

Aragonite Knee Rehabilitation Protocol

Phase I: Acute Motion (Weeks 0 to 2)

Goals

- Relieve pain and swelling
- Decrease inflammation
- Retard muscle atrophy
- Maintain and increase flexibility

Weight Bearing (Trochlea)

- Use bilateral crutches with WBAT (wean after two weeks)

Weight Bearing (Condyle with or without Trochlea)

- Use bilateral crutches with 50% weight bearing for two weeks, progressing to WBAT at two weeks with crutches, then wean off crutches by week four

Exercises

- Range of motion exercises (**no ROM restrictions**)
- Quad sets (with neuromuscular electrical stimulation if needed)
- Short arc quads
- Long arc quads (no weight)
- Mini squats (0° to 45°)
- Four-way straight leg raises
- Multi-angle isometrics
- Avoid kneeling, excessive knee flexion or repetitive activities
- Cryotherapy with elevation for pain and inflammation every hour for 20 minutes

Phase II: Subacute (Weeks 2 to 6)

Goals

- Restore soft tissue balance
- Progress strengthening program
- Enhance proprioception

Weight Bearing

- Wean from crutches as able

Exercises

- Progress range of motion exercises to full
- Continue exercises as listed above
- Leg press
- Hamstring curls
- Wall squats
- Terminal knee extensions
- Step ups
- Lateral step downs

- Lateral walks with resistance
- Proprioception and balance exercises
- Continue cryotherapy for pain management

Phase III: Chronic (Weeks 6 to 12)

Criteria to Progress to Phase III

- Full range of motion
- Minimal to no pain
- Minimal to no swelling

Goals

- Achieve maximal strength and endurance

Exercises

- Continue exercises as listed above
- Increased emphasis on functional activities
- Dynamic stability drills
- Knee extensions 90° to 15°
- Core exercises

Phase IV: Light Activity (Months 3-6)

Criteria to Progress to Phase IV

- No swelling
- Satisfactory clinical examination

Goals

- Development of strength, power, and endurance
- Begin gradual return to activities

Exercises

- Continue exercises listed above
- Knee extensions 90° to 0°
- May begin a jogging/running program per Dr. Kendall's approval
 - Start with straight line jogging/running (walk curves if on track)
 - Start with ¼ mile and progress

Phase V: Return to Activity (Months 6-7)

Goals

- Achieve maximal strength and endurance
- Return to sport activities

Maintenance Program

- Continue with flexibility exercises daily
- Continue with strengthening exercises three to four times a week
- Progress endurance training