

# ACHILLES TENDON REPAIR

## Post-Operative Physical Therapy Protocol



SCAN FOR THE  
ONLINE VERSION



**Stanford**  
MEDICINE

Dear Colleague,

I appreciate your partnership in the rehabilitation of this very special patient of ours. I have instructed the patient that you will be using this protocol. My belief is that the biggest predictor of success is what the patient does at home and consistently. **They should view you not just as a therapist but as a highly educated and skilled teacher** and the patient *must* be an active participant in the rehab process.

To facilitate this, I have included a copy of the rehab protocols I would like the patient to focus on at each time point in the rehab process. Please assist me by encouraging and teaching our mutual patient their home exercises as well.

With your help and the active participation of our patient, I know we can have another fantastic outcome.

Please do not hesitate to reach out directly to me and my team with any questions at any time.

Respectfully,



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|                         | WEEKS 0-3                                  | WEEKS 3-8                                                      | WEEKS 8-12                                          | MONTHS 3-6                                          | MONTHS 6+                                   |
|-------------------------|--------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|---------------------------------------------|
| <b>Weight bearing</b>   | Strict NWB<br><i>Crutches</i>              | PWB in boot<br><i>No FWB until 6 wks</i>                       | Full, in shoe<br><i>Heel lift</i>                   | Full                                                | Full                                        |
| <b>Immobilization</b>   | Plantar-flexion splint                     | Boot 40° (4 heel pads)<br><i>-10°/week to neutral at 7 wks</i> | D/C boot<br><i>Shoe with heel lift</i>              | Wean heel lifts                                     | None                                        |
| <b>Ankle ROM</b>        | None                                       | Light dorsiflexion<br><i>Within boot limits</i>                | Full passive ROM<br><i>Nothing forceful</i>         | Progress                                            | Full                                        |
| <b>Strengthening</b>    | Toe curls, spreads<br><i>Knee ROM, SLR</i> | Isometrics, uninvolved<br><i>Proprioception, intrinsics</i>    | Achilles isometrics,<br><i>Isotonics, Theraband</i> | Closed chain; calf raises<br><i>Slow eccentrics</i> | Eccentric loading<br><i>Sport-simulated</i> |
| <b>Impact and sport</b> | None                                       | Bike at 6 wks<br><i>Heel push, in boot</i>                     | Bike in shoe<br><i>Swimming</i>                     | Bike, rowing                                        | Running 6 mo<br><i>Sport 8-9 mo</i>         |

*As tolerated means pain during exercise no more than 2/10 above baseline. Avoid pushing into pain.*

### WEEKS 0-3

- **Strict NWB in plantar-flexion splint with crutches. No toe-touch weight bearing.**
- Toe curls, toe spreads.
- Knee ROM (active and passive).
- Straight leg raises.

### WEEKS 3-8

- Remove splint and transition into plantar-flexion boot.
- **Transition to partial weight bearing with crutches in plantar-flexion boot. Avoid full weight bearing in boot until 6 weeks post surgery.**
- **Plantar-flexion boot at 40° (4 heel pads) starting week 3, reducing by 10° (remove one heel pad) each week until neutral dorsiflexion/plantarflexion at 7 weeks.**
- Light ankle dorsiflexion within confines of ROM restrictions.
- Isometrics of uninvolved muscles, proprioception exercises, intrinsic muscle strengthening.
- Stationary cycling at 6 weeks with heel push only (not toe) in boot.

**WEEKS 8–12**

- Discontinue boot and gradually wean into regular supportive shoe, initially with heel lift.
- Begin and gradually increase active/resistive exercises of the Achilles (e.g., submaximal isometrics, cautious isotonic, Theraband).
- **Manual full passive range of motion of the Achilles, nothing forceful.**
- Progress to cycling in shoe, swimming.

**MONTHS 3–6**

- Wean heel lifts if not done prior; cycling, rowing machine, etc.
- Closed chain exercises: controlled squats, lunges, bilateral calf raise (progress to unilateral), toe raises, controlled slow eccentrics vs. body weight.

**MONTHS 6+**

- **Month 6: jogging/running, jumping, eccentric loading, sport-simulated exercises.**
- **Months 8–9: return to full sport if rehab goals are met,** including strength and hop testing at 90% or better and clearance by Dr. Tummala.

**CRITERIA TO RETURN TO SPORT**

- Full ankle ROM compared with the uninvolved side.
- No effusion.
- Normal gait and pain-free activities of daily living.
- Calf (plantar flexion) strength at least 90% of the uninvolved side.
- Single-leg hop tests at least 90% of the uninvolved side.
- Around 8 to 9 months after surgery.

**WEEK-BY-WEEK PROGRESSION**

| EXERCISE                                                               | 1 | 2 | 3 | 4<br>(1 mo) | 5 | 6 | 7 | 8<br>(2 mo) | 9 | 10 | 12<br>(3 mo) | 16 | 20 | 24<br>(6 mo) |
|------------------------------------------------------------------------|---|---|---|-------------|---|---|---|-------------|---|----|--------------|----|----|--------------|
| <b>Initial Exercises</b>                                               |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Strict NWB in plantar-flexion splint                                   |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Boot 40° (4 heel pads), remove one per week to neutral at 7 weeks      |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Partial WB in boot with crutches                                       |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Full WB in boot                                                        |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| D/C boot; supportive shoe with heel lift                               |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Wean heel lifts                                                        |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Toe curls, toe spreads; knee ROM; SLR                                  |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Light ankle dorsiflexion within ROM limits                             |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Isometrics (uninvolved), proprioception, intrinsics                    |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| <b>Advanced Exercises</b>                                              |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Achilles isometrics, cautious isotonic, Theraband                      |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Manual full passive Achilles ROM (nothing forceful)                    |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Closed chain: squats, lunges, calf raises (2 → 1 leg), slow eccentrics |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| <b>Cardiovascular Exercises</b>                                        |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Stationary cycling in boot, heel push only                             |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Cycling in shoe, swimming                                              |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Rowing machine                                                         |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| <b>High-Level Activities</b>                                           |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Jogging/running, jumping, eccentric loading, sport-simulated           |   |   |   |             |   |   |   |             |   |    |              |    |    |              |
| Return to full sport at 8 to 9 months                                  |   |   |   |             |   |   |   |             |   |    |              |    |    |              |

*This protocol is a general guideline and does not replace the clinical judgment of the treating therapist and surgeon. Please contact our office with any questions.*