

Aaron J. Casp, MD

Sports Medicine, Hip, Knee, and Shoulder Surgery

1201 11th Ave S

Birmingham, AL 35205

Tibial Spine Fracture Fixation Rehabilitation Protocol

Phase/ Goals	Immobilization	ROM	Therapeutic Exercises
Phase 1 (0-4 weeks) Goals: <ul style="list-style-type: none">● Protect Repair● Regain quad function● SLR with no lag● PROM: 0 → 100°● Eliminate effusion	Hinged Knee Brace Touchdown weightbearing with brace locked in extension x 4 weeks Brace unlocked while sitting or working on ROM	<ul style="list-style-type: none">● Avoid open chain extension● PROM 0 – 120 deg (by end of 4 weeks)● Patellar mobilization all directions Modalities: <ul style="list-style-type: none">● Cryocuff/Game Ready Compression/ Ice	<ul style="list-style-type: none">● Quad/Hamstring/glute sets● Heel slides● Flexion: heel slides, seated knee flex● Extension: heel prop, prone hang● Long sitting HS stretch● SLR x4 in brace or with assist until no extensor lag● Ankle pumps
Phase 2 (5-8 weeks) Goals: <ul style="list-style-type: none">● No effusion● ROM>125● Progress weightbearing● Wean off crutches● Gait mechanics	Full ROM Unlock brace for ambulation week 6	<ul style="list-style-type: none">● Begin full A/ PROM as tolerated● Start Partial weightbearing with crutches after Week 4 and progress to full WBAT by week 6● May discontinue brace week 8 if full weightbearing and no lag Modalities: <ul style="list-style-type: none">● Hi-volt IFC for edema control/ice● Patellar mobs all directions	<ul style="list-style-type: none">● Bike for ROM on no resistance AFTER 4 weeks● May begin elliptical when normal gait and full biking without pain● Heel slides/wall slides/seated assist flexion● Hamstring curls● Calf raises/toe raises● Balance exercises● Progress to weightbearing stretches of gastric/soleus● Standing TKEs● Gait training- when gait WNL, progress to reverse incline● SLS- begin flat surface, progress to uneven surface/airex● Wobble board/Dyna-disc/Bosu balance

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<p>Phase 2 (cont.)</p>		<ul style="list-style-type: none"> ● Gentle prone quad stretch/knee flex ● Manual assist extension/passive stretch ● HS STM for extension assist 	
<p>Phase 3 (9-16 weeks)</p> <p>Goals:</p> <ul style="list-style-type: none"> ● Full weightbearing with normal gait ● Full painless ROM 	<p>Maintain ROM and full weightbearing</p>	<ul style="list-style-type: none"> ● Full A/PROM ● Discontinue brace if have not already <p>Manual:</p> <ul style="list-style-type: none"> ● Joint mobs PRN for full flex and ext ROM ● Patellar mobs/ Scar STM with extractor <p>Modalities:</p> <ul style="list-style-type: none"> ● Ice/stim PRN 	<ul style="list-style-type: none"> ● Bike, elliptical, stair master as tolerated ● Lateral walks with sport cord ● Squats on dynamic surfaces with ball toss and perturbation training ● Begin straight ahead walk-jog progression week 12 if full ROM/no edema/full strength and can perform SL hops pain-free (SUPERVISED) ● No cutting or pivoting ● Advance closed chain exercises and proprioception activities
<p>Phase 4 (4-6 months)</p> <p>Goals:</p> <ul style="list-style-type: none"> ● Jogging without pain/swelling ● SL jump w/o difficulty 	<p>Can fit for ACL brace before full return to activity</p>	<ul style="list-style-type: none"> ● Full A/PROM 	<ul style="list-style-type: none"> ● Continue everything in phase 3 ● Muscular power – squads, split jumps, sled drags ● Gradual return to athletic activity as tolerated ● Maintenance program for strength and endurance