**THE STONE CLINIC**  
ORTHOPAEDIC SURGERY, SPORTS MEDICINE AND REHABILITATION  
PATELLAR TENDON REPAIR WITH ALLOGRAFT  
Post-operative Physical Therapy Protocol

**General considerations:**
- The surgical leg will be weight bearing as tolerated using crutches post-operatively.
- Range of motion will be blocked at 0 degrees in a brace for 4 weeks.
- Passive range of motion 0 to 20 degrees X 2 weeks, progress slowly as tolerated to 70 degrees by 4 weeks.
- Important not to push for flexion past 70 degrees for 4 weeks post-op to protect repair.
- Avoid bandaged area and portals for 4 weeks, “no touch zone” 2 inches from portals.
- Focus on proper quadriceps activation, especially VMO recruitment and patellofemoral mechanics should be the emphasis in the early stages of recovery.
*Returning to full activity as early as possible is dependent upon adherence to the first 6 weeks of the protocol. Continue fitness through upper extremity, trunk, and cardiovascular exercise.

<table>
<thead>
<tr>
<th><strong>Week 1:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- M.D., office visit day 2 for dressing change, review of medications and instruction on a home program.</td>
</tr>
</tbody>
</table>

**Exercise:**
- Ankle pumps, quad sets, leg raises in multiple planes (except hip flexion).
- Extension stretching to hamstrings, calves, and lateral musculature to maintain extension range of motion.
- Gait training with crutches, pain and edema control, and muscle stimulation to improve quadriceps recruitment.

**Manual:** Soft tissue mobilization to surrounding musculature; effleurage for edema.

**Goals:**
Decrease pain and edema.  
Gait weight bearing as tolerated with brace locked in 0 degrees extension.
Passive range of motion 0 to 20 degrees X 2 weeks, up to 70 degrees by 4 weeks.

<table>
<thead>
<tr>
<th><strong>Weeks 2-4:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Nurse visit at 14 days post operative for suture removal.</td>
</tr>
</tbody>
</table>

**Exercise:**
- Continue to progress weight bearing and functional mobility as able.
  - Active open chain hip extensions, adductions, abductions progressing to resistive band exercises as appropriate (proximal to the knee).
  - Standing calf raises. Straight legged bridging on ball with brace on.
- Well legged cycling, upper body work outs.

**Manual:** Soft tissue mobilization surrounding structures, patellofemoral joint, and suprapatellar pouch with appropriate intensity to allow maturation and healing.

**Goals:**
Decrease pain and edema.  
Gait weight bearing as tolerated with brace locked in 0 degrees extension.  
Passive range of motion progress towards 70 degrees as tolerated.
THE STONE CLINIC
ORTHOPAEDIC SURGERY, SPORTS MEDICINE AND
REHABILITATION
PATELLAR TENDON REPAIR WITH ALLOGRAFT
Post-operative Physical Therapy Protocol

**Weeks 4-6:**
M.D. visit at 1 month post-op. Wean out of brace, use brace unlocked if approved by MD.

**Manual:**
- Continue soft tissue mobilization. Initiate gentle patellar glides and portal scar tissue mobilization when appropriate.

**Exercise:**
- Ankle and hip resisted PNF patterns.
  - Single leg balance with perturbations (Around the worlds, single balance with upper extremity movements).
  - Prone on ball with added hip motions.
  - Continue well legged cycling and upper body work outs.

**Goals:**
Range of motion 0 to 100 degrees.

**Weeks 6-8:**
**Exercise:**
Begin functional exercises such as partial squats, bent leg bridges, small range slider lunges, mini step ups.
  - Proprioceptive training. Continue to increase intensity and resistance of other exercises.
  - Two-legged bicycling for range of motion and without resistance and without forcing range of motion.
  - Emphasis on gait training with proper movement patterns.

**Manual:**
- Soft tissue mobilization through hip, knee, and lumbar region as necessary.
  - PNF patterns with resistance above the knee for hip and pelvic patterns.
  - Patellar decompression with taping techniques as needed.

**Goals:**
Focus on gait mechanics. Range of motion 0 to 110 degrees.
Initiate stationary bicycle no resistance/pain.

**Weeks 8-12:**
- Initiate passive flexion stretching to increase range of motion.
- Add lateral exercises (i.e. lateral stepping, lateral step-ups, etc.).
- Continue all exercises with emphasis on closed-chain, functional and proprioceptive program.
- Increase resistance of cycling, add stair machine, and pool programs.

**Goals:**
Gait no limp, good mechanics. Full range squat no pain. Stair management no pain. Range of motion 90% of normal.

**Weeks 12-16:**
MD appointment at 12 weeks. Complete Sports test 1.
- Goals are to increase strength, power, and cardiovascular conditioning.
- Sport-specific exercises and training program. Eccentric focused strengthening program.
THE STONE CLINIC
ORTHOPAEDIC SURGERY, SPORTS MEDICINE AND
REHABILITATION
PATELLAR TENDON REPAIR WITH ALLOGRAFT
Post-operative Physical Therapy Protocol

- Begin pre-running program (see handout for specific instructions) as able to demonstrate good strength and mechanics.

<table>
<thead>
<tr>
<th>4-6 months:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Goals are to develop maximal strength, power, and advance to sporting activities.</td>
</tr>
<tr>
<td>- Resisted closed-chain rehabilitation through multiple ranges.</td>
</tr>
<tr>
<td>- Running program, balance drills and agility program.</td>
</tr>
<tr>
<td>- Initiate plyometric training as able to demonstrate adequate strength and proper mechanics.</td>
</tr>
</tbody>
</table>