LAKESHORE
BONE & JOINT INSTITUTE
ORTHOPEDIC EXCELLENCE. KEEPING YOU IN MOTION.

Neel P. Jain, MD
Orthopedic Surgery
Sports Medicine
Direct Line (219) 250 - 5038
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Quadriceps Tendon Repair Protocol

Name _____ **Date** _____

Procedure _____

Procedure Date _____

Frequency 1 2 3 4 5 times/week **Duration** 1 2 3 4 5 6 weeks

FIRST THERAPY VISIT

- Therapy appointment should be scheduled for 3-5 days postoperatively.
- Goals of therapy visit include:
  - Surgical site evaluation (see below for instructions)
  - Brace/sling education and adjustment as needed
  - Review of therapy protocol, expectations, and plan
  - Initiation of early phase therapy ONLY if applicable (follow protocol as outlined below)
- Surgical site evaluation
  - Incisions are closed with one or combination of below methods
    - Staples
    - Nylon sutures (black sutures)
    - Monocryl sutures covered with steristrips or glue
    - Prineo dressing (clear adherent glue dressing)
  - Anytime the dressing is changed or examined, ***please wash hands*** prior with antibacterial soap.
  - There will be gauze and padding over the incisions and the extremity may be wrapped with an ACE wrap. The surgical dressing should be changed by the therapist using ***sterile*** technique. This includes sterile field, sterile gloves, betadine or chlorhexidine skin cleanser and sterile supplies when redressing the wounds. Do NOT remove steri-strips or glue dressing. DO NOT remove sutures or staples. The new dressing should include dry gauze and ACE wrap. Before the new dressing is applied the wounds should be clean and dry (without removing steri strips or glue dressing). Please do not use tegaderm unless it was used at the time of surgery or if specifically stated on the orders. If there are any concerns with the incisions or dressings, the therapist should call the office immediately – (219) 250-5038.
  - Unless otherwise instructed, incisions must remain dry for 7 days. They must be sealed off in the shower. The Prineo dressing/glue dressing is water resistant, and incisions covered by this dressing may get wet after 3-5 days. Once you are permitted to get the incisions wet, warm soapy water should *gently* rinse the surgical area. Do NOT scrub the area. Pat the area dry with a clean towel and keep free of lotions or creams. Do NOT soak in a pool, bath or hot tub until permitted by the surgeon's office. Please wear clean clothes following shower and be conscious of any pet hair or other contaminants near the surgical area. Do not apply any ointments or medications to the area.

*****Range of motion is an important progression of therapy, but limiting swelling is important. Respecting swelling will decrease pain and improve motion.*****

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Quadriceps Repair Protocol

Phase 1 – maximum protection
0-2 weeks:

- Brace locked in full extension for 6 weeks
- Partial weight bearing for 2 weeks
- Ice and modalities to reduce pain and inflammation
- Aggressive patella mobility drills
- Range of motion 0° to 30° knee flexion
- Begin submaximal quadriceps setting

Weeks 2-4:

- Weight bearing as tolerated; progressing off of crutches
- Continue with inflammation control
- Continue with aggressive patella mobility
- Range of motion 0° to 60°
- Continue with submaximal quadriceps setting

Weeks 4-6:

- Full weight bearing
- Continue with ice and aggressive patella mobility
- Range of motion 0° to 90° (by week 6)
- Increase intensity with quadriceps setting

PHASE II – PROGRESSIVE RANGE OF MOTION AND EARLY STRENGTHENING
Weeks 6-8:

- Full weight bearing
- Open brace to 45°- 60° of flexion week 6, 90° at week 7
- Continue with swelling control and patella mobility
- Gradually progress to full range of motion
- Begin multi-plane straight leg raising and closed kinetic chain strengthening program focusing on quality VMO function.
- Initiate open kinetic chain progressing to closed kinetic chain multi-plane hip strengthening
- Normalize gait pattern
- Begin stationary bike
- Initiate pool program

Weeks 8-10:

- Wean out of brace
- Continue with patella mobility drills
- Normalize gait pattern
- Restore full ROM
- Progress open and closed kinetic chain program from bilateral to unilateral

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- Increase intensity on stationary bike
- Begin treadmill walking program forward and backward
- Begin elliptical trainer

Weeks 10-12:
- Full ROM
- Terminal quadriceps stretching
- Advance unilateral open and closed kinetic chain strengthening

PHASE III – PROGRESSIVE STRENGTHENING
Weeks 12-16:
- Advance open and closed kinetic chain strengthening
- Increase intensity on bike, treadmill, and elliptical trainer
- Increase difficulty and intensity on proprioception drills
- Begin gym strengthening: leg press, hamstring curls, ab/adduction; avoid lunges and knee extensions
- Begin multi-directional functional cord program

PHASE IV – ADVANCED STRENGTHENING AND FUNCTIONAL DRILLS
Weeks 16-20:
- May begin leg extensions; 30° to 0° progressing to full ROM as patellofemoral arthrokinematics normalize
- Begin pool running program advancing to land as tolerated

PHASE V – PLYOMETRIC DRILLS AND RETURN TO SPORT PHASE
Weeks 20-24:
- Advance gym strengthening
- Progress running/sprinting program
- Begin multi-directional field/court drills
- Begin bilateral progressing to unilateral plyometric drills
- Follow-up appointment with physician
- Sports test for return to competition

Comments:

FCE _____ Work Conditioning/Work Hardening_____ Teach HEP_____

Every patient's therapy progression will vary to a degree depending on many factors. Please use your best clinical judgment on advancing a patient. If other ideas are considered to improve patient's outcome do not hesitate to call.

Patient's recovery is a team approach: Patient, family/friend support, therapist, and surgeon. Every team member plays an important role in recovery.

Signature_____ **Date** _____