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Quadriceps and Patellar Tendon Repair Protocol:

The intent of this protocol is to provide the therapist and patient with guidelines for the post-operative rehabilitation course after quadriceps or patellar tendon repair. This protocol is based on a review of the best available scientific studies regarding knee rehabilitation. It is by no means intended to serve as a substitute for one's clinical decision making regarding the progression of a patient's post-operative course. It should serve as a guideline based on the individual's physical exam/findings, progress to date, and the absence of post-operative complications. The stakes are high following extensor mechanism repair – the importance of early protection/maintaining the knee straight when not under the guidance of therapist, and avoiding active extension, should be reinforced. If the therapist requires assistance in the progression of a post-operative patient they should consult with Dr. Spang.

Phase I – Immediate Post Surgical (Weeks 1-6):

Goals: **PROTECT** integrity of repair

Weight-bearing as tolerated using crutches

Post-op brace locked in full extension

Quad sets, passive knee flexion, ankle pumps. ROM 0-30deg

No strengthening, no weight-bearing on flexed knee, no stairs, no flexion past 30

Phase II – Weeks 2-6 after surgery – Continued protection, early ROM

WBAT with crutches

Brace locked in full extension while walking

Quad sets, active knee flexion, side leg lifts, toe raises

Strengthening of non-involved limbs only

No straight leg raises until 6 weeks, no active knee extension exercises
antigravity, no stairs

May gradually increase flexion to 60deg by week 4, with **goal of 90deg flexion by week 6**

Avoid upper extremity bike or upper extremity ergometer at all times.

Phase III – Weeks 6- 12 after surgery – Progressive RANGE of Motion and early strengthening

Goals: Regain full ROM, strengthening

Full weight-bearing – may weight-bear with brace unlocked once quad control restored

Wean from brace approx. weeks 6-8 (variability here)

Progress active and gradual passive knee flexion

Active stretching all uninvolved muscle groups

Stationary bike

Progressive leg lifts antigravity, progress to ankle weight

Wall slides

Partial squats

Progressive walking on level surfaces

Continue to avoid bearing full weight on stairs

Avoid patellofemoral overload

Limit OC and CC knee extension arc to 0-30 deg

Phase IV – Advanced strengthening (12-16 weeks)

Ensure full ROM, stretch all muscle groups

Cautious use of weight-training machines

Step-up-down progression

Walking on level surfaces and gentle inclines

Step up stairs gradually

Avoid jumping

Phase V – Weeks 16-20

Progressive strengthening, avoiding overload. Walk to jog progression

Step down stairs gradually

Phase VI – Weeks 20-24

Progressive run/speed/agility

Jump training after 24 weeks post-op

Proceed gradually with caution.

Finally, I greatly appreciate the opportunity to do your surgery. My staff and I will do everything we can to ensure your comfort and safety during the surgery, and to make sure that you have a quick recovery.

Robert Spang M.D.