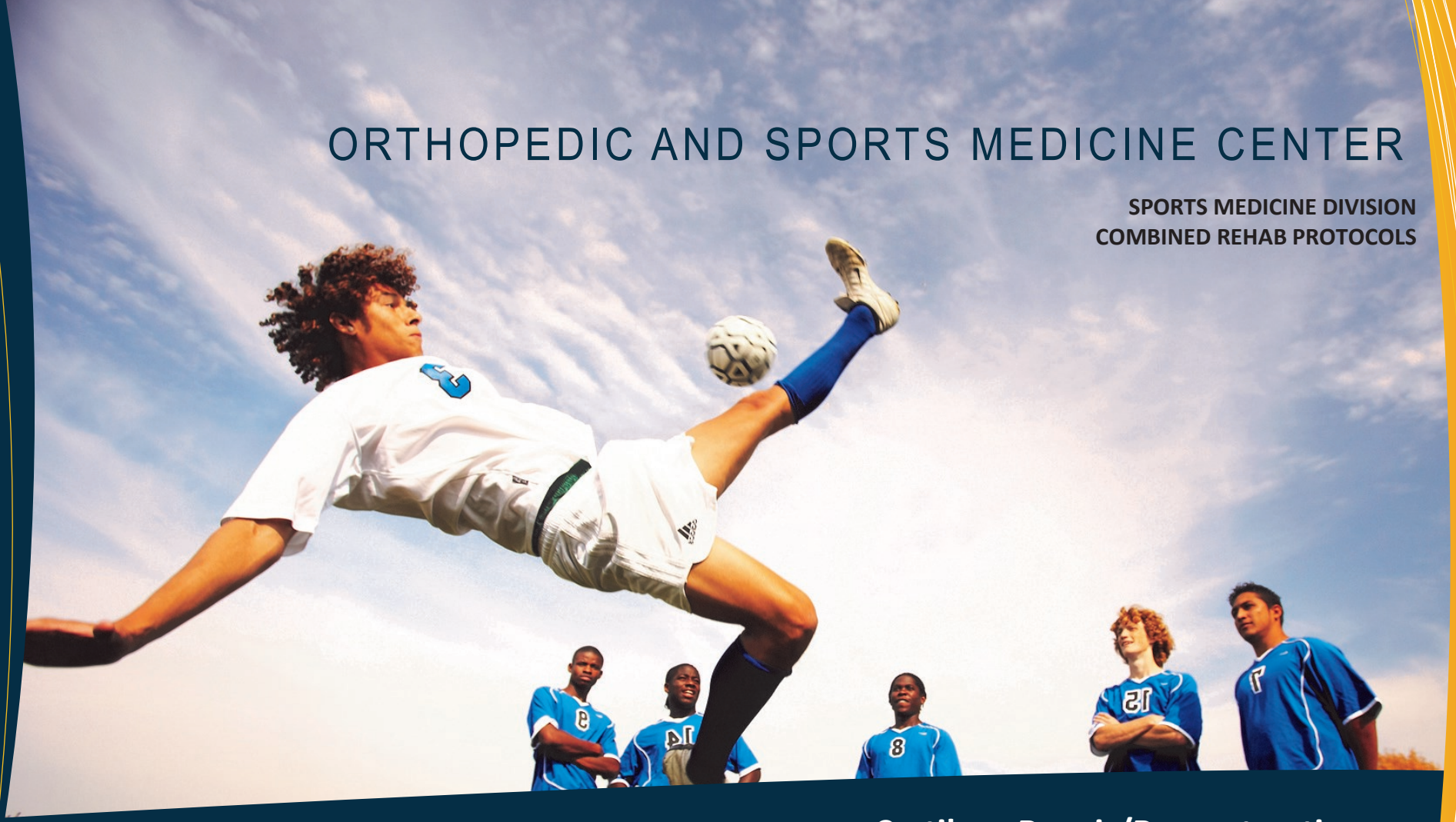
ORTHOPEDIC AND SPORTS MEDICINE CENTER

SPORTS MEDICINE DIVISION
COMBINED REHAB PROTOCOLS



Cartilage Repair/Reconstruction Rehab Protocol

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TIMELINE	GOALS	EXERCISES/METHODS
Early Post-op Day 1- week 6	-Protect site of repair -Restore normal Quadriceps function -Restore normal Patellar mobility -Decrease swelling	Extension -Superior patellar mobs -Quad sets -SLRs-4 ways -Hamstring stretch -Gastroc/Soleus stretch -**Condylar lesions only**: Initiate open chain knee extension: 90-45 Flexion -Inferior patellar mobs -CPM -Heel slides -Prone quad stretch -Seated knee flexion -Wall slides -Bike (no resistance at 1-2 wks) -Hamstring sets -Clams -Core stability
Milestones to reach by end of week 6	-Full knee extension -Knee flexion >120 -Discontinue AD (FWB) **Microfracture: WBAT progress to FWB	
Weeks 6-12	-Gait training -Progressive strengthening	-Bike (with resistance) -Calf raises -Bridges -4 Way Hip PREs -TKEs -Wall sits -Front/lateral step ups -Initiate Mini squats: - condylar Lesion 0-60 - trochlear Lesion 0-45 -Initiate Leg press: - condylar Lesion 0-60 - trochlear Lesion 0-45 -Light Hamstring curls -Sidestepping -Backward walking -Balance progression -Core stability

