tubigrip to be worn under camboot to help control swelling.
- Protective weight-bearing with crutches and camboot: Week 2-3: 25% weight-bearing

Week 3-4 : 50% weight-bearing

- Emphasise patient must use pain as a guideline; if increased pain, decrease activity and/or weight-bearing level.

MANAGEMENT

- Active DF and DR ROM to neutral, inversion/eversion below plantargrade.
- Static calf contraction in camboot.
- Modalities to control swelling.
- Knee/hip exercises with no ankle movement.
 - E.g. Knee extension in sitting, prone hip extension, SLR.
- NWB fitness/cardio
 - E.g. Exercise bike with one leg

PHASE IIB: WEEKS 4-6

GOALS:

- Protect tendon
- Regain ankle range of movement
- Progressively increase weight-bearing in camboot

PRECAUTIONS

- Continue protective weight-bearing with crutches and camboot:

Week 4-5: 75% weight-bearing

Week 5-6 : 100% weight-bearing

- Avoid moving ankle beyond plantargrade when performing any exercise, but can do co-contraction exercises and move through range.
 - E.g. sliding heel along ground, but not past plantargrade dorsiflexion)

MANAGEMENT

- Continue Phase IIA management
- Emphasise patient doing non-weight-bearing cardio activities as tolerated.

PHASE III: WEEKS 6-8

GOALS:

- Protect tendon
- Continue to regain ankle range of movement • Begin light Achilles lengthening/strengthening

PRECAUTIONS

- Avoid moving ankle beyond plantargrade when performing any exercise.
- Weight-bearing as tolerated in camboot. • Gradually remove heel lift over 2-3/7:

E.g. If patient as 2 x 2cm lifts, take one out at a time

MANAGEMENT

- Continue with modalities for swelling as required.

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- Active assisted DF stretching to plantargrade - slowly and initially with a belt in sitting, doing knee straight and knee bent
- Graduated resistance exercises (open and closed kinetic chain as well as functional activities). Start with theraband exercises
- Gait re-training (as now 100% WB in camboot)
- Cardio to now include WBAT exercises eg bike
- Hydrotherapy

PHASE IV: WEEKS 8-12

GOALS

- Wean camboot (usually over 2-5 days) – can drive once 100% weightbearing and no camboot
- Increase anti-gravity calf strength
- Continue to progress ROM and proprioception exercises.

PRECAUTIONS:

- Begin pain free gentle stretching into dorsiflexion beyond plantargrade – no forceful stretch
- Do not allow ankle to go past neutral position during strengthening
- Wear ankle brace to provide added stability once camboot removed, if required for patient confidence.
- Tendon remains vulnerable to sudden loading of the Achilles (eg tripping etc) so ensure patient is diligent with ADL's/exercises to avoid re-rupture.

MANAGEMENT:

- Wean camboot as above- patient may need to return to crutches/SPS as required during the weaning process.
- Add exercises such as stationary bike, elliptical, walking on treadmill as patient tolerates.
- Add wobble board activities- progress from seated to supported standing to standing as tolerated.
- Add double heel raises and progress to single heel raises when tolerated. Ensure the ankle does not go past plantargrade position into dorsiflexion.
- Continue to progress strength/proprioception/ROM exercises as tolerated.

PHASE V: WEEKS 16+

MANAGEMENT

- Increase dynamic WB exercise, included plyometric training sport specific retraining.
- Can now introduce full range of motion in strengthening i.e. can go into dorsiflexion beyond plantargrade.
- Return to normal sporting activities at 6 months.