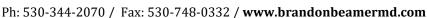
Brandon Beamer M.D - Orthopedic Sports Medicine Specialist

5317 Golden Foothills Parkway El Dorado Hills, CA 95762





Notes:

MARSHALL

CV Exercise: Biking

Walking on treadmill

Criterion for Progression:

- 1) Minimal to no effusion/edema
- 2) ROM equal to opposite LE
- 3) Full patellar mobility
- 4) Ambulate on level surfaces with normal gait

Phase III - Tissue Remodeling/Hypertrophy Phase (12-24 weeks)

Goals: 1) Full knee AROM

2) Normalize eccentric quad control

3) Strength progression

Exercise: Advanced Strength/Proprioception/Balance

Full squat/leg press/lunges to 100 degrees

Single limb Squat

Begin low impact exercise progression^{6,29,41}

CV Exercise: Elliptical^{6,29,41}

Bike, Swim, Alter G

Criterion for Progression:

- 1) No pain or edema/effusion
- 2) Full ROM
- 3)20 reps to 60 degrees single limb squat with eccentric control and good lower extremity alignment
- **4) Quad strength >80% of uninvolved LE** (10RM single leg press or isokinetically if available)

Phase IV – Sport Specific Training (weeks 24+): if desired by pt and cleared by MD

Goals: 1) Begin sport specific drills

- 2) Normalize neuromuscular control
- 3) Normalize jumping/landing mechanics if indicated

4) Prepare for return to sport

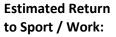
Exercise: Advance agility progression

Begin plyometric progression

Progress on running progression/sport-specific training

<u>Criterion for Return to Sport:</u> (Recommend combination testing of strength, agility, and power according to available resources/clinic setting)

- 1) No pain or swelling
- 2) Hop Tests Single Hop, X-Hop, Triple Hop, Timed Hop >=85% uninvolved
- 3) Single leg squat to 60 degrees knee flexion with good control for 3 minutes
- 4) Quad strength > 90% of uninvolved (10RM leg press or isokinetic testing)
- 5) IKDC (MCID 6.3@ 6mo; 16.7 @ 12 mo)



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It's about you	
Weight Bearing	
□NWB x wks	
☐TDWB xwks/days	
□ PWB% xwks	
□WBAT	
☐ Brace Locked in Ext x wks	
ROM	
☐ Full ROM	
Locked full ext xwks	
Locked at° xwks	
☐ ROM limits	
° to° xwks	
° to° xwks	
to xwks	
° to° xwks	
° to° xwks	
СРМ	
☐ ☐° to° xwks	
□ 30-70° û 10°/d @ dir	
□None	
☐Recommended Clinical	
Guidelines	
TDWB 4-6 weeks ^{6,18}	
No ROM restriction	
CPM 4-6 hours/day x 6-8	
weeks ^{6,30,40}	
□Precautions	
□Precautions	
☐ Precautions No impact x 12 weeks	

(Jsteocnon	arai Allograft/Autograft		
٦	Transplanta	ation (OATS)		
Phase I	– Tissue Protec	tion/Healing Phase (0-6 weeks)		
<u>Goals:</u>	1)Reduce pain and effusion			
	2)Restore patel	estore patellar mobility		
	3)Minimize scar adhesion formation4)Restore normal knee ROM5)Facilitate quadriceps activation6)Protect graft from excessive shear and compression			
	ROM:	PROM/AAROM/AROM (per MD limits) ^{6,30,40}		
		Bike: Rocking to full revolution as ROM allows		
	Exercise:	Quad Isometrics ²¹		
		SLR – 4 way (flex/abd/ext/add) 5,20,26,31		
		Clamshells ³¹		
		LAQ/SAQ ^{12,25,38}		
	Manual:	Patella Mobilizations ^{1,9,10,15,22,}		
		Patellar tendon Mobilizations ^{1,9,10,15,22,}		
		Extension with Overpressure ^{9,10,22,24}		
	Modalities:	Functional Electrical Stimulation ³³⁻³⁵		
		Biofeedback ⁴²		
		Cryotherapy ^{3,4,19,28,43}		
	CV exercise:	Aquatherapy (once incisions healed)		
Criterio	on for Progress	sion:		
	1) Voluntary	quadriceps isometric contraction		
	2) No extensor lag with SLR			
	3) Good patellar mobility			
	4) Knee ROM 0-130 degrees			
	5)Minimal effusion			
Phase I	I – Tissue Prolife	eration Phase/Progression Phase (6-12 weeks)		
Goals:	1) Pain and edema control			
	2) Achieve full I	knee ROM		

- 3) Strength progression develop functional quad control
- 4) Normalize gait

PROM/AAROM/AROM 6,30,30 ROM:

Bike for ROM

Gait retraining/Cone walking²⁴ **Exercise:**

Squats/Leg press to 60,10,12,22,25,27,36,38

Closed chain Terminal Knee Extension (stand)

Calf raises

Weight Shifting/Balance/ Perturbation Training^{7,8,27}

Bridging progression

Step ups, Step Downs, Lateral Step Downs^{8,9,10,12,25,38}

Scar mobilization^{1,2,9,10,15,22} Manual:

Patellar mobilization^{1,2,9,10,15,22}

Modalities: Continue PRN