

Achilles Tendinitis Rehabilitation Program

I. Phase I

Goals: Diminish pain and inflammation
Promote tendon healing
Improve strength
Enhance flexibility
Control functional stresses

Treatment Regimen:

- Hot packs applied to area
- Ultrasound to Achilles tendon (not phonophoresis)
- Transverse friction massage
- Warm-up bicycle (10-12 min.)
- Stretch (hamstrings quadriceps, gastroc, soleus)
- Application of pain stimulation around palpable area x 10 minutes
- Electrical stimulation parameters
- Waveform: Russian
- Frequency: 2500 Hz pulse; width: 200 MS; Rate: 50/sec
- 60 pulses per second (pps)
- duty cycle 10 on/10 off; ramp of 1 second
- pad placement- 1"x1" electrodes placed on each side of inflamed/painful tendon (After 3 minutes, palpate tendon, should be less painful and becoming numb, if not, move electrodes)
- Lower Extremity strengthening program (Level I)
- Normal Hip, Quad, Hamstring exercises
- Leg press
- Toe-calf raises
- Soleus raises
- Generalized ankle strength (DF, INV, EVR)
*Monitor subjective pain level response (goal level ~5 out of 10)
- Pool program – exercises, running, jumping as tolerated
- Stretch (aggressive stretching)
- Cryotherapy after practice/game

II. Phase II

Goals: Gradual increase stress to tendon
Enhance quadriceps strength
Improve flexibility
Gradual increase functional activities

Treatment Regimen:

- Hot packs or warm whirlpool
- Ultrasound to tendon
- Transverse massage to tendon
- Active warm-up bicycle (10-12 min.)
- Stretch (hamstrings, quadriceps, gastroc, soleus)
- Application of pain stimulation
(use for 3-4 times in this phase) (discontinue as soon as possible)

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- Strengthening program (Level II)
 - Leg press (90-0o) and (45-100o)
 - Hip add/abduction
 - Hip flex/extension
 - Wall squats (0-70o)
 - Lateral step-up (foam)
 - Front lunges
 - Knee extension
 - Hamstring curls
 - Toe-calf raises & soleus raises
 - Progress from concentric to eccentric – 2 sec up, 8 sec down
 - Progress to unilateral exercises
 - Bicycle/stairmaster
 - Control forces to LE
 - Enhance hip, knee, & ankle strength & stability
 - Core stability
 - *Monitor subjective pain level response (goal 5-7)
 - Aggressive stretching
 - Cryotherapy after practice/games

III. **Phase III**

Goals: Gradually increase applied loads
Functional training
Enhance lower extremity strength
Improve flexibility

Treatment Regimen:

- Hot packs to tendon
 - Ultrasound to tendon
 - Transverse massage
 - Active warm-up
 - Stretch
 - Strengthening program (Level III)
 - Continue previous exercises
 - Continue eccentric progression
 - Tilt board squats
 - Lateral step-ups
 - Front step-downs
 - Agility drills
 - Lunges onto unstable surface
 - Step-ups on unstable surface
 - Single leg balance on unstable surface
 - Plyometric program
 - Initiate two-legged jumps
 - Progress to one-legged jumps
 - *Monitor pain level (goal level ~5)
 - Progress to running program
 - Backward running
 - Lateral movements
 - Forward running
 - Stretching
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IV. **Phase IV**

Goals: Sports specific training
Continue stretching/flexibility program
Continue strengthening program

Treatment Regimen:

- Heat and ultrasound (if needed)
 - Active warm-up
 - Stretching
 - Continue strengthening program
 - Initiate sport specific drills and training
 - Progress to practice situation
 - Stretch
 - Ice (if needed)
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