ORTHOPEDIC & REHABILITATION THERAPY



TOTAL JOINT GUIDE

KNEE

MAMMOTH HOSPITAL
Elevate Your Health

METICULOUS CARE · MEMORABLE PEOPLE · MAJESTIC LOCATION

Mammoth Hospital

Elevate Your Health

www.MammothHospital.com
(760) 934-3311

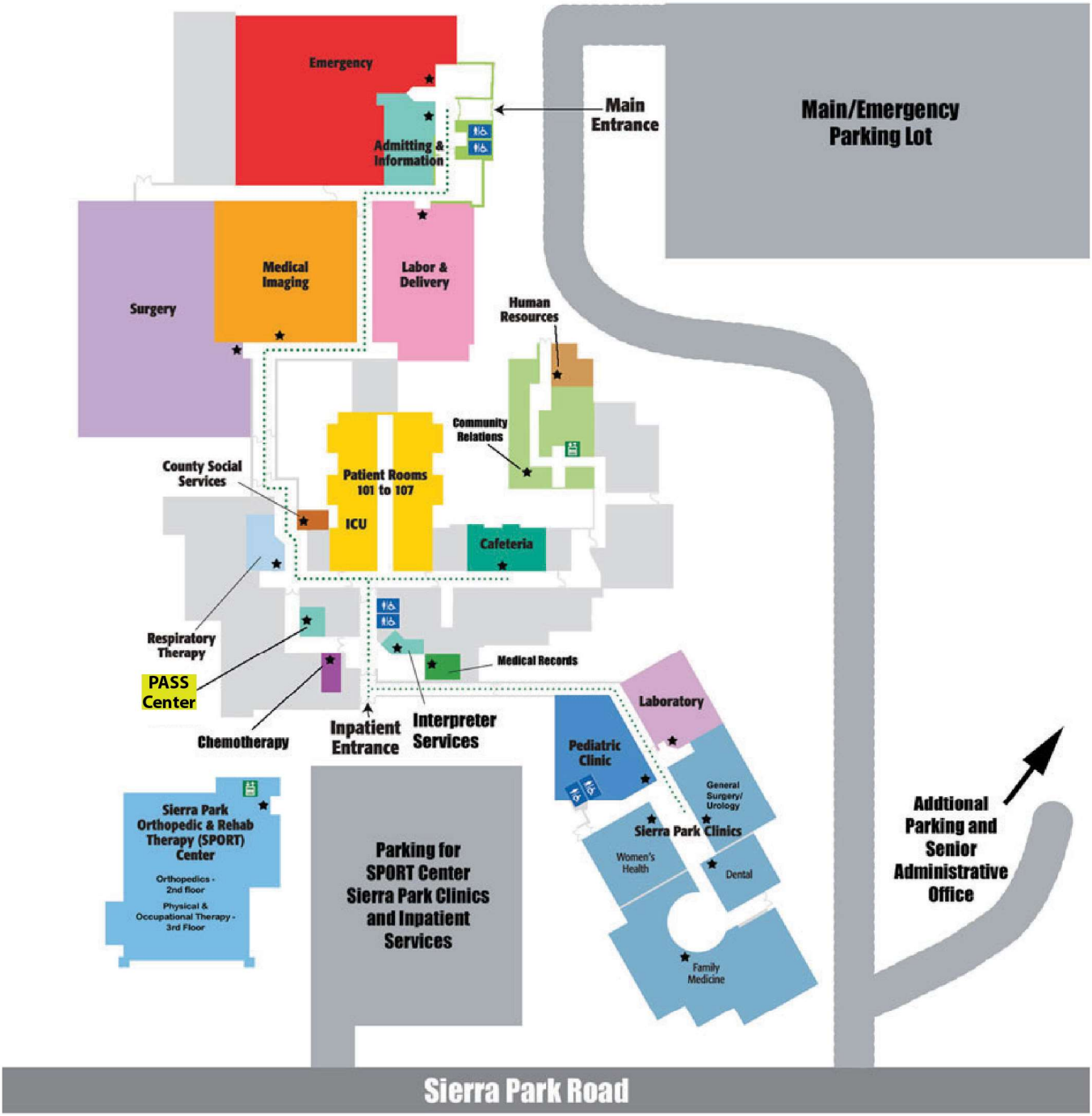


TABLE OF CONTENTS

MY INFO 6

PREPARING FOR SURGERY 11

THE KNEE JOINT 21

MY HOSPITAL STAY 32

AFTER MY SURGERY 41

FAQ AFTER SURGERY 47

APPENDIX: WHY YOU HURT LONG AFTER SURGERY 48


THANK
YOU
Main Entrance

MAMMOTH HOSPITAL
Elevate Your Health

Dear Team Member,

Thank you for choosing Mammoth Hospital for your joint replacement. Please consider us your partner as we strive to make your stay with us an exceptional experience. Our goal is to exceed your expectations in preparing you for your surgery, in providing answers to your questions, and in transitioning you back to your routine life.

Our total joint program has been designed to ensure your success with your new joint. Our program combines evidence based practice with the clinical expertise of our physicians, nurses, therapists and health care professionals who are committed to your success.

We call you a team member because our goal is to partner with you to ensure the best care and communication. By actively participating in your care, you can improve your recovery and make your hospital experience safer. We encourage you to read this guide and refer to it often.

Features of the Mammoth Hospital Total Joint Program include:

- Your Mammoth PASS to Surgery Patient Guide Book
- Pre-operative education class with exercise program
- Preadmission visit in the PASS Center with a registered nurse and physician
- Individual physical therapy sessions
- Joint replacement team with specialized training and dedication
- Daily communication of expectations and activities
- Discharge planning with the Care Coordinator

Please remember that where health care is concerned, one size does not fit all and we are prepared to customize your care based upon your specific medical needs.

Thank you for participating in the Mammoth Hospital Total Joint Program and your PASS to wellness!

