Arthroscopy Protocol

(Menisectomy, debridement, and Plica resection)

Week one	Weeks two to four
Initial Evaluation	**Evaluate**
➢ Range of motion ➢ Joint effusion ➢ Ability to contract quad/vmo ➢ Gait (WBAT) ➢ Assess foot/ankle for biomechanical optimization ➢ Patella Mobility ➢ Inspect for infection/signs of DVT ➢ Assess RTW and sport expectations	➢ Range of Motion ➢ Joint effusion ➢ Patella position and related symptoms ➢ Balance / single leg stance
Patient Education	**Patient Education**
➢ Support Physician prescribed meds ➢ Ensure compliance w/ pre-op hep ➢ Reinforce use of assistive device if needed ➢ Discuss frequency and duration of treatment (1-3x/wk is expected for 2-6 weeks depending on how the patient presents)	➢ Wean from crutches if still in use
Therapeutic Exercise	**Therapeutic Exercise**
➢ Review and update pre-op hep (heel slides, ankle pumps, quad sets, towel stretch) ➢ Should consider Isometrics with NMES if poor quad control ➢ Initiate bicycle (do not force flexion) ➢ May complete isotonic exercises in closed or open chain (total gym, leg press, hamstring curl) ➢ Single leg balance	➢ Stationary bicycle ➢ Progress to partial or assisted squatting activity, and forward step up ➢ Single leg isotonic exercises ➢ Progress to closed chain exercises on unstable surfaces ➢ Single leg dynamic balance activity (OTIS/IT IS airex activities)
Manual Techniques	**Manual Techniques**
➢ Grade I and II patella mobilizations ➢ PROM as tolerated (focus on extension)	➢ Grade III-IV patella mobilization (if needed) ➢ Posterior capsule mobilization (if needed) ➢ Incisional mobilization
Modalities	**Modalities**
➢ NMES/Interferential ➢ Ice	➢ Modalities may be used as needed
Aquatics	**Aquatics**
➢ Hold initiation of aquatics until week 2	➢ Gait: Forward, backward, sideways ➢ Shallow end: Open chain (i.e. calf raises, clap under) and closed chain (i.e. functional movement pattern based i.e. mini squats) LE exercises ➢ Deep end: Open chain (i.e. bicycling, splits/spreads) ➢ Consider use of Hydrocuffs for flexibility
Goals	**Goals**
➢ Control pain ➢ 1+ joint effusion ➢ Restore normal quad contraction ➢ Gain full knee extension ➢ 0-100 degrees ROM	➢ Normal gait ➢ Normal ROM ➢ No pain with ADL's

Weeks four to discharge	Precautions and related issues
Evaluate ➢ Isokinetic Strength test and/or functional hop testing for comparison to be completed if necessary ➢ Address any deficits that may limit return to work or sport goals ➢ HEP compliance	Recovery from arthroscopy is often underestimated, as many patients lack an understanding for the multitude of procedures that can be completed arthroscopically. Our first task is to make sure the patient realizes that arthroscopy is only the method by which their procedure was completed. Secondly, the patient should receive education about which procedure was completed, and it's future implications. The above protocol is for menisectomy, debridement, and plica resection. Below are some of the concomitant issues, and other procedures completed arthroscopically.
Therapeutic Exercise ➢ Progress balance activity to single leg dynamic activity and unstable surfaces ➢ Cardiovascular training (bike, swim and elliptical) ➢ Sports specific exercises ➢ Complete agility and running activity with good test results if necessary ➢ May begin bilateral low level plyometrics with good test results if necessary ➢ Encourage participation in the CFA	**Chondromalacia** ➢ Typically our physicians will give us insight into the location and severity of chondromalacia (grades I to IV) ➢ The location of chondromalacia often provides insight regarding faulty posture and biomechanics. ➢ Both location and severity should be considered when designing treatment programs
Manual Techniques ➢ Any as indicated	**Chondroplasty** ➢ Limited WB for four weeks ➢ Consider unloading brace for return to activity if limited by pain
Modalities ➢ Any as Indicated	**Micro fracture** ➢ NWB typically four weeks, and PWB for two weeks
Aquatics ➢ Gait: Progress with dynamic movement patterns (i.e. walking lunges, side step squats) ➢ Shallow end: Progress open chain (i.e. four count kick, diamond) and closed chain (i.e. modified lunges, step ups) LE exercises ➢ Deep end: Continue open chain and add closed chain (i.e. kickboard squats) ➢ Consider use of fins for resistance training	**Meniscal repair** ➢ No combined weight bearing and flexion for at least 4 weeks
Goals ➢ Normal strength ➢ Return to work or sport ➢ Independence with HEP	

References:

- Maynard, M. (2015). Back to Basics – The Physiological Benefits and Clinical Applicatons of Aquatic Therapy. An Evidence Based Refresher on Aquatic Therapy Principles. *Aqualines*, 27 (1), 4-9.
- Barker, A. L., Talevski, J., Morello, R.T., Brand, C.A., Rahmann, A.E., Urquhart, D.M. (2014). *Archives of Physical Medicine and Rehabilitation*, 95, 1776-86.

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