

AchilloCord^{PLUS}™ System Rehabilitation Programme

For Repair of Acute Achilles Tendon Rupture

The following programme is suggested for acute cases where no back slab has been used.

The patient should be warned not to exceed the prescribed activity levels or to overload the repair before complete healing has occurred.

Please note: Patients should only return to driving when they can achieve full weight bearing without suffering discomfort.

Immediate post-operative care

- Active and passive plantarflexion
- Partial weight bearing with elbow crutches - emphasize heel-toe gait to reduce swelling ~ 25% BW

Day 1-3

- 2 cm heel raise *in situ*, Ice/Cryocuff 20 minutes every 2 hours (if possible)
- Resting with leg elevated
- Avoid resting with foot in plantarflexion (foot pointing down)
- Active plantarflexion 100 repetitions, 4 x per day

Gluteal Exercises:

- Clam shell (glut med) 3 x 20 repetitions left and right
- Prone lying bent knee lifts 10 repetitions x 10 seconds hold
- Isometric buttock squeeze 10 repetitions x 10 seconds hold

Day 7-14

- Walking with elbow crutches - increase weight further ~50% BW
- Heel raise *in situ*, Ice/Cryocuff at night
- Resistance band plantarflexion bent knee 100 repetitions, 4 x per day
- Resistance band plantarflexion straight knee 100 repetitions, 4 x per day
- Bent knee sit ups 3 x 8, hold each for 8 seconds
- Stitches out. Commence scar massage with Vitamin E Cream
- Can commence pool programme

Day 4-7

- Partial weight bearing with elbow crutches - increase weight as tolerable ~ 40% BW
- Heel raise *in situ*, Ice/Cryocuff 20 minutes every 2 hours
- Resting with leg elevated
- Sitting, bent knee heel raises 100 repetitions, 4 x per day
- Sitting, bent knee toe raises 100 repetitions, 4 x per day

Gluteal Exercises:

- Clam shell - side lying (glut med) 3 x 20 repetitions left and right
- Prone lying bent knee lifts 10 repetitions x 10 seconds hold

Day 14-21

- Walking with elbow crutches ~75% BW
- Heel raise *in situ*, Ice/Cryocuff if required
- Resistance band exercises a/a with increased resistance
- Abdominal exercises: bent knee sit ups, front plank 60 seconds, left + right plank from knee 30 seconds
- Bilateral bridge with upper arm support 3 x 10 repetitions
- Bird dog 3 repetitions x 10 seconds hold
- Passive dorsiflexion to right angle

Progression:

- Walking with elbow crutches up to full body weight
- Heel raise *in situ*. Continue with assistance band exercises until tolerating full body weight. Then bilateral standing eyes closed 30 seconds
- Bilateral assisted heel raises



Day 21-28

- Mobilizing with elbow crutches up to body weight
- Heel walking 3 x 10 steps
- Standing dorsiflexion stretch:
 - Straight knee 5 repetitions x 30 seconds hold
 - Bent knee 5 repetitions x 30 seconds hold
- Mobilize around house without heel raise occasionally
- Commence proprioception programme. Bilateral standing balance eyes open 30 seconds -> eyes closed 30 seconds

Day 28-42

- Mobilizing with 1 elbow crutch in opposite arm to operated leg
- Heel raise *in situ* for outdoor mobilization
- Occasionally mobilize around house without heel raise
- Bilateral heel raises, operated foot on weight scale:
 - Bent knee
 - Standing
- Increase heel walking
- Single leg balance 30 seconds episodes, eyes open -> eyes closed
- Unilateral bridges 10 repetitions x 10 seconds hold
- Clams without heel support -> straight leg
- Step up onto 15 cm (6 inch) step x 30 repetitions
- Bilateral wall squats to 90° knee flexion x 12 repetitions

By the end of this phase:

- Heel raise should be removed
- Begin to increase ankle dorsiflexion
- Range towards non operated leg
- Progress to single leg balance eyes closed
- Discard elbow crutches - must not show signs of limping

Day 42 onwards (6 weeks)

- Increase walking frequency
- Commence single leg heel raises
- Increase repetitions
- Increase frequency
- Increase speed
- Commence eccentric loading 3 x 25 repetitions:
 - Straight knee
 - Bent knee
 - * Single leg balance on fitter cushion, eyes open -> closed
 - * When strength symmetrical and eccentric strength symmetrical - can begin to increase loading/jumping from week 8 post-operative

Progression:

- Bilateral vertical jumps
- Bilateral bounds

Look for left right symmetry:

- Unilateral hops for height
- Unilateral hops for distance
- Unilateral lateral hops for distance

Functional test:

- Triple hop for distance. Operated leg should equal non-operated leg
- Commence function training

This rehabilitation programme was developed in conjunction with Ian Horsley MSc, MCSP, Clinical Lead Physiotherapist, English Institute of Sport (EIS) North West, of BackinAction Physiotherapy and Sports Injury Clinic, Wakefield, UK.

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