Pre and Post-Operative Surgical Instructions for

Knee Surgery

Daniel W. Green M.D., F.A.C.S.
Pediatric Orthopedic Surgery and Sports Medicine

Patients Name: _____

Date of Surgery: _____

Post-Op Visit: _____

BRING THIS BOOKLET WITH YOU THE DAY OF SURGERY

Dear Parents,

I consider it an honor and a pleasure to provide your child with pediatric orthopedic care. We at the Hospital for Special Surgery Lerner Children's Pavilion strive to provide the best care and patient experience possible.

While I understand that preparing your child's surgery can be overwhelming this information is intended to streamline the pre and post-operative process and answer many frequently asked questions.

Please contact the office with any questions or concerns.

Sincerely,

Daniel W. Green M.D., F.A.C.S.
Pediatric Orthopedic Surgery and Sports Medicine
Hospital for Special Surgery

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New York, NY 10021
Telephone: 212-606-1631
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1133 Westchester Avenue
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Type of Surgery

- **Ambulatory Surgery**: Procedures from which you are able to go home the same day without an overnight stay. Ambulatory surgery is also called “outpatient surgery”. The majority of surgeries performed by Dr. Green are ambulatory.

- **23-Hour Stay**: Some patients may be advised to stay overnight for observation, pain control or due to late timing of their surgery. There are some procedures Dr. Green performs where your child will be required to stay for 23hrs. (Typically ACL and patella surgery)

- **Inpatient**: Surgeries with an anticipated hospital stay greater than 23hrs. Details regarding private rooms, telephone, television and internet are provided upon request on the day of admission.

Pediatric Medical Clearance

Here at the Lerner’s Children Pavilion we have a dedicated pediatric perioperative team. Depending upon the planned surgical procedure and your child’s medical history, pediatric pre-admission medical clearance and/or clearance from a specialty consult may be required. Please note pediatric medical clearances are done within 7-10 days prior to surgery.

No Medical Clearance Required:

Patients scheduled for ambulatory surgery who are healthy do not require medical clearance.

Medical Clearance Required:

Patients, who undergo surgery with a stay greater than 23hrs, suffer from medical conditions such as asthma, diabetes, and seizure disorders and/or other medical conditions are typically required to undergo pre-operative pediatric medical clearance with our HSS pediatric perioperative team. This appointment is scheduled by the surgical coordinator.

Outside Clearance Notes:

Please have all outside clearance notes faxed to our office: 212-774-2776.

Immunization Records:

All patients under the age of 18 are required to submit their immunization records to the surgical coordinator at least 7 days prior to surgery.

Medications:

If your child is taking a prescribed medication please contact the prescribing physician for instructions on how to proceed with the medication prior to surgery and after surgery.

- ***Please stop anti-inflammatory medications 7 days prior to surgery. Some commonly used includes; ibuprofen, Motrin and Advil etc.***

- ***Please Do NOT take any herbal medications or supplements containing the following: alfalfa, capsicum, celery seed, chamomile, chondroitin, clove, dandelion, dong quai, feverfew, fish oil, flax seed, gamma linoleic acid, garlic, ginger, gingko, ginseng, glucosamine, horseradish, licorice, liver oil, melatonin, onion, papain, papaya, parsley, passionflower, poplar, resveratrol, sweet cover, turmeric, willow bark, etc.) within 10 days of surgery. Many of these increase bleeding risk during/after surgery.***

FEMALE PATIENTS:

- ***Oral contraceptive pills (OCP's) should be discontinued beginning 4 weeks prior to surgery. If surgery is scheduled less than 4 weeks time, stop OCP's ASAP.***

Preparing for Surgery:

Insurance Coverage:

Dr. Green's office will contact your child's insurance provider and obtain the appropriate approval should one be required. However we do recommend that as the member you contact your insurance provider to discuss coverage and benefit questions pertaining to your child's procedure.

