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**MINIMALLY INVASIVE TOTAL KNEE REPLACEMENT
SURGERY
PRE AND POST-OPERATIVE GUIDELINES**

MEDICATIONS

- Prescriptions for pain (Lyrica, Celebrex and Norco) are included in this pre-operative packet. If you have allergies to any of these or did not receive all of these, please call the office. Be sure you received **ALL** from your pharmacy.
- Most patients benefit from sound sleep around the time of surgery. The sleep-aid is prescribed **ONLY** to assist sleep immediately before and after surgery. This medication will not be refilled.
- Pain relievers are best used on a regular basis rather than when the pain becomes so intense that it is intolerable. Pain usually lessens after the first 2-3 days. At this point, pain medication is not needed as often, but should always be used before your physical therapy sessions to maximize results. Be sure to use Celebrex with narcotic pain relievers together as prescribed.
- Pain medication should be taken with food to decrease the possibility of nausea. Should nausea occur, Zofran (ondansetron), also prescribed for you, can be used to help control this. An additional side effect of narcotics is constipation. We do not prescribe laxatives, but recommend over the counter medications to control this.
- **Any requests for medication refills should be called in by you to your pharmacy. Your pharmacy will then request them from us via fax.** Refill requests from your pharmacy will be addressed between 8 and noon, Monday through Friday. **MEDICATIONS CANNOT BE REFILLED ON THE WEEKEND OR AFTER HOURS.** Vicodin, Norco or other narcotic pain relievers will be refilled a maximum of three times on a decreasing strength basis. Thereafter, only non-narcotic pain medications will be prescribed.
- **DVT Prevention:** If given Lovenox continue until complete then start Aspirin 325 mg daily for 4 weeks. If given Aspirin 325 mg take twice daily for six weeks. Never use any anti-inflammatory except for Celebrex while on Aspirin.
- Resume all previously taken out-patient medications when returning home from the hospital unless instructed differently.
- Constipation is likely to occur from the use of the pain medication. Use over the counter stool softener or laxatives is recommended.
- **PLEASE MAKE SURE ALL PRESCRIPTIONS ARE FILLED PRIOR TO THE DAY OF YOUR SURGERY.**
- Our office does not pre-authorize medications through your insurance company. That does not lessen their importance. Fill ALL medications prescribed.

INCISION and EXTREMITY CARE

- Swelling and bruising in the leg and foot is very normal to see during the first several weeks. Minimally invasive (MIS) total knee replacements differ from traditional extended incisions in that they are prone to swelling because of the smaller incision length. Due to the swelling, elevation is crucial. Since we expect a much faster recovery from MIS replacements, there are specific rules to abide by to assure maximum success. The best prevention for swelling is **ELEVATION** of the foot **HIGHER THAN YOUR HEART** on a wedge while resting. Never sit in a chair to pass the time. Always do exercises in a reclining position for the first two weeks.

A good rule of thumb is to elevate the foot 1 hour for each 15 minutes that you walk or sit. Remember, any swelling that occurs in the first 2 weeks is difficult to resolve. Therefore, preventing it from occurring by **ELEVATION IN THE FIRST 2 WEEKS** will make your recovery much easier. If excessive swelling still results, you may need to reduce the amount of blood thinner medication you are receiving. Your internist who supplies this medication can advise you on this. Most swelling resolves in 2-3 months following surgery.

- Dressings should be changed every day. Showering may begin the day after discharge using a plastic wrap to cover the wound. After showering, cleanse the wound with hydrogen peroxide and dress with dry gauze in a sterile fashion. Once the incision is not draining (usually in 3 days), the dressings are no longer necessary.
- If any drainage occurs that appears yellowish, odorous or pus-like, or if you experience wound redness, fever ($>101.0^{\circ}$) or pain that seems to be more intense than before, this could be a sign of an infection and you should **CALL THE OFFICE AT (713) 333-4100**. *Remember, a nominal amount of blood drainage can be expected from the wound during the first few days.*

REHABILITATION

- **6 weeks before surgery:**
- You will be provided with a prescription for pre-surgery conditioning exercise. You may attend the physical therapy of your choice. You will be taught a series of home exercises you should do every day in order to strengthen you for rehabilitation after surgery. This also a marvelous opportunity to meet the therapist who will assist you in your recovery.
- **Day of Surgery:**
- The admission and surgery process on the day of surgery is often long and monotonous. Actual surgery time for males is 1 hr and 5 min, while a female is slightly shorter at 50 minutes. You will stay in recovery for about 3 hours before going to your room on Dunn 7 East. Later in the afternoon, you will have a casual standing/walking outing by the nursing staff on your new knee, putting as much weight on it as desired.
- **Day after Surgery:**
- This is action packed with formal physical therapy 2 times during the day before noon. At completion, if you feel like you are comfortable and can meet the physical therapy goals, you may be discharged. Our goal is a one day stay.
- **At Home:**
- The following exercises are to be done for at least 20-40 minutes, 2-3 times a day after surgery. Remember to do exercises in a reclining position as much as possible. For two weeks walk only for location change not for exercise. Do this fast and get off the knee to elevate as quickly as possible to minimize swelling.
 1. Straight leg raising: Leg lifts with the knee straight should be done by lifting your leg 12" off the floor for 5 seconds. This is done in an effort to maintain strength of the quadriceps muscles, the front muscle of the thigh.
 2. Quad set strengthening: Tighten the front of the thigh for 5 seconds. When done correctly, you will see the knee cap move toward the hip. Extension of the leg is the most difficult. However, it is also the most important one to pursue. This exercise is particularly important to do while massaging or pushing the knee manually into a straight position.
 3. Hamstring exercises: This can be done by either heel drags and bending the knee backwards or by providing resistance of the opposite leg against the operated leg. This works the muscles behind the knee.
- Outpatient physical therapy by a licensed physical therapist **MUST** start no later than the Friday after discharge. Rehabilitation after MIS replacement is a **FAMILY** event. To be effective at the physical therapist you must use narcotics to maximize exercise performances. Therefore, you will need a "designated" driver to get you to and from exercise. **DO NOT** try to rehab your new knee replacement on your own guidance of outpatient physical therapy. We don't want you to waste

