

Dr. Duong Nguyen MPC
MD,FRCS, MScClinEpi, DipABOS, DipSportsMed(ABOS),FAAOS,CIME,DESS(c),DipSportMed(CASEM)
Diplomate of the American Board of Orthopaedic Surgery
Subspecialty Board Certification in Sports Medicine (ABOS)
Fellow of the American Academy of Orthopaedic Surgeons (FRCS/AAOS)
Certified Independent Medical Legal Examiner (ABIME) & Health Law (Osgoode)
Medical Legal Expert Consultant - CMPA (Canadian Medical Protective Association)
DESS(c) Master's Degree / Insurance Medicine & Medicolegal Expertise
Diplomate Sport & Exercise Medicine (CASEM)
Arthroscopic & Reconstructive Shoulder, Elbow & Knee Surgery
Medical Director / Urgent Sports Injury, Rehab & Fracture Clinic
Master of Science / Clinical Epidemiology
Adjunct Clinical Professor - McMaster University
2489 Bloor Street West, Suite 102. Toronto, ON. M6S 1R6
Ph:(416)742-3736 Fax:(416)742-2818 Website: www.nguyensportsmed.com



Knee Pediatric Growth Plate Sparing ACL Reconstruction/Hamstring Autograft Physiotherapy Prescription & Letter of Medical Necessity (Start 3-5 days post-surgery)

Patient's Name _____ Evaluate & Treat: x 2x / week until graduation
Other procedures: Medial / Lateral Meniscal Repair (if yes then walk with leg straight, locked brace x 6 wks, no bike/wall sits until 6 wks, no squats until 10 wks, no stair exercise until 10 wks) Partial Medial / Lateral Meniscectomy Cartilage Repair

Precautions

- Keep the arthroscopy portal incisions dry & clean for 8 days after surgery when sutures are removed. **On 3rd post-surgical day, unwrap tensor band, remove fluffy white cast padding & white pad, KEEP WHITE STERILE GAUZES on incisions (DO NOT at LOOK/EXPOSE THE INCISIONS) & rewrap with tensor band and buckle brace back on locked fully straight. DO NOT TOUCH INCISIONS. Encourage Passive ROM at home daily (2-3 sessions) by family member.** Always walk with crutches with the leg fully straight, brace locked at -10 degrees of extension until cleared by Dr. Nguyen. Drive only when you are able to walk without crutches / brace & you are off narcotic medications. NO HAMSTRING STRETCH x 4 weeks. No bike or active knee flexion until 6 weeks. NO running in a straight line (treadmill) until cleared by Dr. Nguyen (4 mos & can do 10 x single leg squats with no dynamic valgus). No cutting / pivoting / deep squatting / kneeling until 6 mos. No open chain exercises x 6 mos. No side stepping exercises until 5 mos. No **weight bearing** knee bending exercises past 60 degrees. (e.g. squats)

0-4 wks: Have patient ICE the knee 3-4 times daily, 20 minutes at a time or CRYO-CUFF cooling machine on

- **Weight Bearing:** NON-WEIGHTBEARING x 3 weeks then progress to full weight bearing as tolerated with knee straight, brace locked at -10 degrees extension (crutches x 1-6 weeks). [**Modify if cartilage transplantation done: non-weight bearing x 6 weeks**]

- **Crutches:** discontinue at 1-6 weeks when gait is normalized, knee is painfree, good quad tone, no extensor lag, no dynamic valgus.

- **ROM:** as tolerated. Goal for full motion is at 3 weeks. [**Modify if meniscus repair (flexion to 90 deg only for first 3 wks). Full motion goal is then at 5 weeks**]

- **Brace:** discontinue at 4-6 weeks when gait is normalized and good quad tone. Brace is locked in extension (-10 degrees extension) when not doing ROM for ambulation and sleeping (remove for hygiene / exercise) for first 10 days. May remove brace after 10 days when not weight bearing (e.g. hygiene / motion exercises/during sleep). **WBAT at 3 wks with leg fully straight x 6 wks for meniscal repairs.**

Exercises: NO OPEN CHAIN x 6 months (e.g. knee extension machine). Quad muscle electrical stim/Heel slides with belt / Quad sets/ SLR with brace in full extension until quad strength prevents extension lag/isometric hip ad/ abduction/patella mobilization/gastroc + soleus stretch /ankle strengthening. Start on stationary bike (high seat progressing to low seat with increasing resistance) if flexion >100 deg after 4 wks for motion only (no active knee flexion x 6weeks).

4-6 wks: Full weight bearing with leg straight (brace locked at -10 degrees extension). Full active range of motion as tolerated

- **Brace:** unlock then gradually wean off if patient has full extension & no extension lag, no pain, good quadriceps contraction & is able to prevent buckling of the knee- **Exercise:** progress isometric exercises (static wall sits w/ ball < 60 deg) **if NO meniscal repair done**, patella mobilization. Hip/core strengthening (abdominals, glut max/medius [side leg raises, clamshells], planks)

6 wks-5 mos: Full weight bearing as tolerated. Full range of motion as tolerated.

- **Exercise:** Hamstring strengthening (bands). Mini-squats < 60 deg. Begin Dr. Nguyen's proprioception/balance exercises (fixed surfaces). Single leg bike with progressively increased resistance ► Mini-squats with increasing weights ► step off/on raised platform ► core/back strengthening ► star exercise ► stairmaster. Progress to closed chain exercises (wall sits w/ ball < 60 deg, shallow lunges). Begin single leg strengthening at 3 mos.

5-9 mos: May run straight on treadmill (if cleared by Dr. Nguyen) at 5 months if able to do 10 x single leg squats with no dynamic valgus. Start sport + work specific activities (closed chain only & AVOID tibial rotation) if pain free. Progress strengthening (single leg press, bike, leg curls, squats, lunges with weights. At 6 mos, start plyometrics, backward running (avoid tibia rotation) and increase sport + work specific activities/conditioning. .

- If cleared by Dr. Nguyen: At 7 months, progress neuromuscular training (video run, single leg hop, box/cross jump, trampoline testing)

9-12 mos: Increase intensity of cutting / pivoting exercises, gradual return to select sports participation **if pain free, no effusion, equal quad/hamstring/calf strength, and passed Dr. Nguyen's functional neuromuscular control tests.** Maintenance program for strength & endurance.

Return to work and sports to be determined on an individual basis by Dr. Nguyen ONLY. This is a guideline protocol only. If you experience pain, functional difficulties or are not progressing, please return to Dr. Nguyen's sports clinic for a follow-up assessment and discussion.

By signing this referral, I certify that I have examined the patient and physical therapy is medically necessary

Date:

Signature: