

Kyle Anderson, MD
William Beaumont Hospital

27207 Lahser Road #200-B
Southfield, MI 48034
Ph. (248)663-1900

6900 Orchard Lake Rd #103
W. Bloomfield, MI 48322
Ph. (248)855-7400

3535 W. 13 Mile Rd. #605
Royal Oak, MI 48073
Ph. (248)551-9100

Quad / Patellar Tendon Rupture / Repair

PHASE I: Immobilization: 0-6 weeks

0-2 weeks (HEP)

Brace locked at 0° extension, worn 24 hours per day except when working on ROM

Gait: With brace locked at 0° extension TTWB

AROM flexion 0°-30° only, prone or gravity assisted

POW 2-6

Criteria to D/C assistive device: Pain tolerance

Brace: Locked in extension

Ankle pumps, quad/glut/ham sets

FES to quad (sub-maximal contraction) with QS

Patellar mobs med-lat for all patients.

Quad tendon repair: no INFERIOR glides until week 6

Patellar tendon: no SUPERIOR glides until week 6

Myofascial scar work

ROM: Progress approximately 10° per week as tolerated to 90 degrees prone flexion at 6 weeks

Ice/elevation

IFC prn

Weight shifts with brace locked at 0° extension (F/B, L/R, diagonals)

Begin static, dynamic SLB activities (eyes open/closed, head nods, arm movement)

PHASE II: POW 6-12

Gait: Patient should be FWB

Progressively unlock brace to 90° as long as patient has that ROM available actively

Criteria to D/C brace: Quad lag less than 5°
Controlled effusion
Good gait pattern

Patellar mobs all directions

Ankle and hip strengthening

Stretching ankle, hip as needed

Kyle Anderson, MD
William Beaumont Hospital

27207 Lahser Road #200-B
Southfield, MI 48034
Ph. (248)663-1900

6900 Orchard Lake Rd #103
W. Bloomfield, MI 48322
Ph. (248)855-7400

3535 W. 13 Mile Rd. #605
Royal Oak, MI 48073
Ph. (248)551-9100

Gait training PWB on treadmill (brace open to 40°, progress to 90° as ROM increases)

Gait training in clinic with brace open to facilitate quads

Leg press (bilateral): Within ROM guidelines according to # of weeks post-op

Standing curls within flexion ROM

Proprioception: Progress SLB activities (eyes open/closed, head nods, arm movement), all planes of motion

Stationary bike for ROM within ROM guidelines

Initiate motion loss program as needed

Passive stretching for knee flexion as needed

Soft tissue work as needed (infrapatellar space)

Joint mobs as needed

Criteria to progress: ROM > 90 degrees knee flexion

Knee pain minimal

Controlled effusion

PHASE III: Approximately POW 12-16

Progress previous exercises

Treadmill walking: forward, retro

Wall slides

Terminal knee extension with theraband

Step-ups: forward, retro

Step-downs: Medial

SLB activities: Progress to forward dips, ball toss, etc.

Mini-tramp push-downs – progress to jumping

Stairmaster – forward, retro

Leg extension PRE's: terminal extension and inner range quads only, no long arcs

Minisquats – progress to under cord

Jumping on leg press - bilateral

Continues ice as needed

Stretching and joint mobs as needed

Criteria to progress: ROM equal to opposite knee

Controlled effusion

Pain-free

Quad strength 4/5

Kyle Anderson, MD
William Beaumont Hospital

27207 Lahser Road #200-B
Southfield, MI 48034
Ph. (248)663-1900

6900 Orchard Lake Rd #103
W. Bloomfield, MI 48322
Ph. (248)855-7400

3535 W. 13 Mile Rd. #605
Royal Oak, MI 48073
Ph. (248)551-9100

PHASE IV: Approximately POW 16-20

Progress previous exercises

Increase resistance with PRE's

Increase endurance

Stretching, joint mobs, soft tissue work as needed

Functional rehab: Progress to single leg jumping on leg press
Begin light bilateral plyos and progress

Criteria to progress: ROM equal to opposite knee

Quad strength 5/5

Patient able to perform bilateral jumping in place (F/B, L/R)
each for 30 seconds with good technique

PHASE V: Approximately 5-6 months post-op

Progress previous exercises

Functional rehab: Progress to hopping as proper technique/control
demonstrated

Begin running/jogging when hopping performed with control.

Progress to sport specific drills as tolerated for appropriate
patients

Criteria to discharge non-athletes:

Good gait pattern

ADL's without difficulty

Quads 4+ - 5/5 strength

Criteria to discharge athletes: Good gait pattern PLUS patient is able to
perform 2 of the 4 following tests with the affected leg within 80% of the
uninvolved leg:

Single leg hop for distance

Single leg balance reach

Isokinetic strength test

Maintenance program should stress continued strength and endurance work at
least 2-3 times per week , with emphasis on continued stretching of quads at
least daily.

Revised: 9/04