Sincerely,

The Mammoth Hospital Total Joint Team


MY
INFO

MY APPOINTMENTS

SURGERY

Surgery Date: _____ Arrival Time: _____

Surgeon: _____ Office Contact: _____

Check-in Location: See map for directions

What to Bring:

- This Book
- Insurance card and ID
- _____
- _____
- _____
- _____

JOINT CLASS

Date: _____ Time: _____

Location: _____

What to bring:

- _____
- _____
- _____

PRE-OP APPOINTMENT

Date: _____ Time: _____

Location: see map for directions

What to bring:

- This book
- All meds in original containers, including over-the-counter, herbals, vitamins, etc.
- _____
- _____
- _____

MY CONTACT INFORMATION

MY COACH OR COACHES:

_____ Phone: _____

_____ Phone: _____

MY HELPERS, FAMILY AND FRIENDS:

_____ Phone: _____

_____ Phone: _____

_____ Phone: _____

PREFERRED PHARMACY:

_____ Vons Mammoth: (760) 934-4337

_____ Vons Bishop: (760) 872-8114

_____ Rite Aid Mammoth: (760) 934-8564

_____ Rite Aid Bishop: (760) 873-7883

_____ Dwayne's: (760) 872-2522

OUTPATIENT THERAPY PROVIDER:

Company: _____ Phone: _____

HOME HEALTH OR CARE CENTER: (If you plan on using a home health company or plan to go to a care center please let the surgery coordinator know.)

Company: _____ Phone: _____

SIERRA PARK ORTHOPEDICS:

Surgeon: _____

Mammoth Office Phone: (760) 924-4084 Fax # (760) 934-7285

Bishop Office Phone: (760) 872-7766 Fax # (760) 872-1832

Mammoth SPORT Physical & Occupational Therapy: (760) 934-7302

SPORT Physical Therapy – Bishop location: (760) 872-2942

SCHEDULING SURGERY

PREPARATION

Once you and your physician decide to proceed with surgery, you need to think about how it will affect your life before and after, including your work and family schedules. Patients who become active partners in their own care achieve better outcomes.

THE PROCESS

- Before your surgery date can be finalized, our policy is to obtain authorization from your insurance company. Please notify us immediately if you have made any recent changes or plan to change your insurance policy. Surgery scheduling cannot proceed without authorization.
- Make sure you understand your financial obligations with your insurance company and/or the hospital. The hospital is capable of providing you with an estimate and a payment plan for surgery if you would like one. Please notify your surgical coordinator if you would like these services provided to you.
- Your EKG, blood work, and chest x-ray will be done at the PASS center. The surgical coordinator will call you to set this appointment up after insurance authorization has been obtained.
- A medical evaluation will be required before your surgery along with any other necessary tests. This will take place during your Pre-Operative visit at the PASS center.
- A dental clearance may be required by your surgeon.
- Cardiac clearance may be requested.

GUIDELINES FOR JOINT REPLACEMENT PATIENTS

- Diabetic patients - A1C less than 8.
- Cardiac clearance may be requested.
- Renal function within parameters.
- BMI between 19-35 (except for total shoulders).
- No smoking for 6 weeks prior to surgery.
- No more than 2 alcoholic drinks per day.
- Hemoglobin - Female: 12 Male:13
- Flu Shot Recommended
- No dental work (including cleaning) 6 weeks before or after surgery.
- No GI procedures 3 months before surgery
- No cortisone injections for 6 weeks before surgery

(PLEASE NOTE THESE ARE GENERAL GUIDELINES. PATIENTS ARE EVALUATED INDIVIDUALLY IN THEIR PRE-OP APPOINTMENT)

FREQUENTLY ASKED QUESTIONS

What appointments will I need to attend before my surgery?

- Joint class: 90 minutes with additional time to answer questions. Check with PASS center for times and dates.
- Pre-op visit: 60 minutes or longer. This appointment should be scheduled approximately 2-3 weeks before surgery. Make sure you bring all of your medications, vitamins and herbal supplements.
- Pre and post-op physical therapy as advised by your surgeon.
- Dental appointment for clearance if requested by your surgeon.

Why should I attend joint class?

- We believe you will have a better surgical experience if you know what to expect and how to participate in your care.
- You will meet other patients scheduled for joint replacement.
- You will meet members of the joint replacement team.

When will my appointments be scheduled?

- The surgery coordinator will call you with dates and times available after the authorization process has been completed.

ATTENDING A TOTAL JOINT CLASS AND CHOOSING A COACH

Why do I need a coach?

- To help you meet your goals.
- To properly assist you with daily exercises and walking.
- To help you remember instructions (pain meds and anesthesia can make you forget what to do).
- To help your transition from hospital to home.
- To provide moral support and encouragement.

How do I choose a coach?

- Choose someone that will be able to attend your therapy sessions and to help you throughout your recovery.

Can I bring my coach to the joint class and pre-op visit?

- YES! We want you to bring a coach to the class. It helps for them to know what you will experience; it will make them a more efficient coach.

NOTES

PREPARING FOR SURGERY

MY CHECKLIST FOR SURGERY

Weeks before surgery

- Review total joint book and attend total joint class.
- If going to an Extended Care Facility for your recovery you should check with your insurance and the facility. You can work with the discharge planner to assist you with this.
- Start the exercises given to you in the total joint book or consult an outpatient physical therapist.
- Use of tobacco products is not allowed, as it can increase the risk of significant complications. Surgery will be cancelled or postponed until smoking has stopped for 6 weeks.
- If you have an obvious respiratory infection (cold), flu, rash, a skin infection, or any other acute illness within a week before surgery, contact your doctor's office.
- Be careful not to get any cuts, scrapes, or bug bites anywhere near your surgical site. Please do not shave your surgical site 5 days prior to surgery. Please call us if you notice any cuts, scrapes, bites, or open sores on the affected limb prior to surgery.
- Review instructions for vitamins, herbal supplements, and anti-inflammatory medications.
- Obtain durable equipment if needed (walker, crutches, 3-in-1 chair, Iceman, shower chair).