Imaging Studies:

If your child has had imaging at an outside facility, please make sure to bring it to the office prior to surgery. This includes all written reports as well as images on disc. These images must be uploaded into our PACS radiology system prior to surgery.

Post-Surgical Equipment:

For knee surgeries, we often recommend post-operative equipment such as:

- **CPM (continuous passive motion machine)**
  The purpose of this machine is to help achieve and maintain good range of motion in the immediate post-operative phase following MPFL & ACL surgeries. The CPM moves the knee in a controlled setting to allow for flexion without the patient needing to use his or her muscles to move the leg. https://en.wikipedia.org/wiki/Continuous_passive_motion

- **Game Ready (Ice Machine)**
  This product combines active pneumatic compression and rapidly circulating cold therapy to treat pain and swelling in the immediate post-operative period. For more information on this product, go to www.gameready.com.

- **CyMedica (E-Stim)**
  This product is a neuromuscular electrical stimulator that uses high intensity signals to help with improving muscle and nerve atrophy following surgery. For more information on this product, go to www.cymedicaortho.com

These items are ordered by the office and supplied by a surgical vendor. You will receive a call a few days prior to surgery from a vendor to discuss insurance coverage and delivery.

While most insurance companies do not cover these machines, they are available for rent and or purchase. While this equipment is not mandatory for a successful

post-operative recovery, many patients feel that they help aid in regaining strength and range of motion.

Vendors:

Park Avenue Orthotics Gotham Surgical
155 East 55th Street, Suite 200
New York, NY 10022
Telephone: 212-297-0362
Fax: 212-697-3697

BioDymanics Technologies
431 East 72nd Street
New York, NY 10021
Telephone: 800-879-2276
Fax: 212-717-5937

Day before Surgery

You will receive a call from a member of the HSS nursing staff between the hours of 2pm-8pm regarding the time of your child's procedure. In general, we recommend that you arrive at the hospital 2-3 hours prior to your surgery start time.

- If you do not hear from the hospital by 7pm and/or if you miss the call you can reach the hospital operating room nurse by calling **212-606-1710.**

- The HSS Operating room staff (not Dr Green's office) determines the surgical schedule and case order. Please be understanding of the dynamic nature of the OR schedule.

- Do NOT eat or drink anything after midnight before your surgery unless specifically instructed by an HSS representative over the phone.

Day of Surgery

- We recommend that parents pack one small overnight bag for themselves and their child.

- Parents are required to bring one piece of identification, such as a driver's license and or passport.

- Remember to bring the patient's Insurance cards.

- The nursing staff in the pre-op area will take your child's vital signs (blood pressure, pulse, etc.) and will ask you a few questions.

- You will meet with an anesthesiologist in the pre-op area. This is a good time to ask about the pain medications and type of anesthesia that will be used during surgery.

- Dr. Green will greet you and your child in the pre-op area and perform a final brief exam. This is an opportunity for you to ask any additional questions since your last visit.

After Surgery

- **Recovery Room (PACU):** the anesthesia team and nursing staff will monitor your child's postoperative care and child's return to full awareness. Regardless of the type of anesthesia performed, your child will stay at the hospital until his/her condition is stable and safe to leave.

- You will be given post-operative instructions prior to discharge. In addition please refer back to this booklet for Dr. Green's post-operative instructions.

- **Prescriptions:** prescriptions for pain medication and any other required medications after surgery are electronically sent to your child's local pharmacy. Please confirm your pharmacy with the clinical staff. **Please let your recovery team know if your child is not able to swallow pills.**

- **Discharge:** in order to be considered safe to go home your child must be able to stand up and walk without feeling dizzy or lightheaded, tolerate food and drink, and be able to urinate. When your child is considered safe to leave, a parent/guardian will be asked to bring the car to the main hospital entrance. HSS surgical personnel will escort you to the car and assist with your departure.

