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ORTHOPEDIC SPORTS MEDICINE

OGDENCLINIC
ORTHOPEDICS

Achilles Tendon Functional Rehabilitation Guidelines

0-2 weeks	• Plaster cast with ankle in maximum passive plantar flexion; non–weight bearing with crutches

2-4 weeks	• Achilles-specific (or other) walking boot with maximum passive plantar-flexed heel lifts
	• Protected weight bearing with crutches:
	  ○ Weeks 2–3—25%
	  ○ Weeks 3–4—50%
	  ○ Weeks 4–5—75%
	  ○ Weeks 5–6—100%
	• Active plantar and dorsiflexion ROM exercises to neutral, inversion/eversion below neutral
	• Modalities to control swelling (ultrasound, interferential current with ice, acupuncture, light/laser therapy)
	• Electrical muscle stimulation to calf musculature with seated heel raises when tolerated.
	• Patients being seen 2–3 times/wk depending on availability and degree of pain and swelling in the foot and ankle
	• Knee/hip exercises with no ankle involvement, for example, leg lifts from sitting, prone, or side-lying
	• Non–weight-bearing fitness/cardio work, for example, biking with 1 leg (with boot walker on), deep water running (usually not started until 3–4 wk point)
	• Hydrotherapy if available (within motion and weight-bearing limitations)
	• Emphasize need of patient to use pain as guideline. If in pain, back off activities and weight bearing.

4-6 weeks	• Continue weight bearing as tolerated • Continue 2–4 wk protocol • Progress electrical muscle stimulation to calf with lying calf raises on shuttle with no resistance as tolerated approximately weeks 5–6. Please ensure that ankle does not go past neutral while doing exercises. • Continue with physiotherapy 2–3 times/wk. • Emphasize patient doing non–weight-bearing cardio activities as tolerated with boot walker on.
6-8 weeks	• Continue physiotherapy 2 times/wk • Continue with modalities for swelling as needed.

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	• Continue with electrical muscle stimulation on calf with strengthening exercises. Do not go past neutral ankle position. • Remove heel lifts in stages dependent on Achilles length. Remove 1 lift daily as tolerated. Always leave 1–2 lifts in to represent regular shoe lift, depending on boot design. • Weight bearing as tolerated, usually 100% weight bearing in boot walker now. • Graduated resistance exercises (open and closed kinetic chain as well as functional activities)—start with resisted tubing exercises • With weighted-resisted exercises, do not go past neutral ankle position. • Gait retraining now that 100% weight bearing • Fitness/cardio to include weight bearing as tolerated, for example, biking • Hydrotherapy
8-12 weeks	• Ensure patient understands that tendon is still very vulnerable, and patients need to be diligent with activities of daily living and exercises. Any sudden loading of the Achilles (trip, step up stairs, etc.) may result in a re-rupture. • Wean off boot (usually over 2–5 d process—varies per patient), at night as well • Wear Achilles compression ankle brace to provide extra stability and swelling control once boot walker is removed. • Return to crutches/cane as necessary and gradually wean off. Have patient always wear shoes, limiting time in bare/sock feet. • Continue to progress to ROM, strength, and proprioception exercises. • Add exercises, such as stationary bicycle, elliptical, and walking on treadmill, as patient tolerates. • Add balance board activities—standing with block to prevent dorsiflexion past neutral position. • Add calf stretches in standing (gently). Do not allow ankle to go past neutral position. • Add double-heel raises and progress to single-heel raises when tolerated. Do not allow ankle to go past neutral position. • Continue physiotherapy 1–2 times/wk depending on how independent patient is at doing exercises and access to exercise equipment.
12-16 weeks	• Continue to progress ROM, strength, and proprioception exercises. • Retrain strength, power, endurance. • Ensure patient understands that tendon is still very vulnerable and patients need to be diligent with activities of daily living and exercises. Avoid lunges, squats, etc., because these places excessive stretch on tendon.
16+ weeks	• Increase dynamic weight-bearing exercise, including sport-specific retaining (ie, skipping, jogging, and weight training).
6-9 months	• Return to normal sporting activities that do not involve contact or sprinting, cutting jumping, etc., if patient has regained 80% strength
12 months	• Return to sports that involve running/jumping as directed by medical team and tolerated if patient has regained 100% strength.