IOVERAÅ INJECTIONS

- IOVERAÅ injections are a series of injections done 1-2 weeks before surgery in the PACU or Bishop clinic. IOVERAÅ injections are long-lasting cold therapy used to diminish pain after a total knee arthroplasty. Nitrous Oxide is used to "freeze" the nerves for 90-120 days and disrupts the pain transmission to the brain helping to reduce the need for narcotic pain medication after surgery.. This procedure will not permanently damage the nerves. This procedure takes about 1 hour to complete.

Before the day of surgery

Pack clothes and personal items, including:

- Loose fitting comfortable clothes and robe. • Supportive walking shoes. • Remove nail polish
- Eyeglasses instead of contacts. • Personal toiletries. • Dentures and container to hold them.

Evening before surgery

- Remove jewelry and any piercings. • If diabetic get instructions for insulin.
- Shower with Hibiclens if you are unable to shower in the morning.
- After shower place benzoylperoxide over surgical site (see instructions on next page).
- A nurse will call you to finalize your time to arrive and answer any last minute questions.
- No food after midnight. No candy, gum or mints. • Sleep in clean pajamas or clothes

Morning of surgery

- Shower with Hibiclens. (See "Preparing for Surgery: Antibacterial Shower")
- Leave money/jewelry at home.
- DO NOT wear make-up
- Wear comfortable, loose clothing and walking shoes.
- You may drink clear fluids up to three hours before surgery or as advised the day before surgery.
- Take medications the morning of surgery as instructed.
- Bring your Coach.
- Bring your Total Joint Book.
- Bring your insurance card, ID and Co-pay if applicable.
- Bring sleep apnea assists (CPAP, BIPAP), inhalers and medications if instructed to.
- Bring a book, magazine, crossword puzzle, or mobile device – something to help pass the time while you wait. (Wi-Fi is available in the Pre-Op area)
- Bring walker, crutches, Iceman.

You may have clear fluids up to three hours before your surgery. You will be advised of the exact time to stop drinking.

- **IMPORTANT: If you do not follow this diet before your surgery, your surgery may be cancelled and scheduled for another time.**
- Water.
- Coffee or black tea with no cream, milk or sugar.
- Clear fruit juice without pulp (apple juice, white grape juice.)
- Clear carbonated beverage.
- Gatorade.
- Jello (plain, no fruit.)

Antibacterial shower

- Shower prior to surgery with Hibiclens. Shower with a non-lotion based soap first. Rinse. Then shower with the Hibiclens soap. Hibicleans is antiseptic/antimicrobial soap. This helps to decrease the bacteria present on your skin that could cause an infection in your surgical site.
- Shower the night before or the morning of your surgery with the soap provided.
- This soap should not be used on your head, face, ears, eyes, mouth or genital area.
- **Showering instructions:**
  - Rinse your skin with water from the neck down.
  - Use your regular non-lotion base soap and rinse off.
  - Apply Hibiclens to your washcloth and wash your entire body.
  - WASH GENTLY. This soap performs its antibacterial function without scrubbing.
  - Concentrate on the specific surgical area.
  - Rinse thoroughly. Then apply benzoyl peroxide (See below).
- Do not shave or use any hair removal methods for five days prior to your surgery as tiny nicks to the skin could cause cancellation of your surgery.
- Do not use lotions or oils on your body after showering.
- Do not use if you have a known sensitivity to chlorhexidine gluconate.
- Do not use makeup or perfumes.

Benzoyl Peroxide

Pre-operative skin prep before knee surgery:

Benzoyl Peroxide 5% gel has been shown to reduce the risk of infection following hip surgery. The gel is to be applied beginning 48 hours prior to surgery as outlined below.

Warning: Benzoyl Peroxide may bleach your clothing.

*Only apply gel to the side of the planned surgery (right or left knee)

Two days prior to surgery:

Morning: Shower as you normally would with a non-lotion based soap, rinse well, then open a packet of the anti-bacterial soap (Hibiclens), dry well, then apply the gel (about a quarter size dollop) onto the skin of the affected hip. Apply to the side, front and back of the knee. This should be gently rubbed onto the skin, as if you are applying sunscreen lotion. The gel will not be visible.

Night: Reapply the Benzoyl Peroxide gel as above.

One day prior to surgery:

Morning: Shower with anti-bacteria soap, dry well, apply gel to the knee skin

Night: Reapply the Benzoyl Peroxide gel as above.

Surgery day:

In early am: Shower with anti-bacteria soap, dry well, apply gel to the knee skin

Medications

- Make sure you discuss with your physicians the medications you are taking. Include all prescription medications, vitamins, herbal or dietary supplements, anti-inflammatory medications and any anti-coagulants (also called blood thinners).
- You will be instructed when to stop vitamins, herbal supplements and anti-inflammatory medications.
- If you are on anti-coagulants (also called blood thinners) you will need special instructions before surgery.
- At your pre-op visit, you will be notified what medications to take the morning of surgery. If you are on insulin you will be given dose instructions the evening before your surgery.
- If you have a stent in your heart you will need to stay on your aspirin or as directed by your surgeon.

Bowel function

- It make take several days to have a bowel movement. Anesthesia and pain meds frequently cause constipation before and after surgery. It is important to maintain normal bowel function and avoid constipation. Drinking plenty of fluids and eating whole grains, fruits, and vegetables will help prevent constipation. You may need an over-the-counter stool softener.

CHECKLIST FOR SURGERY

Checklists

The following checklists are guides to help you prepare for surgery and recovery. Careful preparation improves the chance of a complication-free recovery.

