

TABLE E-1 Achilles Tendon Rupture Rehabilitation Protocol

| Time Frame | Activity   |
|------------|--|
| 0-2 weeks  | Posterior slab/splint; non-weight-bearing with crutches: immed. postop. in surgical group, after injury in nonop. group  |
| 2-4 weeks  | Aircast walking boot with 2-cm heel lift*†   |
|            | Protected weight-bearing 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-weight-bearing fitness/cardiovascular exercises; e.g., bicycling with one leg, deep-water running  |
|            | Hydrotherapy (within motion and weight-bearing limitations)  |
| 4-6 weeks  | Weight-bearing as tolerated*†  |
|            | Continue 2-4 week protocol   |
| 6-8 weeks  | Remove heel lift   |
|            | Weight-bearing as tolerated*†  |
|            | Dorsiflexion stretching, slowly  |
|            | Graduated resistance exercises (open and closed kinetic chain as well as functional activities)  |
|            | Proprioceptive and gait retraining   |
|            | Modalities including ice, heat, and ultrasound, as indicated   |
|            | Incision mobilization‡   |
|            | Fitness/cardiovascular exercises to include weight-bearing as tolerated; e.g., bicycling, elliptical machine, walking and/or running on treadmill, StairMaster |
| 8-12 weeks | Hydrotherapy   |
|            | Wean off boot  |
|            | Return to crutches and/or cane as necessary and gradually wean off   |
| >12 weeks  | Continue to progress range of motion, strength, proprioception   |
|            | Retrain strength, power, endurance   |
|            | Increase dynamic weight-bearing exercise, include plyometric training  |
|            | Sport-specific retraining  |

\*Patients were required to wear the boot while sleeping. †Patients could remove the boot 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.

TABLE E-2 Activity at Time of Injury

| Sport                       | No. of Patients |
|-----------------------------|-----------------|
| Racket sport                | 24              |
| Basketball                  | 18              |
| Soccer                      | 15              |
| Baseball                    | 12              |
| Volleyball                  | 12              |
| Football                    | 9               |
| Ascending/descending stairs | 8               |
| Pushing a heavy object      | 4               |
| Trip and fall               | 3               |
| Martial arts                | 3               |
| Other                       | 20              |