O·S·M·S
ORTHOPEDIC & SPORTS MEDICINE SPECIALISTS

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Physical Therapy Protocol: Achilles Tendon Repair

Philosophy:
The Achilles tendon plays a critical role in walking, stair climbing, and return to previous sports. The tendon unit is susceptible to injury because it is a long tendon that crosses two joints in the human body. Spontaneous ruptures usually occur during athletic activities in middle-aged patients, and are diagnosed via physical exam with your OSMS surgeon and advanced imaging. The failure to repair this injury can lead to weakness in push-off strength and the possibility of repeat rupture. The repair can be difficult to accomplish surgically, and a commitment to non-weight bearing is necessary to achieve a desirable outcome. A strong, pain-free ankle with functional range-of-motion comes about through an anatomic reconstruction of the torn tendon with careful physical therapy performed with the therapist and at home. It can take up to a year to make full recovery and it is not unusual to have intermittent pains and aches during that time.

Phase I, surgery to 2 weeks

OSMS appointments:
Medical appointments at 2 weeks
Films are sometimes taken to assess implanted hardware (technique variable)
Physical therapy will begin as directed by your physician and as indicated on your physical therapy order

Rehabilitation Goals:
Protection of the repaired tendon
Recovery from surgery
Reduce pain and swelling
Gradually return to activities of daily living

Precautions:
Non-weight bearing in short leg cast or plantarflexed boot (OK to put foot down when standing)
Rest and elevation between ADLs

Range-of-Motion Exercises:
Hip and knee AROM

Suggested Therapeutic Exercises:
Gait training with bilateral axillary crutches or Roll-About

Progression Criteria:
Patient may progress to phase II after 2 weeks if they have healed incision

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Phase II, (after Phase I criteria met, usually at 2-6 weeks)

OSMS appointments:
Medical appointments at 6 weeks
Physical therapy appointments continue at once or twice weekly
Rehabilitation Goals:
Maintain hip and knee ROM
Improve core, hip and knee strength
Precautions:
Partial WB in walker boot in PF position (remove 1 wedge every 3 weeks)
Control swelling with elevation
Range-of-Motion Exercises:
Toe flexion/extension
Suggested Therapeutic Exercises:
Light massage of foot to decrease edema (start from toes and work towards ankle)
Core strengthening (abdominal recruitment, bridging on ball, ball reach, arm pulleys, resisted diagonal TheraBand's)
Hip & knee strength (clamshells, hip abduction, prone hip extension, SLR, TheraBand press)
At 3 weeks, ok to progress to leg press machine
Glute stretching (medius, minimus, piriformis, hamstring, rectus femoris)
Cardiovascular Exercises:
Upper body circuit training or upper body ergometer
Progression Criteria:
Patient may progress to phase III after 6 weeks

Phase III, (after Phase II criteria met, usually after 6+ weeks)

OSMS appointments:
Medical appointment at 12 weeks
Physical therapy appointments fade to every 10-14 days until cleared
Rehabilitation Goals:
Good eccentric and concentric neuromuscular control
Multiplane limb control
Precautions:
Heat before exercise, ice after

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WBAT without the brace is allowed

Suggested Therapeutic Exercises:

Progress with closed chain exercise
Lunges from 0-90
Leg presses 0-90
Proprioceptive exercises
Begin stationary bike
Hip and core strengthening

Progression Criteria:

After 12 weeks, ok to begin single leg strengthening
After 12 weeks, ok to begin jogging and progress to running
Sport specific exercises
Return to sport is MD directed, generally >16 weeks

References:

- Baer GS, Keene JS. Tendon Injuries of the Foot and Ankle: Achilles Tendon Ruptures. *Orthopedic Sports Medicine: Principles and Practice.* (Third Edition).
- Van der Linden et. Al. Increased Risk Achilles Tendon Rupture with Quinolone Antibacterial Use. *Arch Intern Med* 2003; 163: 1801-1807.