



# ORTHOPEDICS & SPORTS MEDICINE

BAYCARE CLINIC®

## Dr. Chad Zehms Meniscus Repair Protocol

### Phase 1 – Maximum Protection Phase (0-6 weeks)

#### Goals for Phase 1

- Protect repair
- Minimize effusion
- ROM per guidelines listed, emphasis on extension
- Encourage quadriceps function
- Scar tissue mobility

#### Precautions

- No isolated resistance knee flexion for 6 weeks due to semi-membranous attachment to medial meniscus and popliteus to the lateral meniscus

#### Immobilization/Weight Bearing

- Non-weight bearing with crutches and brace locked at 0° for 2 weeks
- Progress to WBAT with brace locked at 0° until 6 weeks

#### Range of Motion

- **0-6 weeks:** 0-90° PROM, emphasis on full extension

#### Brace

- **0-6 weeks:** Brace opened from 0-90° and to be worn at all times unless performing physical therapy or for hygiene. Keep brace locked at 0° for ambulation.

#### Manual Therapy

- Patellar mobility (superior, medial, lateral)
- Scar massage when incisions closed
- Gentle flexibility of lower extremity
- PROM knee flexion to 90°, strong emphasis on full knee extension

#### Strengthening

- Quadriceps setting
- Hip strengthening
  - Multi-plane open kinetic chain SLR with brace on if needed for quad lag
- Core strengthening

#### Modalities

- Vaso pneumatic compression for edema management 2-3x/week
- Cryotherapy 3x/day for 20 minutes each with knee elevated above heart
- NMES for quadriceps function if quad lag present



## Phase 2 – Moderate Protection Phase (6-12 weeks)

### Goals for Phase 2

- Minimize effusion
- Gently increase ROM
- Normalize gait with heel-toe pattern
- Discharge brace
- Closed kinetic chain strengthening program
- Progress muscle strength, endurance, and balance

### Precautions

- No kicking in pool for 12 weeks
- Avoid closed kinetic chain knee flexion past 90°
- Avoid twisting and pivoting for 12 weeks
- Avoid deep squatting for 4 months
- Avoidance of impact activity until able to pass functional testing

### Range of Motion

- Gradually progress toward full range of motion

### Brace

- Begin progression of opening brace from 0-30° if able to demonstrate good quad control during ambulation with brace being further opened every 3-4 days until 90° is reached.
- Expectation of 0-90° while weight-bearing for 3-4 days without crutches before discharge or brace

### Manual Therapy

- Gentle flexibility of lower extremity musculature

### Strengthening

- Stationary bike with light resistance starting with partial motion to full revolutions
- Bilateral gym strengthening program progressing to single leg strengthening (mini squats, leg press, 4-way hip strengthening, step-ups, bridging, calf raises)
- Core strengthening

### Aquatics

- May initiate aquatic therapy program when incisions are closed

### Neuromuscular Control

- Proprioception on stable surface progressing to unstable surfaces
- Add dual tasking and sport specific balance as able

### Modalities

- Vaso pneumatic compression for edema measurement 2x/week
- Cryotherapy 2x/day for 20 minutes each with knee elevated above the heart
- NMES for quadriceps function if quad lag present with SLR

### Testing to Advance to Phase 4 of Protocol

- **Functional strength testing** to be scheduled before 12 week follow-up with MD. Appointment must be scheduled with Aurora BayCare Sports Physical Therapy at the 1110 Kepler location
- Y-Balance testing within 6 cm of involved LE for posterior-lateral and posterior-medial reach and within 4 cm of involved LE for anterior reach
- Isometric quadriceps testing (<20% difference)
- Single leg squat with good control



## Phase 3 – Strengthening and Plyometric Phase (12-20 weeks)

### Goals for Phase 3

- Progress single leg muscle strength, endurance, and balance
- Initiate impact activity
- Sport or work specific tasks

### Manual Therapy

- Restore flexibility – hamstring, quad, gastroc-soleus, ITB

### Strengthening

- Stationary bike or elliptical
- Unilateral gym strengthening program (single leg squats, eccentric leg press, lateral step-downs, advanced bridging, multi-directional lunges, CKC hamstring curls)
- Initiate impact activities
- **12-14 weeks:** Sub-maximal body weight impact exercise (pool, GTS, plyo-press, AlterG)
- **14+ weeks:** Sagittal plane running, agility drills, sub-maximal plyometrics
- **16+ weeks:** Advance to multi-directional
- Core strengthening

### Neuromuscular Control

- Advanced proprioception on un-stable surfaces with perturbations and/or dual tasking, add sport specific balance tasks as able

### Modalities

- Cryotherapy after activity

### Return to Function Testing: Aurora BayCare return to function for the lower extremity protocol to be used

- **Week 24: Return to function testing** per MD approval. Appointment must be scheduled with Aurora BayCare Sports Physical Therapy at the 1110 Kepler location. Please contact physician office if unable to make this arrangement for alternative testing.
- **Criteria:** Pain-free, full ROM, minimal joint effusion, isokinetic strength and functional testing at 90% compared to uninvolved, adequate knee control with sport and/or work specific tasks

This protocol was reviewed and updated by Chad Zehms, MD and Katelyn Peterson, PT, DPT on October 28, 2025