your time in completing your recovery. An experienced therapist will help expedite this process. The goal is 5 weeks of therapy until completion and discharge, however sometimes it is necessary to extend this to achieve full range of your knee. Aside from exercises given by your P.T., the best exercise is knee stretches. This should be done for at least 20 minutes, 3 times a day, for 2 weeks after surgery.

- Rocking chairs, low chairs and low sofas are good methods to help your knee regain range of motion.
- Concentrate on elevation and stretches to keep the knee limber. After two weeks, you may also start walking; you should also progressively push yourself to attain more endurance by increasing the distance or duration that you are walking. Remember to elevate the knee after your walk before two weeks after surgery.

Special Equipment

- I highly recommend the purchase of the following equipment:
- Cryo-cuff ice pack to help control post-operative pain and discomfort.
- Foam wedge (7-10 inches in height.) This elevates the knee to prevent swelling.
- Ask your local medical supply company or look online to purchase these products.

PRECAUTIONS

- Unless otherwise instructed, you can put full weight on your new knee replacement immediately.
- Driving may resume as early as 2 weeks so long as you are not under the influences of narcotics pain medication and have ample motor skills and reaction time. Remember you may not drive yourself to therapy sessions. Please arrange ahead of time for your family or friends to assist you with transportation needs during this time. They will be as anxious to see you progressing in your recovery as you will be.
- There are no precautions regarding sexual intercourse following total knee replacement.
- Most people can return to desk jobs in 3-4 weeks following surgery, but return to more strenuous jobs is only at Dr. Lionberger's direction after full rehabilitation.
- Avoid activities that involve running, jumping, racket sports, or carrying heavy loads. You may kneel on your knee if desired. Dr. Lionberger's patients are allowed to return to all other non-contact and non-pivotal sports as long as they do not train to become more aggressive in the sport. For example: A level II snow skier must stay at a level II.

DVT and PE

- Symptoms of Deep Vein Thrombosis are usually localized to the site and include: pain, swelling, tenderness and redness or discoloration of the skin. Pulmonary Embolism symptoms include shortness of breath, rapid pulse, sweating, feeling of apprehension, chest pains worsening with deep breath, coughing up blood, decreased blood pressure, and light-headedness. If you experience any of these symptoms, go to an Emergency Room immediately.

LONG-TERM PRECAUTIONS

- Due to the remote possibility of infection to your total joint following surgical, dental or urologic procedures, we strongly recommend advising your physician/dentist of your total joint replacement.
- Antibiotic coverage should be initiated if a dental, skin or genitourinary procedure is performed following your joint replacement.
- **CALL THE DENTIST OR PHYSICIAN DOING THE PROCEDURE FOR THE ANTIBIOTIC PRESCRIPTION.** The following are recommendations for preventative antibiotics:
 - Cephalexin or Amoxicillin: 2 grams orally 1 hour prior to the procedure. If unable to take oral medications: Cefazolin 1 gram or Ampicillin 2 grams IM/IV 1 hour prior to the procedure.
 - If allergic to Penicillin: Clindamycin 600 mg orally 1 hour prior to the procedure. If

unable to take oral medications: Clindamycin 600 mg IM/IV 1 hour prior to procedure.

FOLLOW-UP CARE

- **FOR ALL FOLLOW-UP APPOINTMENTS, CALL THE APPOINTMENT DESK DIRECTLY AT (713) 333-4103.**
- A post-operative follow-up visit is required at 3 weeks with Dr. Lionberger and 6 weeks with Lauren my Physician Assistant.
- A 3 month post-operative visit is optional but recommended for all patients. After that you should schedule a follow up visit on a yearly basis from the date of your surgery.
- **Regular follow-up post operative appointments are made on a next available basis and cannot be accommodated as work-ins. Therefore, all patients should schedule their post-operative appointments as early as possible. PLEASE NOTE: If you are a clinical study patient, a research coordinator will make the follow-up appointments for you and will provide a schedule of visits to you before hospital discharge.**
- If you have any questions or concerns regarding the contents of this packet, please call the office BEFORE your surgery
- BRING YOUR WEDGE AND CRYO-CUFF TO THE HOSPITAL IF YOU HAVE PURCHASED THEM BUT IT IS NOT MANDATORY.