To complete before surgery:

___ I have verified with my insurance company that I have coverage for my surgery.

___ I have attended the total joint replacement education class

___ I have received a call from the PASS Center to set-up my preadmission testing.

___ I will call the PASS nurse or PA with questions regarding surgery.

___ I have completed a Living Will or Health Care Power-of-Attorney to have on file in my chart.

___ I have not shaved my legs for 5 days before my surgery.

___ I have arranged for someone to drive me home when I'm discharged from the hospital.

___ I have arranged for someone to stay with me the first couple nights after surgery.

___ I have arranged for someone to drive me to my follow-up appointments.

To improve my health before surgery:

___ I quit smoking 6 weeks before surgery to improve healing and reduce risk of infection after surgery.

___ I had a dental check-up to make sure all my dental needs are taken care of before surgery.

___ I received a flu vaccination if surgery is during flu season.

___ I am eating lightly the week before my surgery to help reduce the risk of constipation. I have increased water and fiber in my diet as well.

___ I had my diabetes checked and it is under control

___ I have cut back my drinking to no more than 2 alcoholic beverages per day to improve healing and reduce risk of infection after surgery.

What to bring to the hospital:

___ Current list of medications and supplements, noting which ones have been stopped.

___ Loose pajamas or short nightgown or robe if desired.

___ Undergarments

___ Loose shorts, jogging suit, sweats, tops

___ Slippers with back and rubberzed sole or walking sneakers. No open toe shoes.

___ Socks

___ Personal toiletries (toothbrush, toothpaste, denture cleanser/cup, deodorant, electric or other razor, shaving cream, comb, NO powders).

___ Eyeglasses

___ Hearing aid and Batteries

___ CPAP machine setting, tubing and machine

___ Cell phone and charger

___ Drivers license or photo ID, insurance card, Medicare or Medicaid card

___ Copy of your advanced directive

___ Important telephone numbers including that of your ride home

___ This guide book so you can review items with your health care team

___ Bring a walker or crutches if you have them. If not you will receive some in the hospital.

___ DO NOT bring valuables- no jewelry, credit cards, checkbooks, or cash.

___ Do not bring your own medications unless otherwise directed.

Pre-admission testing:

A pre-operative work-up is mandatory within 30 days prior to surgery for all joint replacement patients. This is done in the PASS Center at Mammoth Hospital. At this visit, you will meet one of the internists, you will be asked about your medical history, previous surgeries, illnesses and current state of health. You will also under go any necessary tests, such as lab work, urinalysis, nasal swab, X-RAY, and/or EKG. The PASS Center will call you to set up this appointment after authorization has been obtained.

PREPARING YOUR HOME FOR SURGERY

Make arrangements BEFORE surgery to ensure your house is safeguarded against trip or fall hazards and to allow for daily activities with limited mobility or function. Arrange help from family or friends ahead of time that can provide assistance and support for when you need it most .

Fall prevention

- Remove throw rugs or tape down loose edges.
- Remove dust and dirt from floor.
- Arrange furniture to allow you to walk freely, especially if an assistive walking device is needed.
- Create a wide, clear path from your bedroom and kitchen so you can easily move about with a walk

Stairs and steps

- Remove throw rugs.
- Make sure there is enough light in the area to see steps.
- Remove objects on or around steps.

Kitchen

- Remove throw rugs.
- Plan easy meals.
- Store food and cooking utensils lower where you can reach them with limited effort.
- Place frequently used items on upper shelf of refrigerator.
- Group similar items together for easy access.
- Prepare extra meals and freeze them.
- Clear countertops to allow for sliding items from one location to another.

Bathroom

- Remove throw rugs.
- Store commonly used items at waist level.
- You may need to elevate the toilet seat.
- Your method of bathroom use and showering may need to be modified. You may need help. Your therapist will help determine the safest method.
- Special equipment will be discussed during class and your hospital stay.

Bedroom

- Remove throw rugs.
- Remove clutter.
- Make wide paths for allowing you to walk with cane or walker or crutches.
- Place lamp or flashlight near your bed.
- Install night lights along the route to your bathroom and bedroom.
- Sleep in a bed that is high enough to easily enter and exit.
- Keep a phone nearby.
- If you have room, place a solid arm chair so you can sit and get dressed.

Living area

- Remove throw rugs.
- Arrange furniture to allow for walker, crutches or cane.
- Sit in chairs with arms and no wheels.
- Place a firm blanket or pillow in low chairs or sofas to make the seat higher, this will make it easier to get up.
- Remove all cords or tape them down. This is a large tripping hazard.

IMPORTANT TAKE HOME POINT: PLAN AHEAD! Do as much as possible before your surgery, it will make your recovery that much easier. If you have questions call your therapist or nurse.

OTHER ITEMS TO CONSIDER:

- Pets: they are part of the family but if they jump on you or trip you it could be disastrous. Try to arrange care for them for the first month after surgery or have a friend walk and feed them.
- Have comfortable clothes to wear.
- Arrange for someone to help with groceries and mail.
- Refill medications on a regular basis.
- Consider the type of car you own and if you can transfer in and out according to any precautions you may have. You may have to sit in back seat or put a pillow or blanket in the car to use for positioning when coming home. DO NOT drive until your doctor says it is OK.
- Have a portable phone to take with you while moving in the house in case you need to call for help.
- Have telephone numbers handy or preset on your phone.

NUTRITION CONSIDERATIONS FOR SURGERY

Surgery and wound healing increase your body's energy needs. Your body also has special vitamin and mineral needs in order to help the tissue, muscles and bones that were affected by the surgery. With a well balanced diet, a healthy person is generally able to meet the body's extra demands to support good healing following surgery. The following are nutrition guidelines to assist you with a healthy recovery following surgery.

We also have a dietitian on staff who is available for consult. She can be contacted via phone at (760) 924-4214 or by email at casey.michel@mammothhospital.com.

