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Knee Arthroscopy (Partial Meniscectomy/Chondroplasty) Rehabilitation Guidelines

This handout is a guideline for your rehabilitation after anterior cruciate ligament reconstruction. You may vary in your ability to do the exercises and progress from one phase to the next during the corresponding timeline, but you will ultimately progress and achieve your goals. Please call Dr. Spencer's office if you are having a problem with your knee or if you or your physical therapist or athletic trainer has questions.

PHASE 1: ~0-2 weeks after surgery

GOALS

1. WBAT and wean from crutches
2. Ensure wound healing
3. Attain and maintain full knee extension (Symmetric)
4. Gain knee flexion (knee bending) to 90+ degrees
5. Decrease knee pain and swelling
6. Promote quadriceps muscle strength
7. Avoid blood pooling in the leg veins

Do not place a pillow under the knee. This will lead to stiffness.

BRACE

- If given a brace, use the brace when ambulating
- Don't place the ice packs directly on the skin or for more than 20 minutes at a time
- Wean from the brace over the second week

WEIGHT-BEARING / CRUTCHES

- **Weight-bear as tolerated** with crutches
 - Use crutches to assist when walking
 - Occasionally (every one or two hours) practice standing on your operated leg, with your knee fully straight, for 10 to 20 seconds.
 - Concentrate walking normally, in a heel-strike to toe-off pattern, without a limp
 - You may gradually wean from 2 crutches to 1 crutch, held on the side opposite the

- injured knee
- Progress to no crutches when you can walk without a limp and there is no pain and you can perform a SLR without extensor lag
- Do not pivot on your operative leg when turning

CRYOTHERAPY

If you are experiencing pain, swelling, or discomfort, we suggest ice therapy for 20 minutes with at least a 20-minute break in between. Use your cryocuff or place ice in a zip lock bag and/or in a towel and apply to the injured area. Never place ice directly on the skin.

WOUND CARE

Remove your bandage on the third morning (72 hours) after surgery but leave the small pieces of white tape (steristrips) across the incision. You can wrap an elastic bandage (ace) around the knee after showering to help control swelling. **Do not** soak the incision in a bathtub or Jacuzzi until the incisions are completely healed. Please see your post-op instructions.

SHOWERING

You may shower 3 days (72 hours) after your surgery. Sit down on a stool in the shower, remove your brace, remove the ACE wrap and gauze dressings, but leave the steri-strips in place (white tape over incisions). Use *Glad Press'n Seal* to wrap the knee several times to make a water-resistant barrier by pressing firmly above and below your bandages completely around your thigh and calf. Proceed to shower. Do not submerge the knee under water. Once finished showering, pat the knee dry, do not rub. Remove the *Glad Press'n Seal*. Reapply new gauze pads and a new ACE wrap, then put your brace back on. Do not hop on one leg.

E-STIM

If using an electrical stimulator, please use high-intensity levels.

FREE/MACHINE WEIGHTS (Upper Body/Trunk Only)

During Phase 1, we suggest that you do not use any lower extremity free or machine weights. If you are doing free or machine weights for the upper body and trunk, we suggest a very light resistance of 3 sets of 15-20 repetitions. Do not place yourself in a compromising position with your recently operated knee.

HOME EXERCISE PROGRAM

*Perform exercises without your brace, if given one

Days per Week: 7

Times per Day: 3-4

Quadriceps squeeze	1-2 sets of 15-20 reps
Heel prop	5 minutes
Heel slides with towel assist	1 set of 5 to 15 minutes
Sitting heel slides	1 to 2 sets of 15 to 20 reps
Straight leg raises (Without extensor lag)	1-2 sets of 15-20 reps
Patellar mobilization (very important!!)	1 set for 1 to 3 minutes
Hip abduction	3 sets of 10 reps

Ankle pumps
Prone hang

1 set of 2 to 3 minutes
5 minutes

Additional Exercises:

- 1/2 squats
- Active-assisted ROM stretching, emphasizing full knee extension (flexion to tolerance)
- Hamstring and gastroc/ soleus and quadriceps stretches
- Use of compression wrap or brace
- Bicycle for ROM when patient has sufficient knee ROM. May begin partial revolutions to recover motion if the patient does not have sufficient knee flexion

START PHYSICAL THERAPY

- You can start formal physical therapy about 3 to 5 days after the operation
- We ask that your PT follow our written protocol
- If your PT has questions, please ask them to call us to discuss them

***CRITERIA FOR ADVANCEMENT TO PHASE 2:**

- Full extension/hyperextension
- Good quad set, SLR without extension lag
- At least 90° of flexion
- Minimal swelling/inflammation
- Normal gait on level surfaces, weaned from crutches

PHASE 2: ~2 – 4 weeks after surgery

Goals

1. WBAT w/o crutches
2. Ensure wound healing
3. Maintain full knee extension (Symmetric)
4. Attain knee flexion of 120° or more
5. Advance quadriceps muscle strengthening
6. Decrease knee and leg swelling
7. Normal gait without crutches
8. Improve balance and proprioception

WEIGHT-BEARING / CRUTCHES / BRACE

- **Weight-bear as tolerated** and wean the crutches and brace
 - Concentrate walking normally, in a heel-strike to toe-off pattern, without a limp
 - Progress to no crutches when you can walk without a limp and there is no pain

CRYOTHERAPY

Use the cryocuff or ice bags to decrease swelling for 20 minutes three times a day after each exercise session.

