

Dr. Petre's Achilles Repair Rehabilitation Protocol – Normal

Key considerations per Dr. Petre:

1. Avoid creating pain – discomfort is okay but pain should not occur and persist 3 days in a row. If it does, rest the patient until pain level is clearly decreasing. If it does not decrease, have doctor evaluate.
2. Avoid all passive motion into DF for 1st 6 weeks post-op
3. Weight-bearing has been shown in studies to improve strength of healing with no increase in re-rupture rate – just protect from any dorsiflexion forces, especially unexpected ones (therefore the importance of the boot with limiting of DF)
4. CKC exercises can be uncomfortable and fatiguing, but should not cause pain and/or swelling; if this happens back off the amount of stress
5. Major risk of re-rupture occurs at 6 weeks to 4 months, especially when unprotected.
6. Do not expect an athlete to return to competitive situation any earlier than 6 months, and usually not until 9-12 months.
7. Expect some Achilles discomfort (usually insertional) when athlete first resumes competitive participation and the stresses that accompany such participation. Manage with routine anti-inflammatory measures. If necessary, rest and use patches (diclofenac, nitroglycerin).
8. Avoid over stretching the tendon repair. This will result in weakness and loss of athletic ability. It's better for it to be too tight than too loose.

Weeks 2-6:

ROM

Retrograde edema massage, soft tissue mobilization, scar mobs, etc.

Joint mobilizations, no passive DF, active ROM in all planes and gentle active assisted motion **(i.e. the player should be initiating all movement during this time period and particularly avoid DF above neutral to prevent stretching the repair)**

Strength

Intrinsics

INV, EV, PF- light theraband, light manual resistance

Supplementary strength: quads, hamstrings, hip abd/add, rotators, gluts

Supplementary cardio: single leg rowing, biking, UBE

Pool

Aqua-jogging after week 3, no floor contact

Gait

Wean from crutches, continue to wear boot.

Weeks 6-10:

ROM

Continue with ROM within limits

Mobilizations, assist to get DF to neutral if not already there (prefer to have 10 degrees DF by 8 weeks)

Start bike (very limited resistance and check that ankle does not go into excessive DF on the pedal)

Strength

Intrinsic

Theraband exercises – all directions and progress resistance as tolerated

BAPS ROM and proprioception/rhythmic stabilization

Manual resistance exercises, but cautious with DF resistance

Pool

Walking chest depth

Backwards walking for eccentric control

Aqua jogging, no ground contact

Gait

Wean out of boot*

Weight shifting exercises, work on fundamentals of gait, etc.

Supportive shoe with heel lift (usually start with half inch lift and then drop to quarter inch after 2 weeks, eliminate lift after 2 more weeks or when patient comfortable)

Weaning Out of Boot

1st week – out of boot for 1 hour in the morning and 1 hour in the afternoon

2nd week – out of boot for 2 hours in the morning and 2 hours in the afternoon

3rd week – out of boot for 4 hours in the morning and 4 hours in the afternoon

4th week – out of boot completely

Weeks 10-14:

ROM

Regain full DF, beginning to push DF (within tolerance)

Joint mobs if indicated

Strength

Intrinsic, theraband program

Seated BAPS program

CKC(closed kinetic chain) exercises within tolerance

Seated heel raises, can add appropriate weight, weight should not limit patient's ability to raise through full range of motion.

Progress to double leg heel raises by week 12

Bike and gradually add resistance, start elliptical trainer as tolerated toward week 12

Pool

Pool walking, if underwater treadmill, begin incline to tolerance

Gait

Emphasize gait pattern as patient weans from boot, and weans from heel lift in shoe

Backwards walking for eccentric control

Months 4-5:

ROM

Push DF if necessary, regain symmetrical ROM

Strength

Unlimited CKC progression if tolerated

Double leg heel raises to tolerance; single leg if patient is able always focusing on smooth concentric and eccentric control

Single leg balance progression

Pool

Squats, Lunges, Single leg heel raises

Fast Pace Walking

Gait

Walking on treadmill, incline

Begin water jogging, floor contact (underwater treadmill)

Start Alter-G if available with weight-bearing pressure started at 50%, add 10% every 4-7 days as tolerated

Month 5-6

ROM

Any remaining ROM gains

Strength

Begin single leg heel raises

Initiate eccentrics

*begin with prone manual, progress to standing double leg heel raise with single leg eccentric lower to floor

Full CKC program

Lunges, Reverse Lunges, etc.

Initiate movement prep/functional warm-up program

Functional single leg balance exercises, add UE challenges (throwing)

Pool

Eccentrics chest depth

Cont. Running progression in pool with treadmill

Begin initial agilities

Month 6-7+

Strength/Gait

Agilities

Begin running progression

Progress weight in CKC program

Progress to sport specific training