BRACING

- Immobilizer until SLR with-out sag 10x10
- Then IROM 0-90 for 6 weeks.
- *** Brace flexion may be limited if lesion requires it.

ROM RESTRICTIONS

- 0-90 for 6 weeks

WEIGHT BEARING

- NWB for 4 weeks
- 25-50% Week 5
- 50-75% week 6
- 100% after 6 weeks

OTHER RESTRICTIONS AND KEY CONSIDERATIONS

CPM

- 6-8 hours every day
- May use while sleeping
- Start 0-40 week 1
- Add 10 degrees / week
- Max Condylar lesion: 0-90
- Max PF Lesion 0-45

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TIMELINE	GOALS	EXERCISES/METHODS
Weeks 12-16	-Progressive strengthening -Progress cardiovascular endurance	-**Trochlear Lesion i**nitiate Open chain knee extension: 45-0 -Unilateral step ups -Leg press single leg -Squats to 90 -Initiate lunge progression -Initiate Alter G running progression -Initiate light plyometrics -Balance progression -Core stability
Weeks 16+	-Progressive strengthening -Progressive plyometric training	--Hamstring curls -Squats -Lunges -Running: -Begin Progression at 4-6 months -Light agility -cutting/pivoting restricted until 4-6 months --Progress running - Progress plyometrics -Core stability

SHOWERING

1. May Shower day 1 after surgery
2. Must "waterproof" surgical site for 5 days after surgery
3. No submerging wounds for 4 weeks

WOUND CARE

1. Remove everything except steri strips the day after surgery
2. Place clean gauze or op-site on wounds daily for 5 days

MEDICATIONS

1. Pain medicine only as needed. Wean off as soon as possible
2. Don't over-use NSAIDS
3. Aspirin 325mg daily for 1 month for DVT prophylaxis

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RETURN TO PLAY CRITERIA

Pre-RTP Criteria before testing can commence	Full AROM Resolution of pain No/Trace joint effusion present MMT grossly 5/5 strength in LE LEFS: ≥ 75/80 (95%) Lysholm Knee Rating: ≥ 95% 1RM SL Leg Press ≥ 90% contralateral side 1RM SL Hamstring Curl ≥ 90% contralateral side
Lower Limb Symmetry Index (LSI): LSI % (mean score of 3 trials on injured limb/ mean score of 3 trials on uninjured limb) x 100	SL Hop: ≥ 90% SL Triple Hop: ≥ 90% SL 6 meter Timed Hop: ≥ 90% SL Cross-over Hop: ≥ 90% Overall Score: ≥ 90%
Vail Sports Tests:	Passing Score ≥ 46/54 (85%)
Tuck Jump Assessment (TJA):	perfect score on the TJA or improvement of 20 percentage points from the initial score
Single Leg Squat: No Errors in Form (Errors listed right)	Arm strategy: removal of hand off the waist Trunk alignment: leaning in any direction Pelvis plane: loss of horizontal plane Knee position: tibial tuberosity medial to second toe or tibial tuberosity medial to medial border of foot Steady stance: subject stepped down on non-tested limb, or foot wavered from side-to-side
Modified Star Balance Excursion Test (Y Balance Test):	SEBT % = ((mean score of 3 trials in anterior distance + mean score of 3 trials in posterior lateral distance + mean score of 3 trials in posterior medial distance)/ leg length of stance limb) x 100. Passing Score ≥ 94%
Core Testing: (ongoing research): ≥ 90% of all standard timed tests:	Right Single Leg Bridge: Men 95 seconds; Females 75 seconds Left Single Leg Bridge: Men 99 seconds; Females 78 seconds Flexor Endurance Test: Men 136 seconds; Females 134 seconds Extensor Endurance Test: Males 160 seconds; Females 185 seconds Lower Abdominal Muscle Testing: Males 5/5; Females ≥ 4/5 (75□=3/5, 60□=3+/5, 45□=4-/5, 30□=4/5, 15□=4+/5, 0□=5/5)

RTP INSTRUCTIONS

RTP evaluation can progress throughout treatment as appropriate

PRE-RTP

Complete all testing in Pre-RTP section. Only Continue on when able to pass

SESSION 1

LSI, Vail Sports, TJA

SESSION 2

Single leg squat, Y Balance, Core Testing

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