

**PHYSICAL THERAPY PROTOCOL: ACI of patella/trochlea with AMZ
(Autologous Chondrocyte Implantation with Anteromedialization Tibial
Tubercle Transfer)**

Name: _____ Date of Surgery: _____

Frequency: 2-3 times per week x 12 weeks Signed: _____

PHASE 1 → 0-2 weeks post-operative

Brace use:

- locked in full extension at all times except for hygiene and home exercises

Weight bearing:

- heel-touch only

Range of motion:

- gentle passive ROM 0-45 degrees; CPM 0-30 degrees

Exercises:

- quad sets, patella mobilization, straight leg raise, calf pumps at home
- CPM at home 0-30 degrees

PHASE 2 → 2-8 weeks post-operative

Brace use:

- unlocked from 0-45 degrees (week 2-4)
- progress to unlocked 0-90 degrees (week 4-6)
- discontinue brace at 6 weeks post-op

Weight bearing:

- heel-touch only (weeks 2-6)
- advance 25% weekly until full weight bearing from weeks 6-8

Range of motion:

- in CPM 0-60 degrees (weeks 2-4)
- in CPM 0-90 degrees (weeks 4-6)
- When NWB, can advance PROM as tolerated otherwise

Exercises:

- weeks 2-6: Add side-lying hip and core exercises, advance quad set and stretching
- Weeks 6-8: add heel raises, closed chain in gym, gait normalization, eccentric quad and hamstring. Advance core, glue, and pelvic stability

PHASE 3 → 8-12 weeks post-operative

Brace use: None

Weight bearing: As tolerated/Full

Range of motion: No restrictions

Exercises:

- Progress closed chain activities
- Advance hamstring work, proprioception/balance, hip/core/glut
- Stationary bike begin at week 10

PHASE 4 → 12-24 weeks post-operative

Exercises:

- Progress Phase 3 exercises and functional activities; walking lunges, planks, bridges, swiss ball, half bosu
- Advance core/glut and balance activities

PHASE 5 → 6-12 months post-operative

Exercises:

- Advance all activity without impact such as running, jumping, pivoting
- Return to sport when cleared by MD