NUTRITION BEFORE SURGERY

Healthy eating to support healing after surgery starts before you even have your surgery. There will be a period of time that your diet will be restricted before and after surgery. Before surgery you will be required to abstain or "fast" from foods and beverages for at least 8 hours. After surgery, it is very common for your appetite to be poor due to pain, nausea or constipation. Eating a healthy diet in the weeks before surgery help to support your body's needs during the time your diet is restricted.

NUTRITION DURING RECOVERY

To support proper wound healing your body needs adequate intake of calories, protein, vitamin A, vitamin C, and zinc. Most people do not need to take a supplement to meet their body's needs for wound healing after surgery. Eating a well balanced diet will provide enough of these nutrients. Refer to the tables below to find what foods are good sources of these nutrients. If you have restriction in your diet that prevents you from including these foods in your diet, have had unintentional weight loss, have severe burn or bed sore, or if you have chronic or poorly healing wounds you may need supplementation. Speak with your doctor or registered dietitian if you are concerned you may need a supplement.

Even when a person has good iron levels before surgery, it is common that the iron levels drop as a response to surgery. Good iron intake will help to ensure proper reproduction of the components of your blood that require iron. Consuming vitamin C rich foods with iron rich foods helps increase your iron absorption from both the animal and plant-based foods. Some people require iron supplementation in addition to what they eat. Iron from meat sources is better utilized in the body than from plant sources. Iron is a substance that can be toxic if you take too much, so speak with your doctor or registered dietitian if you are concerned and feel you need an iron supplement. Iron supplements can also cause constipation.

Vitamin A Rich Foods	Vitamin C Rich Foods	Protein/Zinc Rich Foods	Iron Rich Foods
Sweet Potatoes	Oranges	Meat	Beef
Cantaloupe	Cantaloupe	Pork	Poultry
Carrots	Honeydew Melon	Seafood	Pork
Mango	Strawberries	Dark Poultry	Baked Potato with Skin
Peaches	Papaya	Dairy Products	Chickpeas
Papaya	Broccoli	Beans	Kidney Beans
Collard Greens	Bell Peppers		Peas
Kale	Baked Potato		Apricots
Spinach	Tomato		Egg
Fish	Cauliflower		Whole Grain Bread
Dairy Products			Tamarind
			Iron-Fortified Cereals

WEIGHT MANAGEMENT AND JOINT HEALTH

Being overweight contributes to the development of arthritis by increasing the stress on the joints. This excess stress can lead to the breakdown of the cartilage tissue. If you are overweight, weight loss can help you relieve some of the stress on the joint and may even help relieve the pain. If you choose to go forward with joint replacement surgery weight control is still important. Maintaining a healthy weight can help your new joint last longer and help keep the recovery period from being extended.

If you are overweight, weight loss should be a goal!

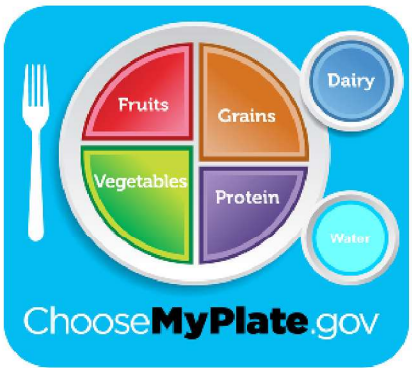
TIPS FOR LONG-TERM WEIGHT LOSS:

- **Avoid extremely restrictive diets:** Fad diets and extremely low calorie diets tend to produce rapid weight loss. While this may be desirable, the restrictions placed on you with these diets are usually difficult to maintain for an extended period of time. In addition, too rapid of weight loss from extremely restrictive diets is from loss of muscle mass, which is not desirable. Once you quit the diet, the weight lost is usually regained.
- **Focus on learning healthy eating habits:** If you can incorporate healthy eating habits into your normal routine, you are more likely to be successful with maintaining your weight loss.
    - **Focus on healthy portion sizes that satisfy your appetite.** Use the portion size guide below as a reference for healthy portion sizes.
    - **Slow down when you eat.** It takes time for our minds to register when our stomach says it is full. You tend to eat more food when you eat fast because you are not allowing your brain the time to catch up with the signals your stomach is sending. Allow yourself 30 minutes to eat each meal.
    - **Make 1/2 of your plate fruits and vegetables.** When we do not eat our fruits and vegetables, we tend to replace them with higher calorie foods. Make sure you incorporate a fruit or vegetable serving with every meal. Fruits and vegetables are also great snacks.
    - **Snack.** If you are hungry between meals do not avoid your hunger cues. Ignoring your hunger cues can lead to excessive hunger and over eating at your next meal. Choose a healthy snack like fruit or string cheese to settle your hunger cues and decrease hunger at meal time.
    - **Drink low sugar beverages.** Focus on water and non sweetened teas for fluid intake. High caffeine intake can affect calcium absorption, so choose low caffeine as well.

- **Remain active:** Even while your joints ache or are healing, you can usually find another activity to do to help you burn calories. Talk to your doctor and/or physical therapist about other activities that you can do to manage your weight and not place undue pressure on your joint. The proper exercises may also help strengthen the muscles around the joint, providing increased support for the joint to relieve some of the pressure and pain.

SERVING SIZES

1/4 plate protein (One 3 oz meat serving is about the size of a deck of playing cards).
1/4 plate fruit (One 1/2 cup fruit serving is about the size of a tennis ball).
1/4 plate vegetable (One 3/4 cup vegetable serving is about the size of a baseball).
1/4 plate whole wheat grains (One 1 oz serving of bread, pancakes or tortilla is about the size of a CD).



DIABETES AND SURGERY

Blood sugar control is extremely important after surgery. High blood sugar levels can result in poor healing, increased risk of blood clots and increases your chances of developing a serious infection. Blood sugar control can be difficult after surgery. Surgery places significant stress on your body, and stress leads to elevated blood sugar levels.

