



REHABILITATION GUIDELINES

Edward S. Chang, MD
Orthopaedics and
Sports Medicine

OFFICE LOCATIONS

TUESDAY
8100 Innovation Park
Drive
Fairfax, VA 22031
T 703-970-6464
F 703-970-6465

WEDNESDAY
1005 N. Glebe Rd
Suite 410
Arlington, VA 22201
T 571-414-6940
F 703-970-6465

THURSDAY
FRIDAY (AM only)
6355 Walker Lane
Suite 300
Alexandria, VA 22310
T 703-797-6980
F 703-797-6981

CLINICAL NURSE

Eileen Perri, BSN
(703) 797-6918

PATELLAR TENDON REPAIR

The rehabilitation guidelines are presented in a criterion based progression program. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, associated injuries, pre-injury health status, rehab compliance, tissue quality and injury severity. Specific time frames, restrictions and precautions may also be given to protect healing tissues and the surgical repair/reconstruction.

INDIVIDUAL CONSIDERATIONS:

PHASE I (Week 0-2)

Goals

Protect surgical repair

Precautions

1. Use Hinged Knee Brace locked in extension
2. Ambulation: PWB with crutches, locked in extension
3. Brace must be worn at all times other than when performing rehabilitation exercises (sleep included).

Range of Motion

No ROM

Therapeutic

1. Ankle Pumps
2. Isometric Quad Sets
3. Isometric Hamstring Sets
4. Isometric Glut Sets
5. Upper Body Ergometer/Circuit training

PHASE II (Weeks 2-6)

Goals

1. Normalize gait with WBAT and brace locked in extension

Precautions

1. Continuous use of the brace locked in extension with crutches for ambulation
2. Brace worn at all times other than when performing exercise
3. Sleep in brace until 4 weeks post-op.



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Range of Motion

1. Begin ROM 0-90 degrees starting at 0-45 degrees.
2. No active knee extension until week 8.

Therapeutic Exercises

1. Heel Slides
2. Knee extension ROM with foot resting on a towel roll
3. May incorporate active knee extension at week 8.
4. Four way leg lifts with brace locked in extension.
5. Gentle patellar mobilizations
6. Upper body ergometer or upper extremity circuit training

PHASE III (Weeks 6-8)

Goals

1. Normalize gait on level surfaces with brace unlocked to 30-45 degrees without crutches
2. Initiate active quad contractions in weight bearing
3. ROM goal 0-90

Precautions

1. Avoid excessive weight bearing flexion

Therapeutic Exercises

1. AROM for open chain knee flexion and extension
2. Closed chain quad control from 0-45 degrees with light squats and leg press
3. Prone knee flexion
4. Stationary bike
5. Patellar mobilizations
6. Upper body ergometer or upper extremity circuit training

PHASE IV (Weeks 8-16)

Goals

1. Normalize gait on all surfaces with brace unlocked
2. Wean out of brace
3. Full knee ROM
4. Good control with squats to 45 degrees

Precautions

1. Avoid any forceful eccentric contractions
2. Avoid impact activities
3. Avoid exercises that create movement compensations.



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Therapeutic Exercise

1. Non-impact balance and proprioceptive drill
2. Stationary bike
3. Gait Drills
4. Hip and core strengthening
5. Stretching for patient specific muscle imbalances
6. Quad strengthening- closed chain exercises short of 60 degrees knee flexion
7. Functional movements (Squat, step back, lunge).
8. Stair Master, swimming

4.

Progression to Phase 5

1. Normalize gait mechanics without brace on all surfaces
2. Squat and lunge to 70 degrees knee flexion without weight shift
3. Single leg stand with good control 10 seconds
4. Full AROM for knee flexion and extension

PHASE V (4-6 months)

Goals

1. Good control and no pain with movements, including impact

Precautions

1. Post activity soreness should resolve 24-36 hours
2. Avoid post-activity swelling
3. Avoid running with limp.

Therapeutic Exercises

1. Impact control exercises beginning with both feet, progress to 1 foot to the other, and to same foot.
2. Movement control exercise- low velocity single plane and progress to high velocity, multi-plane
3. Sports/work specific balance and proprioceptive drills
4. Hip and core strengthening
5. Stretching for patient specific muscle imbalances
6. Cardiovascular- begin jogging program and replicate sport/work specific demands (see below)

Return to Sport

1. Dynamic neuromuscular control with multi-plane activities without pain or swelling.



REHABILITATION GUIDELINES

RETURN TO RUNNING PROGRAM

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MD**
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PHASE I – Warm Up Walk 15 Minutes, Cool Down Walk 10 Minutes

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Day	1	2	3	4	5	6	7
Week 1	W5/J1x5*		W5/J1x5		W4/J2x5		W4/J2x5
Week 2		W3/J3x5		W3/J3x5		W2/J4x5	
Week 3	W2/J4x5		W1/J5x5		W1/J5x5		Return to Run

Key: W=walk, J=jog

*W5/J1x5= Walk (5 minutes), Jog (1 minute); repeat 5 times

PHASE II – Warm Up Walk 15 Minutes, Cool Down Walk 10 Minutes

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Week	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	20 min		20 min		20 min		25 min
2		25 min		25 min		30 min	
3	30 min		30 min		35 min		35 min
4		35 min		40 min		40 min	
5	40 min		45 min		45 min		45 min
6		50 min		50 min		50 min	
7	55 min		55 min		55 min		60 min
8		60 min		60 min			

- Recommendations:
 - Runs should occur on softer surfaces during Phase 1
 - Non-impact activity on off days
 - Goal is to increase mileage and then increase pace
 - avoid increasing two variables at once
 - 10% rule: no more than 10% increase in mileage per week