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ACHILLES TENDON RUPTURE REHABILITATION

WILLITS PROTOCOL

Table E-1 Achilles Tendon Rupture Rehabilitation Protocol

Time Frame	Activity
0-2 weeks	Posterior slab/splint; non-weightbearing with crutches: immediately postop in surgical group, after injury in nonoperative group
2-4 weeks	Aircast walking boot with 2 cm heel lift * ⁑
	Protected weightbearing with crutches
	Active plantar flexion and dorsiflexion to neutral, inversion/eversion below neutral
	Modalities to control swelling
	Incision mobilization modalities ⁂
	Knee/hip exercises with no ankle involvement (e.g. leg lifts from sitting prone or side-lying position)
	Non-weightbearing fitness/cardiovascular exercises (e.g. bicycling with one leg, deep-water running)
	Hydrotherapy (within motion and weightbearing limitations)
4-6 weeks	Weightbearing as tolerated * ⁑
	Continue 2-4 week protocol
6-8 weeks	Remove heel lift
	Weightbearing as tolerated * ⁑
	Dorsiflexion stretching, slowly
	Graduated resistance exercises (open and closed kinetic chain, as well as functional activities)
	Proprioceptive and gait re-training
	Modalities including ice, heat, and ultrasound, as indicated
	Incision mobilization ⁂
	Fitness/cardiovascular exercises to include weightbearing as tolerated (e.g. bicycling, elliptical machine, walking and/or running on treadmill, StairMaster)
	Hydrotherapy
8-12 weeks	Wean off boot
	Return to crutches and/or cane as necessary and gradually wean off
	Continue to progress range of motion, strength, proprioception
>12 weeks	Continue to progress range of motion, strength, proprioception
	Retrain strength, power, endurance
	Increase dynamic weightbeaing exercise, include plyometric training
	Sport-specific training

* Patients were required to wear the boot while sleeping.

⁑ Patients could remove the boor for bathing and dressing but were required to adhere to the weight-bearing restrictions according to the rehabilitation protocol

⁂ If, in the opinion of the physical therapist, scar mobilization was indicated (i.e. the scar was tight or not moving well), the physical therapist would attempt to mobilize using friction, ultrasound, or stretching (if appropriate). In many cases, heat was applied before beginning mobilization techniques.