



## Troubleshooting for Knee Rehabilitation

### Extension Loss

- Propping in long sit with calf/hamstring stretch
- Prone hanging: 3x/day for 10 minutes
- Extensionator™
- Mobilize in extension with heel prop. Emphasize anterior interval, patellar complex mobilizations to resolve anterior impingement.
- Soft tissue mobilization to posterior musculature. Consider performing during prone hang if tolerated.
- Follow extension PROM with active quad work to improve active TKE (including quad sets held for time).
- Foam roller
- Early post-op: using t-scope brace for passive extension stretching (sleep, school, work, etc.).

### Flexion Loss

- Check quad flexibility
- Check hip flexor flexibility
- Use A-P or P-A mobilizations at varied angle of flexion (pending ACL graft healing).
- Stretching
  - Quadruped heel sit
  - Towel roll behind knee joint for gapping
- Superior fibular head mobilization
- Anterior interval, patellar complex mobilizations
- Bike (upright and/or recumbent), recumbent stepper: rocking or full circles
- Soft tissue mobilization to quad in Thomas Test position

### Poor Quad Function

- Ensure proper isometric quad function through quad setting prior to progression to SLR
  - Quad activation → create superior patellar glide → active hyperextension → SLR
  - Must have full passive extension then full active extension before initiating SLR
- Terminal Knee Extension (TKE)
  - Prone
  - Long sit with heel prop
  - Standing with and without resistance
- NMES: 15 minutes in full extension (heel prop if needed)
- Biofeedback: hold quad set 10 seconds up to 60 second reps

### Anterior Knee Pain

- Mobilize anterior interval in extension, 30°, 60°, 90°
- Check scar mobility
- Stretch quad
- Soft tissue mobilization to quad (foam roller, Graston™, etc.)
- Anterior interval taping