

# 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)

- 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

**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)