SWELLING

Continue wrapping the knee with an elastic bandage (ACE) after exercising / PT sessions to control swelling.

EXERCISE PROGRAM

Stationary Bicycle

Days per week: 5-7

Times per day: 1-2

Utilize a stationary bicycle to move the knee joint and increase knee flexion. If you cannot pedal all the way around, then keep the foot of your operated leg on the pedal, and pedal back and forth until your knee will bend far enough to allow a full cycle. Most people are able to achieve a full cycle revolution backwards first, followed by forward. You may ride the cycle with no resistance for up to 10-15 minutes, 1 to 2 times a day. Set the seat height so that when you are sitting on the bicycle seat, your knee is fully extended with the heel resting on the pedal in the fully bottom position. You should then actually ride the bicycle with your forefoot resting on the pedal.

Water Workout (optional)

Days per week: 3

Times per day: 1

Once the incisions are well healed, you may do Aqua-jogger exercise or Flutter kick swimming 20-30 minutes

RANGE OF MOTION AND STRENGTHENING EXERCISES (brace off)

Days per Week: 5-7

Times per Day: 2-3

Quadriceps setting	1-2 sets of 15-20 reps
Heel prop	5 minutes
Prone hang	5 minutes
Heel slides with towel assist	1 set of 5 to 15 minutes
Straight leg raises	1-2 sets of 15-20 reps
Standing hamstring curl	3 sets of 10 reps
Standing toe-raises	3 sets of 10 reps
Hip abduction	3 sets of 10 reps
1/3 knee bends	3 sets of 15 reps
Wall slides	3 sets of 15 reps

You can start the Leg Press and Hamstring Curl machine during this phase under supervision of a physical therapist if you have achieved the following goals:

1. Full passive knee extension
2. Full extension while quadriceps setting
3. Flexion of 125 degrees
4. Minimal swelling

Additional Exercises:

- Toe raises- calf raises
- Hamstring curls
- Continue bike for motion and endurance
- Cardio equipment- stairmaster, elliptical trainer, treadmill and bike as above.
- Lunges- lateral and front
- Leg press
- Lateral step ups, step downs, and front step ups 2
- Knee extension 90-40 degrees
- Closed kinetic chain exercise terminal knee extension
- Four way hip exercise in standing
- Proprioceptive and balance training

Stretching exercises- as above, may need to add ITB and/or hip flexor stretches

***CRITERIA FOR ADVANCEMENT TO PHASE 3:**

1. No patellofemoral pain
2. Minimum of 120 degrees of flexion
3. Sufficient strength and proprioception to initiate running
4. Minimal swelling/inflammation

PHASE 3: >4 weeks after surgery

GOALS

1. Maintain full knee extension
2. Attain full knee flexion
3. Walk with a normal heel-toe gait with no limp
4. Muscle strength and conditioning improvements
5. Resume running, strength training
6. Return to sport/functional activities/work tasks

EXERCISE PROGRAM

Range of Motion and Strengthening Exercises

Days per week: 3	Times per day: 1
Quadriceps setting	1-2 sets of 15-20 reps
Heel prop	5 minutes
Prone hang	5 minutes
Heel slides with towel assist	1 set of 5 to 15 minutes
Straight leg raises	3 sets of 10 reps
Standing hamstring curl	3 sets of 10 reps
Standing toe-raises- single leg	3 sets of 10 reps
Hip abduction	3 sets of 10 reps
Squat to chair	3 sets 15 reps
Wall slides	3 sets of 15 reps

Stretching Exercises

Days per week: 5-7	Times per day: 1-2
Hamstring stretch	3-5 reps holding 15 to 30 seconds
Quadriceps stretch	3-5 reps holding 15 to 30 seconds
Calf Stretch	3-5 reps holding 15 to 30 seconds

Additional Exercises:

- Continue to emphasize closed-kinetic chain exercises
- May begin plyometrics/ vertical jumping
- Begin running program and agility drills (walk-jog) progression, forward and backward running, cutting, figure of eight and carioca program
- Sport specific drills

Criteria for discharge from skilled therapy:

Non-antalgic gait
Pain free /full ROM
LE strength at least 4+/5
Independent with home program
Normal age appropriate balance and proprioception
Resolved palpable edema