KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

The following meniscectomy guidelines were developed by HSS Rehabilitation. Progression is both criteria-based and patient specific. Phases and time frames are designed to give the clinician a general sense of progression. Progression through the phases may vary in individuals with concomitant injuries such as degenerative joint disease, patellofemoral pain syndrome and ligament insufficiency.

Follow physician modifications as prescribed.
KNEE MENISCETOMY POST-OPERATIVE GUIDELINES
Pre-Operative Phase

PRECAUTIONS
- Avoid severe pain with ROM and strengthening exercises
- Modify or minimize activities that increase pain

ASSESSMENT
- Lower Extremity Functional Scale (LEFS)
- International Knee Documentation Committee (IKDC)
- Hip Disability and Osteoarthritis Outcome Survey, Junior (HOOS JR)
- Numeric pain rating scale (NPRS)
- Swelling- girth measurement
- Lower extremity (LE) AROM and PROM
- LE flexibility
- LE strength
- Quality of quadriceps contraction
- Single leg stance (SLS)
- Gait
- Current activity level/demands on LE

TREATMENT RECOMMENDATIONS
- Post-operative plan of care
  - Edema control
  - Activity modification
  - Gait training with expected post-operative assistive device
  - Basic home exercise program (HEP)
    - Ankle pumps, quadriceps sets
    - Straight leg raise PRE’s- hip flexion, hip abduction, hip extension
    - Seated knee flexion and extension AAROM
    - LE flexibility exercises e.g. supine calf and hamstring stretches
    - Passive knee extension with towel roll under heel
    - Plantar flexion with elastic band or calf raises
- Gait training with appropriate pre-operative assistive device if needed
• Additional recommendations for patients attending multiple sessions pre-operatively
  o Edema control
  o ROM exercises e.g. seated knee flexion AAROM, supine knee extension PROM
  o LE flexibility exercises
  o LE progressive resistive exercises, e.g. quadriceps sets, straight leg raises in multiple planes
  o Balance/proprioceptive training
  o Stationary bike

**CRITERIA FOR ADVANCEMENT**
• Maximize ROM and flexibility in pain-free range
• Maximize strength prior to surgery
• Independent ambulation on level surfaces and stairs with appropriate assistive device
• Patient able to verbalize/demonstrate post-operative plan of care

**EMPHASIZE**
• Familiarization with post-operative plan of care
• Quadriceps contraction
KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

Acute Care (Ambulatory Surgery): Day of Surgery

PRECAUTIONS

- Avoid painful activities: prolonged sitting, standing, walking, and exercises that cause increased pain
- Do not put a pillow under the operated knee- keep extended while resting and sleeping
- Avoid premature discharge of assistive device- should be used until gait is normalized

ASSESSMENT

- Mental status
- NPRS
- Wound status
- Swelling
- A/AAROM of knee
- Post-anesthesia sensory motor screening
- Functional status

TREATMENT RECOMMENDATIONS

- Transfer training
- Gait training with assistive device on level surfaces and stairs
- Patient education on edema control and activity modification
- Initiate and emphasize importance of HEP
  - Quadriceps sets, gluteal sets, ankle pumps,
  - Seated knee A/AAROM
  - Straight leg raise if able
  - Passive knee extension with towel roll under heel

CRITERIA FOR ADVANCEMENT

- Independent ambulation with appropriate assistive device on level surfaces and stairs
- Independent with transfers
- Independent with HEP
EMPHASIZE

- Control swelling
- Independent transfers
- Gait training with appropriate assistive device
- A/AAROM (emphasize extension)
- Emphasize quadriceps re-education (quadriceps sets)
KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES

Post-Operative Phase 1: Weeks 0-3

PRECAUTIONS

- Do not put a pillow under the operated knee- keep extended when resting and sleeping
- Avoid pain with exercises, standing, walking and other activities
  - Monitor tolerance to load, frequency, intensity and duration
- Avoid premature discharge of assistive device- should be used until gait is normalized
- Avoid forceful PROM

ASSESSMENT

- LEFS
- IKCD
- KOOS JR
- NPRS
- Swelling
- Knee A/PROM
- Patella mobility
- LE ROM and flexibility
- Quality of quad contraction e.g. ability to perform straight leg raise without lag
- Hip and gluteal strength- MMT or handheld dynamometer
- Functional strength e.g. squat, ability to ascend stairs
- SLS
- Gait
- Current activity level/demands on LE

