
Patellar Tendon and Quadriceps Tendon Repair Rehab Protocol

Phase I (Weeks 0 to 2)

Appointments

- Rehabilitation appointments typically begin three to five days after surgery

Goals

- Protect the post-surgical repair

Precautions

- Ambulate with crutches
- Continually use the hinged knee brace locked in extension and crutches for weight bearing as tolerated for ambulation. The brace must be worn and locked at all times other than when performing rehabilitation exercises.
- Follow range of motion guidelines
- Keep the incision and sutures dry

Range of Motion

- Knee range of motion from 0 to 30 degrees of passive knee motion, unless specifically stated otherwise by Dr. Thieken

Exercise

- Ankle pumps, **isometric quadriceps sets**, hamstring sets, glut sets and **patellar mobilizations**
- Upper body circuit training or upper body ergometer

Criteria for Progression to Phase II

- Progress two weeks post-operatively

Phase II (Weeks 2 to 6)

Appointments

- Rehabilitation appointments are one to two times per week

Goals

- Normalize gait with weight bearing as tolerated with gradual progression, continuing to use the brace locked in extension, the ability to discontinue the crutches will be determined by the rehabilitation provider and physician based on your progress and leg control
- Protection of the post-surgical repair

Range of Motion

- Continually use the hinged knee brace locked in extension and use crutches for weight bearing as tolerated, with gradual progression, for ambulation. The brace must be worn and locked at all times other than when performing rehabilitation exercise
- Post-operative weeks 3 to 6: 0 degrees to 90 degrees of knee motion without active quadriceps extension (i.e. no active knee extension). Goal of 90 degrees of flexion at six weeks.

Exercise

- Heel slides
- Knee extension range of motion with foot resting on a towel roll
- Four-way leg lifts with brace locked in extension
- Gentle patellar mobilizations
- Weight shifting on to surgical side with brace
- Upper body circuit training or upper body exercise

Criteria for Progression to Phase III

- Progress six weeks post-operatively
- Knee range of motion at 0 to 90 degrees (i.e. avoid knee hyperextension)

Phase III (Weeks 6 to 12)

Appointments

- Rehabilitation appointments are once every one to two weeks

Goals

- Normalize gait on level surfaces using brace opened to 30 to 40 degrees without crutches
- Initiate active quadriceps contractions in weight bearing

Precautions

- Gradual progression to weight bearing with knee flexion with avoidance of weight bearing knee flexion past 70 degrees for 12 weeks after surgery
- Continue to follow range of motion limits for the specific time frame, as described below

Range of Motion

- Post-operative weeks 7 to 8: 0 to 115 degrees of knee motion without active quadriceps knee extension
- Post-operative weeks 9 to 10: 0 to 130 degrees of knee motion; active knee extension is now permitted
- Precautions may be altered by the surgeon based on the integrity of the repair; if so, these will be specifically stated by the surgeon

Exercise

- Active range of motion for open chain knee flexion and extension
- Closed chain quadriceps control from 0 to 40 degrees with light squats and leg press, progressing to shallow lunge steps at weeks 10 to 12
- Prone knee flexion
- Stationary bike
- Patellar mobilizations
- Open chain hip strengthening
- Core strengthening
- Upper body circuit training or upper body ergometer

Criteria for Progression to Phase IV

- Normal gait mechanics without crutches
- Active knee range of motion at least 0 to 110 degrees

Phase IV (Week 12 to 24)

Appointments

- Rehabilitation appointments are once every week

Goals

- Normalize gait on all surfaces without brace
- Single leg stand with good control for 10 seconds
- Full knee range of motion
- Good control with squat to 70 degrees of knee flexion

Precautions

- Avoid any forceful eccentric contractions
- Avoid impact activities
- Avoid exercises that create movement compensations

Exercise

- Non-impact balance and proprioceptive drills
- Stationary bike
- Gait drills
- Hip and core strengthening
- Stretching for patient specific muscle imbalances
- Quad Strengthening: Closed chain exercise, initially starting as a vary short arc of motion and gradually progressing to 70 degrees of knee flexion
- Functional movements (squat, step back, lunge)
- Hip and core strengthening
- Stationary bike, StairMaster and swimming

Criteria for Progression

- Normal gait mechanics without the brace on all surfaces
- Squat and lunge to 70 degrees of knee flexion without weight shift
- Single leg stand with good control for 10 seconds
- Full active range of motion for knee flexion and extension