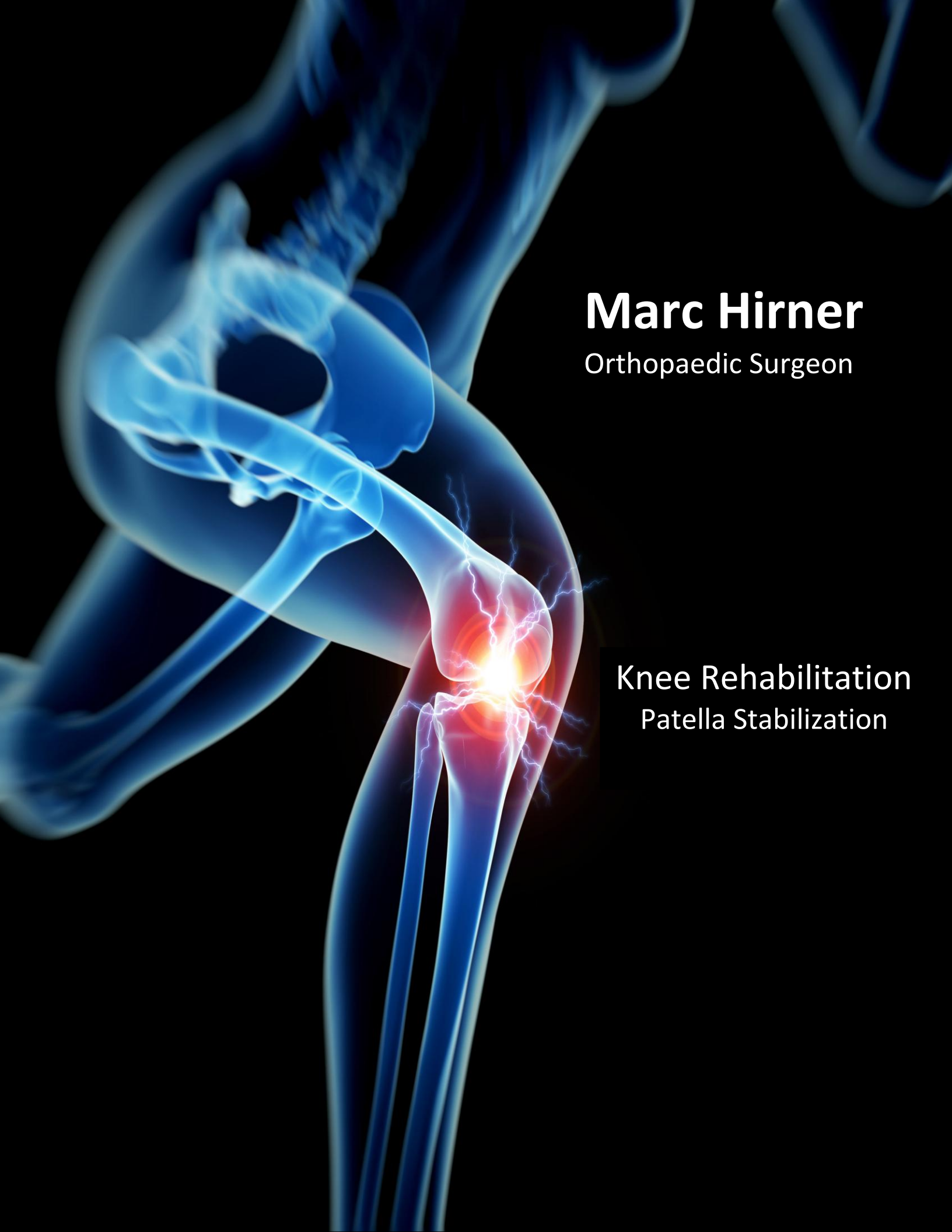

Marc Hirner

Orthopaedic Surgeon

Knee Rehabilitation

Patella Stabilization

Medial Patellofemoral Ligament Reconstruction Rehabilitation Protocol

*It is important to understand that all time frames are approximate and that progressions should be based on individual monitoring as well as type of surgery.

MPFL Reconstruction is an operation to correct for lateral patellar instability. These patients are often chronic/recurrent lateral patellar dislocators. Often times traumatic injuries lead to tears or avulsion injuries of the MPFL.
Rehab Considerations: Patients will utilze a brace that will be locked at 0 deg during all weightbearing activities for the first 2-4 weeks depending on quadriceps strength. ROM will be progressed as follows:

Week 0-1: 0º
Weeks 1-3: 0º →90º
Weeks 3-4: 0º →100º
Weeks 4-5: 0º →110º
Weeks 5-6: 0º →120º
Weeks 6-8: Full painfree ROM

Phase I (0-4 weeks)

- Weight Bearing: Brace locked when ambulating. Unlock brace for weight bearing depending on quad control (2-4weeks)
- RecommendedTreatment:
    - Active warm-up: Nu-step, ¼-½ revolutions on bicycle (**per ROMprecautions)**
    - Flexibility: hamstrings, gastroc-soleus complex, hipflexor.
    - Strength: quad sets, SLR 4-ways, TKE against T-band, NMES for quad/vmoreeducation
    - Gait training with cups (wks 2-4) to facilitate improved knee flexion in swingphase.
    - Balance/Proprioception exercises per weightbearingstatus.
    - Pain control: IFC and cryotherapy. Instruct patient to ice 4-5 times perday.

Phase II (4-6 weeks)

- Weight Bearing: 100% weight-bearing without crutches (depending on quadcontrol).
  : D/C Brace (week 6)
- RecommendedTreatment:
    - Active warm-up: Bike,elliptical
    - Manual therapy: scar mobilization, patellar mobilizations (**avoid lateralglides**)
    - Flexibility: Hamstrings, gastroc/soleus, hip flexor,ITB.
    - Strength: wall slides, hamstring isotonics, heelraises, SLR 4 ways, total gym. Open kinetic chain knee extension from 0º →45º (**6 weeks)**. Treadmill walkingprogram.
    - Gait training: with small cones if continued lack of knee flexion in swingphase.
    - Balance/Proprioception: Double limb BOSU, single leg stance on solid surface progressing to conformingsurfaces.
    - Pain control: IFC and cryotherpay for pain control asneeded.

Phase III (6-12 weeks)

- Weight Bearing: No restriction

- RecommendedTreatment:
    - Active warm-up: Bike, elliptical,stepper
    - Flexibility exercises: hamstring, gastroc/soleus complex, hip flexor,ITB
    - Strength: OKC knee extension (**progress 0^0 →90^0 at week 8**), hip strengthening, heelraises, step-ups, step downs (eccentrics), lunges, squats, leg press, ambulate against resistance.
    - Balance/Proprioception: Continue with progressions double limb→single limb, solid surface→conforming surfaces, eyes open→eyes closed, predictable→unpredictable (perturbations).
    - Initiate Treadmill jogging program. **(week12-16)**

    Running progression

        1. Treadmillwalking
        2. Treadmill walk/runinterval
        3. Treadmillrun
        4. Track: run straits, walkturns
        5. Track: run straits andturns
        6. Run onroad

*Progress to the next level when patient is able to perform activity for 2 miles without increased pain or effusion. Perform no more frequently than every other day. Do not progress more than 2 levels in a day period.

Phase IV (months 4-6)

- Agilitydrills/plyometrics
- Transition to home gymprogram
- Progress running program in regards to distance andspeed.
- Anticipate return to sport at 5-6months.