Start planning early: Good blood sugar control after surgery starts before surgery. Stable blood sugars for several weeks before surgery make it easier to control blood sugar levels during and after surgery. A normal blood sugar range is between 70-110. If your blood sugar levels are frequently higher, you should speak to your diabetes management team to help you get your blood sugar levels under control.

Log your numbers: Make sure you are keeping track of your blood sugar results in a log. A blood sugar log helps you to track trends in your blood sugar results. Bring this log with you on the day of your surgery. This log will be helpful to different health care providers that may visit you during your hospital stay. If you need a blood sugar log, contact the office of your endocrinologist, primary care physician or dietitian.

Surgery schedule: You will likely be directed to refrain from eating after midnight the evening before your surgery. The longer you are without food, the more difficult it may be to control blood sugar levels. To combat this complication, try to schedule your surgery for the early morning. An early morning surgery may help to decrease the likelihood of having a low blood sugar level during surgery.

Insulin: Insulin can help bring down blood sugar levels when other medication cannot. Even if you are not normally on insulin, you may need to be on insulin after surgery. If you are normally on insulin, your insulin dose may be larger than normal while recovering from surgery. Your insulin regimen may also be adjusted the day of surgery to account for the period of time you will not be able to eat.

Medications and supplements: If you take any regular medication or supplements you may need to discontinue or adjust them for a short period before your surgery. Make sure you discuss your complete list of medications and supplements with your doctor prior to surgery. While many medications and supplements are generally considered safe, some can interact with anesthesia, affect clotting or affect healing.

HOW TO IMPROVE BLOOD SUGAR CONTROL

Diet: You may need to monitor your diet more closely. The diabetic diet is not just about getting rid of sweets. Further education regarding your diet may be beneficial. If you have never seen a dietitian, request a referral from your doctor to see a dietitian to discuss your diet. For basic tips on monitoring your diet, see the handout "Basic Principles for Meal Planning with Diabetes" in this packet.

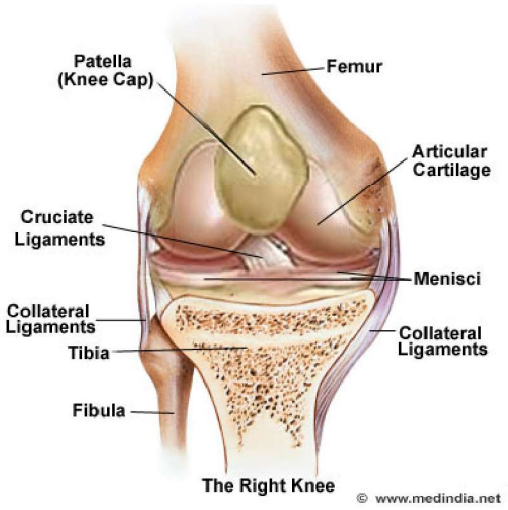
Exercise: Exercise helps your body take up the sugar in your blood steam and use it for energy. This leads to a lowering of your blood sugar level. Speak with your doctor and physical therapist about exercises that you can do to help with your blood sugar control with out aggravating your affected joint.

Medical management and screening: Maintain your annual screening appointments with your primary care provider. These appointments are important to review your medication regimen, your blood sugar trends and perform essential tests to assess for health complications related to diabetes.


THE
KNEE
JOINT

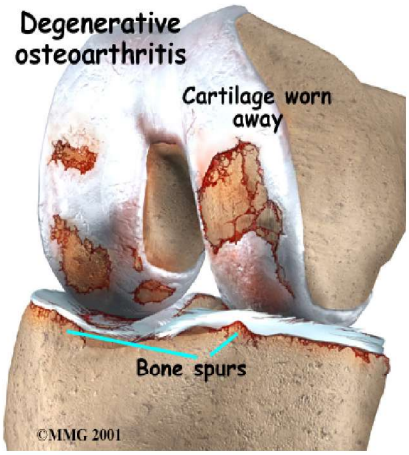
THE NORMAL KNEE JOINT

1. Made up of both the tibiofemoral joint (where the tibia, or shin bone, meets the femur, or thigh bone) and patellofemoral joint (where the patella, or knee cap, lies on top of the femur).
2. Tibiofemoral joint:
    - A synovial joint: a capsule surrounds the joint and is filled with synovial fluid to provide joint lubrication.
    - Flexes (bends) and extends (straightens) the knee.
    - The bones are connected by ligaments which provide stability of the knee.
    - Cartilage and menisci between the two bones help to provide shock absorption and distribute the load of our weight more evenly across the joint surface.
3. Patellofemoral joint:
    - The patella (or knee cap) slides up and down and helps to distribute the forces of large leg muscles over the knee.



MOST FREQUENT CAUSES OF KNEE JOINT REPLACEMENT

- Osteoarthritis: degeneration of the joint that causes breakdown of the cartilage on the end of the bones mostly caused by "wear and tear" with aging.
- Rheumatoid arthritis: a long term disease of unknown cause that attacks the joints and results in the destruction of joint cartilage and bone.
- History of injury or trauma resulting in degenerative changes.
- Excess body weight creating increased pressure and stress on the joint.
- Not performing regular exercise.
- An infection.
- All conservative treatments (medication, injections, and physical therapy) have been exhausted and are no longer effective.



IS KNEE REPLACEMENT RIGHT FOR YOU?

This is a decision that should be made by you, your family, your family physician, and your orthopedic surgeon.

Common symptoms that people who have knee replacement surgery often include:

- Severe knee pain with daily acts of living, such as walking, going up and down stairs, getting up and down from a chair, and getting in and out of a car.
- Moderate to severe pain while resting or at night that can disrupt your sleep pattern.
- Loss of motion in the knee and/or weakness in the hip, thigh, and leg.
- Failure with conservative treatment such as medications, injections, and physical therapy.

