Rehabilitation Protocol for Iliotibial Band Syndrome

This guideline is intended to assist clinicians and patients through the non-operative course of care for Iliotibial Band Syndrome. This protocol is time based (dependent upon tissue healing) as well as criterion based (dependent upon patient tolerance). Specific intervention should be based on the needs of the individual and should consider exam findings and clinical decision making. If you have questions, contact the referring physician. Also referred to as Iliotibial band friction syndrome, this pathology refers to lateral thigh/knee pain, typically distal, along the area where the ITB slides over the lateral femoral condyle at approximately 30 degrees of knee flexion. This can be common for activities that require repetitive knee flexion and extension.

Diagnosis Considerations	• Pain: may not occur during activity, but can intensify over time • Common Aggravating Factors: ascending/descending stairs, downhill skiing, long distance running, weight training, jumping, cycling. • Localized tenderness over the lateral femoral condyle or Gerdy's tubercle. There may be swelling or increased density in this area. Pain may be elicited with active flexion/extension of the first 30 degrees of knee motion, as the thumb compresses the ITB over the epicondyle. Hip pain may also be present. • Patellar glides may be limited medially • Footwear/foot position: calcaneal varus structure, excessive internal tibial torsion. Consider seat position for cyclists. • Common areas of weakness: hip abductors, hip adductors, knee flexion, knee extension • Special Tests: Muscle Length (Ober's, Thomas), Noble compression test, creak/Renne test	
Differential Diagnosis	• Lumbar Radiculopathy (or referred pain) • Snapping hip syndrome • Stress fracture • Sacroiliac joint dysfunction • TFL/Gluteus medius/gastrocnemius muscle strain • Trochanteric bursitis • Tendinopathy: biceps femoris, vastus lateralis, popliteus	• Lateral meniscus pathology • Superior tibiofibular joint sprain • LCL sprain • Knee OA • Common peroneal nerve injury • Infection • Neoplasm

PHASE I: IMMEDIATE/ACUTE INFLAMMATORY PHASE (0-2 WEEKS)

Rehabilitation Goals	• Reduce any swelling, minimize pain.
	• Restore lower extremity mobility (including hip, knee, ankle).
	• Restore tolerance to full motion.
	• Minimize arthrogenic muscle inhibition and re-establish quadriceps, hip control.
	• Patient education.
	  ○ Minimize aggravating factors as much as possible, such as descending stairs, prolonged sitting, running, jumping.
	  ○ Initial self-symptom management and joint protection.
	  ○ Independent with initial home exercise program.

Intervention	During this early phase, numerous manual interventions may be utilized to reduce the patient's pain, restriction to movement, and joint loading: • Soft Tissue Mobilization/Instrument-Assisted Soft Tissue Mobilization • Taping (McConnell, Kinesiotaping) • Ischemic compression/Bloodflow Restrictive Training • Dry Needling • Nerve mobilization • Joint mobilization/manipulation as indicated (lumbopelvic, coxofemoral, tibiofemoral, talocrural, subtalar) • Strengthening • Stretching *Mobility:* • Stationary biking for tolerable mobility (minimal resistance) • Walking program *Strengthening: Minimal loading* • Bridge/unilateral bridging • Sidelying clamshells • Sidelying hip abduction • Core/lumbopelvic stabilization (transverse abdominus, multifidus lifts, front/side planks) *Stretching/foam rolling* • Hip flexors (with hip adduction bias) • Hamstrings • Quadriceps • Iliotibial band (with care to avoid trochanteric bursa, lateral femoral condyle) • Adductors • Hip extensors/rotators • Gastroc-soleus complex
Criteria to Progress	• Full knee motion, compared to uninvolved side. • Appropriate quad contraction with superior patella glide and full active extension. • Full tolerance to weightbearing with relative knee extension.

PHASE II: INTERMEDIATE/SUB-ACUTE REPARATIVE PHASE (2-4 WEEKS)

Rehabilitation Goals	• Progress to closed-chain/weightbearing activities without loading of knee flexion. • Maintain full ROM. • Tolerance to closed chain hip strengthening/balance without loading of knee joint in flexion. • Independent with progressed home exercise program, all daily activities.
Additional Intervention **Continue with Phase I interventions as indicated*	*Weightbearing Strengthening Progression: Extension-based Loading* • Sumo walks • Monster walks • 4-way hip drills *Balance/proprioception* • Single-leg stance • Clock taps • Ball toss *Correction of movement abnormalities with functional tasks*
Criteria to Progress	• Tolerance to weightbearing activities. • Maintenance of full ROM. • Normalize muscle length or achieve muscle length goals.

PHASE III: LATE/REMODELING PHASE (4-8 WEEKS)

Rehabilitation Goals	• Maintain full ROM. • Promote proper movement patterns. • Avoid post exercise pain/swelling. • Achieve all muscle strength goals. • Negotiating stairs unlimited. • Full tolerance to closed chain knee joint loading with flexion, with appropriate eccentric control. • Achieve all muscle strength goals. • Achieve daily/functional goals.
Additional Intervention **Continue with Phase I-II Interventions as indicated*	*Weightbearing Strengthening Progression: Flexion-based Loading* • Partial squat, squat to chair, wall slide, progressing to functional squat pattern • Lunge/reverse lunge/slider lunge • Step ups • Step downs, eccentric loading • Single leg squat • Double leg squat jumps • Double leg box jumps up/down • Single leg hop downs • Single leg forward hops *Correction of movement abnormalities with sport-related tasks (hip adduction, hip internal rotation, contralateral pelvic drop)* *Return to Running Program*
Criteria for Discharge/Return to Sport	• Independent self-management of symptoms • Demonstrate appropriate understanding of condition and maintenance to prevent risk of recurrence

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Contact	Please email MGHSportsPhysicalTherapy@partners.org with questions specific to this protocol

References

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