- **Phone Call:** Dr. Green and/or our nurse practitioner will call you the day after surgery to check on your child's post-operative progress and answer any questions.

- **First postoperative visit:** typically occurs 10-14 days after surgery. This appointment is usually made with the office staff at the time of scheduling surgery. If you need to confirm this appointment and or make any changes to this appointment please contact the office.

Postoperative Instructions

Diet:

- Begin with clear liquids and light foods (jello, soup, etc.) Progress to a normal diet as tolerated if you are not nauseated.
- Avoid greasy or spicy foods for the first 24hrs to avoid GI upset.
- Increase fluid intake (water, Gatorade, etc.) to help prevent constipation.

Medications:

- Most patients require a stronger acting pain medication for a short period of time following surgery. You will receive this prescription prior to discharge. We do not recommend attending school if your child is taking a post-operative narcotic pain medication.

- Narcotic pain medicine may cause constipation, nausea, itching, and excessive drowsiness. You should take an over-the-counter stool softener (Colace and/or Senna) while taking narcotics to prevent constipation, but

stop if you develop diarrhea. If your child develops nausea or vomiting, please let us know as there are medications to help with these side effects. If you experience itching, over the counter Benadryl may be helpful. Narcotic pain medications often produce drowsiness and it is against the law to operate a vehicle while taking these medications.

- Ibuprofen (i.e. Motrin, Advil) may be taken in between the prescribed pain medication to help with pain control.

- Patients may experience nausea and/or vomiting from the pain medication or from anesthesia. Some patients require a prescription for anti-nausea medication prior to discharge.

Female Patients Only:

- Continue to remain off oral contraceptive pills (OCP's) for 6-8weeks post-op, wait for first menstrual cycle after surgery and re-start OCP's that Sunday.

Ice:

- Ice is a very important part of your recovery. It helps reduce inflammation and improves pain control. You should ice several times each day for 30 minutes or more at a time. Please make sure there is a thin sheet or towel between the ice and your skin.

Wound Care:

Bandage:

- You should remove the ace wrap dressing on the knee 48 hours after surgery. Light bleeding and some swelling are normal the first 48 hours after surgery. If you notice active drainage after 48 hours please call Dr. Green's office. After the ace wrap is removed, there will be a clear tegaderm dressing over your child's incision. Do not remove this clear plastic dressing that lies directly on your child's skin. If the tegaderm plastic

dressing becomes loose or falls off then remove the plastic tegaderm dressing and apply a band-aid or gauze over the incision.

Incision:

- **Keep the incisions dry for until the first post-operative visit**
    - If the clear tegaderm plastic dressings are adhering well to the skin then it is ok to take quick showers with these dressings intact. Often this is achieved by wrapping the knee and dressing in saran wrap to keep the skin dry.
    - Your child should avoid immersing the operative leg in water (pool, bath, jacuzzi, etc.) for 2-3 weeks following surgery.
    - **Do not apply creams, lotions, or ointments to your child's incisions while they are still healing (approximately 2-3 weeks).**
- Avoid touching the surgical incisions as much as possible. Sutures will be removed in the office at your first post-operative visit approximately 10 days after surgery. You may see a small amount of drainage near the sutures. This is normal and to be expected for the first 1-2 days following surgery. If drainage or bleeding persists after the 2nd post-operative day, please notify our office.
- If you notice that you have lower leg or ankle swelling, loosen the brace and/or loosen the ace wrap. To decrease swelling, elevate the operative leg so that the foot is higher than the knee and the knee is higher than the chest. Place pillows under the foot and ankle, NOT under the knee. If these actions do not help alleviate the foot or ankle swelling, please call the office.

Shower:

- Your child may shower after the ace bandage has been removed (48 hours), but it is very important that you keep your child's sutures dry. As previously mentioned cover the dressing with saran wrap is often a very inexpensive and effective way to stay dry.