TREATMENT RECOMMENDATIONS

- Bike
- Gait training
- Modalities for pain and edema as needed
- Emphasize patient compliance with HEP and weight bearing precautions/progression
- Knee A/AAROM
- Patella mobilization
- LE flexibility exercises
- Muscle reeducation using modalities as needed
- Hip progressive resisted exercises
• Closed chain strengthening exercises e.g. leg press, squat, forward step up progression
• Proprioception training
• Consider blood flow restriction program with FDA approved device if cleared by surgeon and qualified therapist available

CRITERIA FOR ADVANCEMENT
• Swelling and pain controlled
• Full passive knee extension
• Passive knee flexion ≥ 120°
• Unilateral weight bearing on involved LE without pain
• Normal gait pattern without assistive device on level surfaces
• Independent with HEP
• Perform a pain free body weight squat without compensation (assisted as needed, i.e. counter, ball, TRX)
• Ascend ≥6” step

EMPHASIZE
  o Normal gait pattern
  o Patient compliance with HEP and activity modification
  o Control of pain and swelling
  o Total lower body functional strengthening
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Post-Operative Phase 2: Weeks 4-8

PRECAUTIONS
- Avoid pain with therapeutic exercise and functional activities

ASSESSMENT
- LEFS
- IKCD
- KOOS JR
- NPRS
- Swelling
- Knee A/PROM
- Patella mobility
- LE ROM and flexibility
- LE strength- MMT or handheld dynamometer
- Functional strength e.g. squats
- SLS
- Alignment and control with forward step down
- Movement strategy for gait, stairs, squat
- Current activity level/demands on LE

TREATMENT RECOMMENDATIONS
- LE flexibility exercises
- Patella mobilization
- Progressive LE open kinetic chain exercises
- Functional progression of LE closed kinetic chain exercises, e.g. double leg squat to single leg squat and initiate forward step down progression
- Progress proprioceptive balance training
- Cardiovascular endurance training e.g. bike, swimming, elliptical when able to perform 6” forward step up
- Initiate impact activities with progressive loading e.g. anti-gravity or underwater treadmill, bilateral to unilateral
- Progress HEP
CRITERIA FOR DISCHARGE (OR ADVANCEMENT TO PHASE 3 IF RETURNING TO SPORT)

- Full knee PROM
- Minimal swelling
- Ability to ascend and descend 8" stairs pain-free with good control and alignment
- Independent with full HEP
- Discharge OR move on to phase III if the goal is to return to sport

EMPHASIZE

- Eccentric quadriceps control
- Functional progression
- Normalize flexibility to meet demands of ADL's
- Establish advanced HEP/gym home program
KNEE MENISCECTOMY POST-OPERATIVE GUIDELINES
Post-Operative Phase 3: Return to Sport

PRECAUTIONS
- Avoid pain with therapeutic exercise and functional activities
- Avoid too much too soon - monitor exercise and activity dosing
- Don’t ignore functional progressions
- Be certain to incorporate rest and recovery
- Protect tibiofemoral and patellofemoral joint from excessive load

ASSESSMENT
- LEFS
- IKDC
- KOOS JR
- NPRS
- Quantitative assessments for limb symmetry, e.g.:
  - LE strength - hand held dynamometry or isokinetic testing if available
  - Flexibility
  - Hop Test
  - Star Excursion or Y-Balance Test©
  - T-Test of Agility
- Functional assessment e.g. HSS Quality of Movement Assessment (QMA)
  - Access for movement strategy, control, alignment, deceleration and cutting:
    - Squat
    - Single leg stance
    - Forward step down
    - Single leg squat
    - Single leg bridge
    - Jumping and hopping
    - Deceleration and cutting

TREATMENT RECOMMENDATIONS
- Initiate return to running program when able to descend 8” step without pain or deviation
- Advance proprioceptive balance training
- Advance LE strengthening
- Plyometrics progression
• Sport-specific agility training
• Increase endurance and activity tolerance
• Sport-specific multidirectional core retraining
• Progress total body multidirectional motor control exercises to meet sport-specific demands
• Collaboration with trainer, coach or performance specialist
• Patient education regarding self-monitoring of exercise volume and load progression

CRITERIA FOR RETURN TO SPORT
• Lack of pain, swelling and apprehension with sports-specific movements
• Quantitative assessments ≥ 90% of contralateral LE
• Movement patterns, functional strength, flexibility, motion, endurance, power, deceleration and accuracy to meet demands of sport
• Independent with gym or return to sport program

EMPHASIZE
• Self-monitoring of exercise volume
• Self-monitoring of load progression
• Speed and power
• Agility, change of direction and deceleration
• Collaboration with appropriate Sports Performance expert
KNEE MENisceCTOMY POST-OPERATIVE GUIDELINES

References


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