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**ACL Insufficiency Protocol**

**Recovery/Recuperation Phase (I)**

- Restore ROM
- Gait training: aquatic therapy if needed
- Quad isometrics
- Straight leg raise with/without weights
- Calf raises
- Hip PRE's
- Hamstring PRE's
- Stationary bike/ Nordic Track
- Closed chain activities: BAPS, half-squats, step-ups, leg press
- Balance work: emphasize hip, knee flexion; avoid valgus moment at knee; single-leg
- Core strengthening
- *ISOKINETIC TESTING WHEN PAIN-FREE*

**Limited Return to Activities Phase (II)**

- Progress endurance activities
- Add StairMaster, VersiClimber if available
- Quad isometrics, isotonic (90-40 degree arc), eccentrics
- Isokinetic training quads, hamstrings at high speed = 180-300 deg/sec
- Advance closed kinetic chain strengthening (i.e., one-leg squats)
- Progress proprioception activities (slide board, KAT, etc.)
- Begin jogging when quad torque injured side 60% of uninjured side
- Begin running and agility work when quad torque injured side 80% of uninjured side

**Full Return to Sports Phase (III)**

- Ⓞ Begin aggressive functional exercise, agility without contact
  - ○ Jog/sprint progression
  - ○ Forward, backward running, 1/2, 3/4, full speed
  - ○ Cutting, cross-over, carioca, etc.
- Neuromuscular control program
- Plyometrics

**COMMENTS:**