



Indiana University Health

IU Health Physicians Orthopedics & Sports Medicine

BONE MARROW ASPIRATE CONCENTRATE (BMAC) INJECTION WITH KNEE ARTHROSCOPY

PHYSICAL THERAPY PROTOCOL

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Patient Name: _____ **Date of Surgery:** _____

Procedure(s): **Right/Left Knee Arthroscopy**
 Partial Meniscectomy/Debridement
 Fat Pad/Plica Debridement

Accessory Procedure (circled if applicable):

Lysis of Adhesions (LOA) with Manipulation Under Anesthesia (MUA)

___ **Evaluate and Treat – no open chain or isokinetic exercises**



__ Provide patient with home exercise program

Frequency: _____ x/week x _____ weeks

__ Phase I (Weeks 1-2)*: *Initial recovery.***

◆ **Toe-touch weightbearing with crutches for 1 week post-op.**

◆ **ROM:** Progress through passive, active and active-assisted ROM as tolerated

- Goal: Full extension by 2 weeks, 130 degrees of flexion by 6 weeks

◆ **Patellar mobilization daily.** You may begin to ride a stationary bicycle with low tension 10-12 minutes/day, as well as simple quadriceps and hamstring exercises on a daily basis. **No squats or lunging activities to avoid overloading the joint.**

◆ **Strengthening:** quad sets, SLRs, heel slides, etc.. No restrictions to ankle/hip strengthening.

****If a lysis of adhesions (LOA) and manipulation under anesthesia (MUA) was performed at the same time, patient needs to wear a knee immobilizer (or hinged knee brace, locked in extension) at all times except during PT and for hygiene. CPM is usually ordered for 2-4 hrs per day x 6wks.*

__ Phase II (Weeks 2-6)*: *Advance ROM and strengthening.***

◆ **ROM:** Continue with daily ROM exercises

- Goal: Increase ROM as tolerated; aggressive end-range stretching as tolerated

◆ **Strengthening:** Begin and advance closed chain strengthening to full motion arc.

- Add pulley weights, theraband, and other modalities as per PT discretion.
- Advance to wall sits, lunges, balance ball, leg curls, leg press, plyometrics as tolerated.
- Continue stationary bike and biking outdoors for ROM, strengthening, and cardio. Progress to sport-specific activities as tolerated.



- **Restrictions from squats and lunging activities to avoid overloading the joint until 6 weeks postop. BMAC patients should avoid running, jumping and other impact-loading activities for 3 months postop.**
- Monitor for anterior knee symptoms, modulating exercises as necessary.

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Other:

- Modalities Electrical Stimulation Ultrasound
- Heat before/after Ice before/after exercise
- May participate in aquatherapy after week three, begin aqua-running week 6

By signing this referral, I certify that I have examined this patient and physical therapy is medically necessary. This patient would would not benefit from social services.

Date: _____

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