- You may remove your child's brace to shower, unless otherwise instructed. As your child's balance may be affected by recent surgery, we recommend placing a plastic chair or bench in the shower to help prevent falls.

- **Do NOT take baths, go into a pool, or soak the operative site until approved by Dr. Green.**

NORMAL SENSATIONS AND FINDINGS AFTER SURGERY:

- PAIN: Surgery hurts. We do everything possible to make your child's pain/discomfort level tolerable, but some amount of pain is to be expected. Please do not be nervous to give your child his/her pain medicine.

- WARMTH: Mild amount of warmth around the operative site is normal for up to 3 weeks.

- REDNESS: Small amount of redness where the sutures enter the skin is normal. If redness worsens or spreads it is important that you contact the office.

- DRAINAGE: A small amount is normal for the first 24-48 hours. If wounds continue to drain after this time, you need to contact the office.

- NUMBNESS: Around the incision is common.

- BRUISING: Is common and often tracks down the leg due to gravity and results in an alarming appearance, but is common and will resolve with time.

- FEVER: Low-grade fevers (less than 101.0°F) are common during the first week after surgery. You should have your child drink plenty of fluids and breathe deeply. A low-grade temperature is normal for a week after the surgery.

NOTIFY US IMMEDIATELY FOR ANY OF THE FOLLOWING:

- Temperature greater than 101.0°F.
- Severe nausea, vomiting, diarrhea, or constipation.
- Chest pain or shortness of breath (go to ER).
- Sutures become loose or fall out and incision becomes open.
- Change is noted to your incision (increased redness or drainage).
- Drainage persists greater than 4 days or becomes yellow or foul smelling.
- Increased pain unrelieved by medication or measures mentioned above

Returning to school:

- This varies widely by patient and the type of surgery performed. In general, the patient should no longer require post-operative narcotic pain medication during the day to be able to return to school. Generally, many patients are able to return to school a few days following surgery. If you need a letter for school or parent's place of employment, please let us know

Post-op Appointment:

- Approximately 10-14 days after surgery your child will need to return to see the surgeon for a post-operative check. Typically this appointment is made at the time of booking the surgery. If you need to confirm and or change this appointment please contact the office at 212-606-1631.

Physical Therapy:

- In almost all cases, post-operative physical therapy is indicated. You will receive a prescription for therapy either before discharge or at your first post-op visit. You can choose to have physical therapy at HSS or at a therapy center near your home. In general, your child's first PT session usually takes place 10-14 days after surgery unless indicated otherwise by Dr. Green. You may choose to have physical therapy at HSS or at a PT center near your home. If you need help finding a therapist, please let our office know.

  HSS Pediatric Physical Therapy
  212-606-1137

  HSS Sports Physical Therapy
  212-606-1005

  HSS Westchester Physical Therapy
  914-821-9300

Post-Operative Knee Rehabilitation Guidelines

(TO BE FILLED OUT BY DR. GREEN AFTER SURGERY)

Daniel W. Green M.D.
212-606-1631

1. **Weight Bearing Status**
   - ○ No Crutches
   - ○ TTWB (Toe touch weight bearing)
   - ○ PWB (partial weight bearing)
   - ○ WBAT (weight bearing as tolerated) with crutches (until next visit)
   - ○ WBAT (weight bearing as tolerated) Okay to stop crutches once pain and swelling have resolved.

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2. **Brace**
   - ○ No brace needed
   - ○ Brace for comfort
   - ○ Brace while walking (Okay to take off to shower, sleep and physical therapy)
   - ○ Other see instructions below:

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3. **Range of Motion**
   - ○ No range of motion. Leg to be kept straight in full extension.
   - ○ Full range of motion with no restrictions.
   - ○ Range of motion with limitations, see below:

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4. **Physical therapy should start before 1st post-op visit**
   - ○ No
   - ○ Yes, protocol given with physical therapy prescription

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5. **CPM (Continue Passive Motion)**
   - ○ Not needed
   - ○ Unit ordered

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6. **Game Ready (Ice Machine)**
   - ○ Not needed
   - ○ Unit ordered

For instructions on the CPM and Game Ready Machines please refer to this booklet

Post-Operative FAQ's

What are some warning signs of infection?