ORTHOPEDIC EVALUATION

Before deciding if you are a candidate for total knee replacement, your orthopedic surgeon will give you a comprehensive evaluation that will include:

- Medical history: to get information about your general health and activity level.
- Physical examination: to assess knee motion, strength, stability, and integrity.
- X-ray: to help determine the extent of damage to your knee. They will look for spurring, the contour of the joint, and damage to the bony surfaces.
- Other tests: your doctor may order an MRI, blood tests, or a bone scan to determine the condition of your bone and soft tissue.

After he or she has completed and studied the tests he or she may recommend total joint surgery and describe to you why you may need it, the surgical technique, and what options you may have.

TOTAL KNEE SURGERY

Your surgeon will remove the cartilage and bone that is damaged. The damaged area will then be replaced with plastic and metal joint surfaces to allow for restored function and alignment. The surgical technique may vary based on your surgeon's preference.

Parts of the knee replacement:

- Femoral: replaces the end of the femur or thigh bone cartilage.
- Tibial: replaces the top of the tibia or shin bone cartilage.

Typically surgery time is about one to two hours depending on extent of damage to repair and the surgeon's technique. You also will need to account for time spent in both the preparation room and the recovery room.



TOTAL KNEE TIPS FOR HOME

- Pain after surgery can make it difficult for you to dress or bend down. Getting items such as a "reacher" can help you pick up things up off the floor, a "sock aid" can help you put your sock on, and a "shoe horn" can help you put your shoes on.
- Wearing sweat pants or loose bottoms will make it easier to get pants on and off.
- Do not place a pillow under your knee when sitting or sleeping at night. This will cause your knee to stiffen up and may lead to additional surgery. Try to make sure that you are keeping your knee completely straight. You can do this by rolling up a small towel and propping it under your ankle, or placing a small pillow under your calf or ankle.
- Often times it feels better to move your knee frequently. Do not sit in one position for an extended period of time. If you change position often, this will prevent you from getting stiff. Also, if you do not have access to a stationary bike, you can purchase a "restorator" for a fairly low price. It helps you to stretch the knee and bend it similarly to the way you would on a stationary bike. Do not use this until your physical therapist instructs you to and demonstrates the proper way to use it.

- Ice and elevation can help decrease your pain and swelling. Try to keep your leg elevated and ice often. An "Ice man" for icing can be beneficial; however, it is most often not covered by insurance companies. They are available for purchase in our orthopedic office or online.



KNEE RESTORATOR



REACHER



SOCK AID



SHOE HORN

PRE-OPERATIVE AND POST-OPERATIVE EXERCISES:

Before your surgery you should perform the following exercises below to help you improve the strength and tone of your muscles. The stronger you are before you have surgery, the easier it will be for you to recover. Some of these exercises may cause soreness or discomfort, but stop exercises that cause you sharp pain.

You should perform the exercises (below) once a day for 10 repetitions. You can rest and perform two to three sets of 10 repetitions depending on how fatigued you become. You can divide up the exercises however you like, doing some in the morning, and some in the afternoon, all at once, or one set of all in the morning, and one set of all in the evening.

You will perform the same exercises after your surgery, however, some of them may be challenging and painful. If this is the case, do not worry. Your physical therapist will tailor your exercise routine to fit your specific needs.

DO NOT PERFORM THE STANDING EXERCISES WITHOUT ASSISTANCE AND DIRECTION FROM YOUR PHYSICAL THERAPIST FIRST FOLLOWING SURGERY.

Your physical therapist will mark which exercises he or she would like you to perform following surgery and how many times a day, repetitions, and sets he or she would like you to perform.





ANKLE PUMPS

Instructions: gently move your ankles up and down to keep the blood flowing thorough your legs.

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**



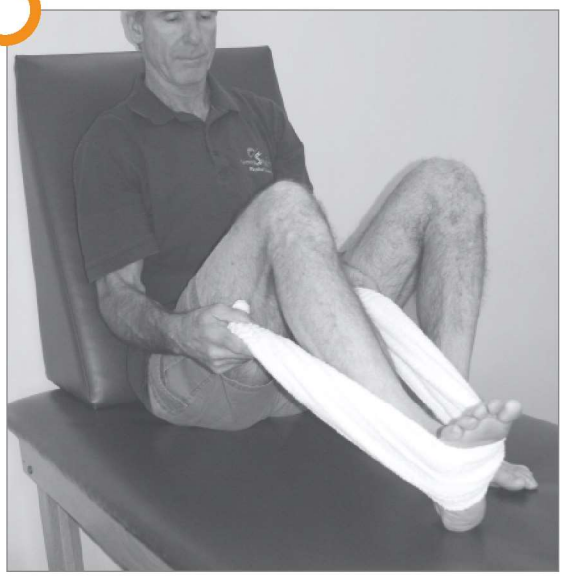
QUAD SETS

Instructions: sitting up with both legs straight, tighten up your thigh muscles (quadriceps) by pushing the back of both knees towards the bed (using both legs will help your affected leg contract). Hold the contraction for 5 seconds.

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**



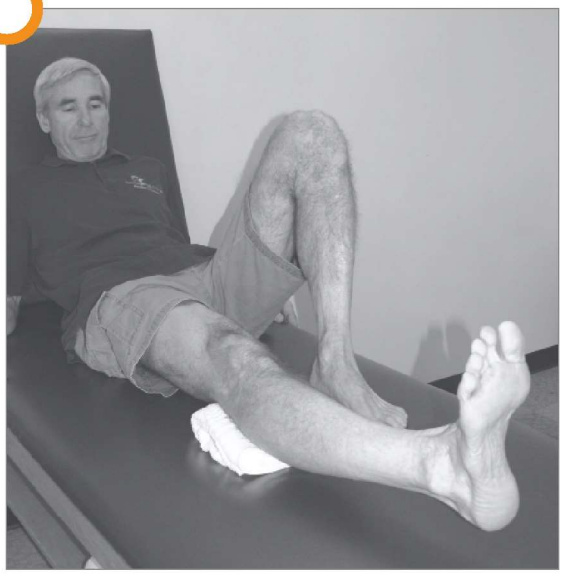
HEEL SLIDES

Instructions: lie on your back with your unaffected knee bent, slide the heel of the operated leg towards your buttock until you feel a stretch. You may use a towel looped around the bottom of your foot to help bend your knee. Then slide your heel back down until your leg is straight.

