



Orthopedic Surgery, Sports Medicine & Arthroscopy Specialists

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REHABILITATION PROTOCOL- Nonoperative patellar tendinopathy/anterior knee pain

The rehabilitation guidelines are presented in a criterion based progression program. 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. The therapist should consult the referring physician with any questions or concerns.

INDIVIDUAL CONSIDERATIONS

PHASE 1 (~0-2 weeks)

REHAB GOALS	<ol style="list-style-type: none"> 1. Minimize swelling & pain 2. Normalize gait
PRECAUTIONS	<ol style="list-style-type: none"> 1. No running/jumping/bounding 2. Ice as needed for pain
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> ○ Soft tissue mobilizations/techniques as tolerated ○ Lumbosacral mobility ○ Hip flexor & quad flexibility ○ Patellar tendon mobility
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> ○ As above ○ Gluteal & transversus abdominis activation ○ Functional rolling ○ Posterior weight shifts against wall ○ Eccentric decline squats, partial weight bearing (progress to full wt bearing if <5/10 pain) ○ Side lying hip abduction, clam shells, hip hiking ○ 2 leg balance exercises
CARDIOVASCULAR EXERCISE	Elliptical, stationary bike & swimming if pain free
PROGRESSION CRITERIA	<ul style="list-style-type: none"> ○ Appropriate gluteal & core activation patterns ○ No pelvic drop/knee valgus with stability exercises ○ <5/10 pain with full wt bearing eccentric exercise

PHASE 2 (~3-4 weeks)

REHAB GOALS	<ol style="list-style-type: none"> 1. Progress strengthening, balance 2. Minimize pain and swelling
PRECAUTIONS	<ol style="list-style-type: none"> 1. No full wt bearing running

	2. Ice as needed after activity
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> ○ Continue phase 1 exercises ○ Modalities as needed
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> ○ Continue phase 1 exercises ○ Gluteal activation in tall kneel/half kneel ○ Add UE/LE movements w/pelvic stability exercise ○ Progress to 50-75% resistance for decline squats ○ Balance- add unstable surfaces ○ Core- planks, chop/lift ○ Bounding
CARDIOVASCULAR EXERCISE	<p>Continue phase 1</p> <p>Add jogging on shuttle (1-2 min x 5-10 sets)</p>
PROGRESSION CRITERIA	<ul style="list-style-type: none"> ○ Appropriate gluteal & core activation patterns ○ No pelvic drop/knee valgus with stability exercises ○ <5/10 pain with full wt bearing eccentric exercise

PHASE 3 (~5-8 weeks)

REHAB GOALS	<ul style="list-style-type: none"> ○ Progress strengthening & LE drills ○ Minimize pain, inflammation
PRECAUTIONS	<ul style="list-style-type: none"> ○ Continue phase 2 activities
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> ○ Continue exercises from phase 2. ○ Mobilizations/soft tissue technique as needed
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> ○ Continue exercises from phase 2 ○ Inchworms, spidermans, walking lunges ○ Full weight bearing decline squats eccentric ○ Step downs (4 in at 4 wks, 6 in at 6 wks) ○ Balance/proprioceptive- advance to single leg, unstable, perturbations, etc ○ Single leg squats, split lunges, resisted band walking, step up 12 ○ Double leg bounding
CARDIOVASCULAR EXERCISE	<p>Continue phase 2, begin jogging (if painful restart at previous level)</p>
PROGRESSION CRITERIA	<ul style="list-style-type: none"> ○ No pain with ADLs/rehab activities ○ Able to perform single leg squat w/o pain or knee valgus

PHASE 4 (~9+ weeks)

REHAB GOALS	<ul style="list-style-type: none"> ○ No pain with sport activities ○ Improvement of strength, endurance, neuromuscular control ○ Return to sport/work
PRECAUTIONS	<p>Post-activity soreness should resolve within 24 hours Avoid post activity swelling</p>
RANGE OF MOTION EXERCISES	<ul style="list-style-type: none"> ○ Continue with flexibility exercises from previous phase
SUGGESTED THERAPEUTIC EXERCISES	<ul style="list-style-type: none"> ○ Continue phase 3 activities. Progress with resistance/load. ○ Step downs progress to 8 in. Step ups 24 inch box ○ Single leg jumping on Shuttle/total gym ○ Double leg hop downs- progress from 4 in to 6 to 12 in ○ Balance/proprioception- progress as tolerated ○ Sport specific- can begin cutting, agility drills when tolerating running pain free. Begin with single plane activities at 50% speed, advance speed then advance complexity of drills.
CARDIOVASCULAR EXERCISE	<p>Walk/run progression</p>
PROGRESSION CRITERIA- RETURN TO SPORT	<ul style="list-style-type: none"> ○ LE strength >90% of contralateral ○ Hop test 90% of contralateral ○ Symmetrical ROM ○ No pain/discomfort during activity ○ Completion of sport specific program ○ Physician clearance