- If your child has a temperature greater than 101.0°F, recurrent chills, yellow or foul smelling drainage, or increasing redness around the incisions you should call the office immediately.

What if my child has a low-grade fever after surgery?

- A low-grade fever (less than 101.0°F) during the first week after your child's surgery is common. This is a normal response by your body. Drinking plenty of fluids and taking deep breaths is helpful.

Is the swelling normal?

- Yes, some swelling is normal. For lower extremity surgery, it will be worse when the leg is down and better when the leg is elevated. Elevation and ice can be very helpful. If the swelling does not go down or you start to develop calf pain please notify the office. For upper extremity surgery, movement of the wrist/hand/fingers, particularly repetitive squeezing an object such as silly putty can help reduce swelling

Why is there bruising that tracks down the operative limb?

- This is normal after surgery. Blood from the surgical site is pulled down by gravity and causes bruising in locations away from the area that was operated on. Some people get bruising into the foot after knee surgery or the fingers after upper extremity surgery. You should not be alarmed it will resolve over 3-5 weeks. The amount of such bruising varies by person.

Is pain normal?

- Yes, surgery is painful. The most pain will occur within the first 72 hours after surgery. There is no purpose in "being a hero" during this time. Give your child

pain medicines, if needed for the first few days and then you can begin to space them out. Remember, it takes 30-45 minutes for a pain pill to begin working, so do not wait for the pain to become unbearable before taking the next dose. Also, ice and rest is one of the most important parts of pain relief.

How often should you Ice the surgical site?

- Ice and elevation are your child's best friends! You should ice approximately 6 times a day for the first 2-3 days. Be sure to place a thin towel between the ice and your child's skin.

Should fluid draining from the incisions alarm me?

- If your child had arthroscopic surgery, some draining fluid onto the dressing is normal during the first 24-48 hours because we use large amount of water during the surgery and it is therefore only natural for some of this fluid to leak out while your child's body absorbs the rest. If the bulky bandage becomes wet, do not be alarmed; just reinforce it with another bandage. If you have persistent drainage 4 days after surgery, please contact the office.

How do I take off my child's bandage?

- You should remove the ace wrap dressing on the knee 48hours after surgery. Light bleeding and some swelling are normal the first 48hours after surgery. If you notice active drainage after 48hours please call Dr. Green's office. After the ace wrap is removed, there will be a clear tegaderm dressing over your child's incision. Do not remove this clear plastic dressing that lies directly on your child's skin. If the tegaderm plastic dressing becomes loose or falls off then remove the plastic tegaderm dressing and apply a band-aid or gauze over the incision.

How do elevate the surgical limb?

- For lower extremity surgery, prop the leg up (elevation) using several pillows or blankets underneath. Elevation is extremely important to limits swelling and pain

after surgery. Proper elevation works by gravity. The foot should be higher than the knee, which should be higher than the hip allowing gravity to pull the fluid/swelling back towards the heart.

What activities can your child do?

- It is very important for your child to do as much activity as possible while still adhering to the limits imposed by Dr. Green. Simply getting up and walking around the house is important. This will decrease the possibilities of post-operative complications.

When can my child drive?

- Your child cannot drive for at least 4 weeks following knee surgery depending on the side and type of surgery. Prescription narcotic pain medications will impair motor skill, reaction time and judgment. It is against the law to drive while taking prescription pain medications (even if they were prescribed for your child).

What happens at my child's first post-operative visit?

- Your child's first postoperative visit typically occurs 10-14 days after surgery. Dr. Green will review your surgery and any arthroscopic photographs. He will outline your post-operative physical therapy protocol. If you have sutures that need to be removed, they will be.