Isolated Tibial Tubercle Osteotomy Rehabilitation Protocol

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This protocol provides general guidelines for rehabilitation following isolated tibial tubercle osteotomy. Progression should be individualized based on the procedure, healing, and patient response, with modifications as directed by the surgeon.

Phase	Goals	Precautions / Restrictions	Treatment

Weeks 0-6	• Manage swelling and pain
	• **Protect surgical site**
	• Achieve and maintain good quad activation
	  • SLR **no lag**
	• Symmetric knee extension by week 2
	• Moderate irritability of knee
	  • Swelling is improving
	  • <5/10 pain
		• Weight bearing
		  • Weeks 0-6 TWB
		  • Locked in extension while WB
		• ROM restrictions:
		  • **0-90 degrees** for 2 weeks
		  • Progressive ROM per tolerance
		  • **Do not force motion**
			General guidelines
			• PRICE
			• Quadriceps activation and strength should be emphasized
			• OKC hip strengthening in all planes
			• Cryotherapy/Modalities as indicated
			Initial visit
			• FOTO, LEFS PRO

Weeks 6-12	• Progress to full symmetric ROM
	• Ambulate community distances by 12 weeks
	• Anterior Y-balance **<4 cm** difference
	• Low irritability of knee
	  • Minimal swelling with activities
	  • <2/10 pain
		• WBAT progressing to FWB
		• D/c immobilizer once SLRs with **no lag**
		• Progressive ROM
		• **Avoid excessive patellar loading (deep knee flexion)**
		• **No running, cutting, pivoting**
			General guidelines
			• Begin CKC strengthening (**avoid anterior knee pain)**
			• Cryotherapy/Modalities as indicated
			Week 6
			• FOTO, LEFS PRO
			• Initiate exercise bike at 6 weeks
			Weeks 6–8
			• CKC strengthening: 6-8 weeks limit loaded knee flexion angle to **45 degrees**
			Weeks 8+
			• CKC strengthening: 8+ weeks limit loaded knee flexion angle to **90 degrees**

Weeks 12-20	• Restore total leg strength • Return to run protocol at 12 weeks **with MD approval** • Isokinetic score of **70%**	• Slowly progress impact and plyometric activities as muscle strength allow • **Avoid excessive loading of anterior knee**	**General guidelines** • Progress CKC, single leg, multi-planar, and with resistance as tolerated • Cryotherapy/Modalities as indicated **Week 12** • FOTO, LEFS PRO • Initiate a run/walk program at 12 weeks **After Week 18** • Start sports specific drills/training after 18 weeks

Phase	Goals	Precautions / Restrictions	Treatment
Weeks 20+	● Performance/RTS testing ● Isokinetic score of **90%** ● SL vertical jump **90%** ● Triple hop **90%**	● Return to sport progression **per MD clearance**	**General guidelines** ● Sports specific training **Week 20** ● FOTO, LEFS PRO