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**



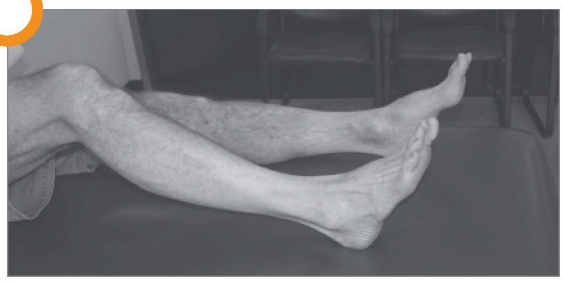
SHORT ARC QUADS

Instructions: lie on your back and roll up a towel or fold a pillow in half and place it under the knee of your operated leg. Tighten the muscles in your thigh and straighten your knee out while keeping the back of your knee on the towel or pillow. Hold for 5 seconds, then lower your foot back to the bed.

Repeat the exercise: _____ times per set

Do: _____ sets per session

Repeat this: _____ times per day





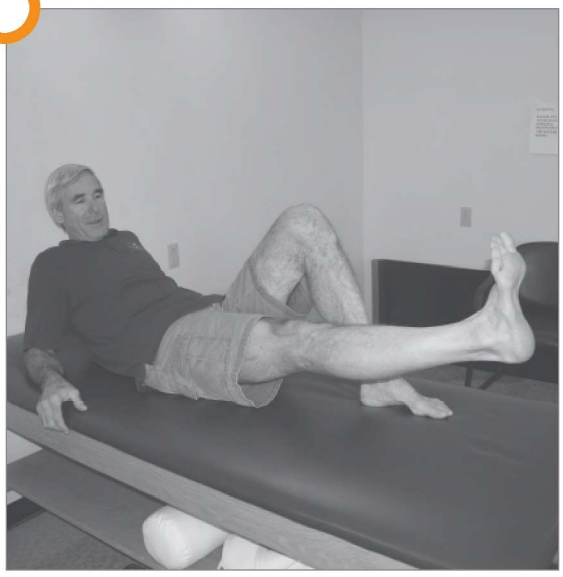
SUPINE HAMSTRING SETS

Instructions: lie on your back and bend the knee of the operated leg and tighten the muscles on the back of your thigh (hamstrings) by digging your heel into the bed. Hold for 5 seconds.

Repeat the exercise: _____ times per set

Do: _____ sets per session

Repeat this: _____ times per day



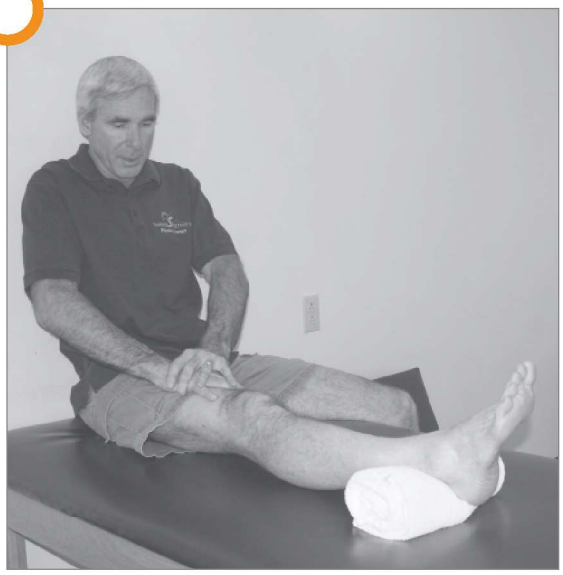
SUPINE STRAIGHT LEG RAISE

Instructions: lie on your back and bend your opposite leg up to protect your back. Tighten the thigh muscles of your operated leg, try to straighten out your knee as much as possible, and lift the leg 6 inches off the bed. Bring your leg back down and relax.

Repeat the exercise: _____ times per set

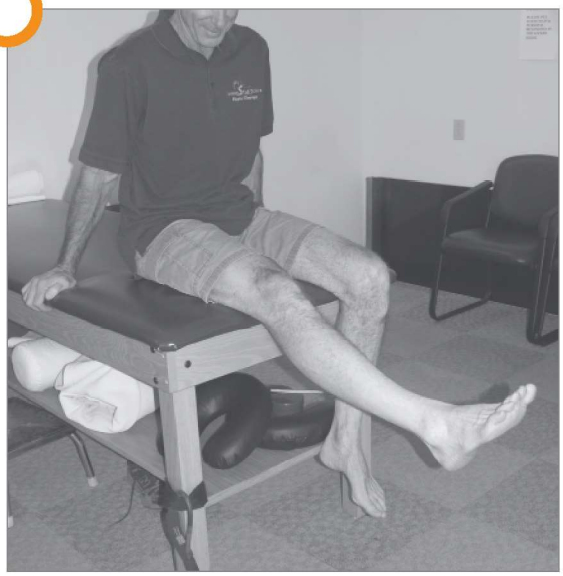
Do: _____ sets per session

Repeat this: _____ times per day



SUPINE OR SEATED KNEE EXTENSION STRETCH

Instructions: it is VERY important that you gain full extension (straightening) of your knee to be able to walk in a normal pattern. Lie on your back with your opposite knee bent, or you can sit up. Roll a towel up and place it under your ankle. Try to keep your knee as straight as possible for up to 10 minutes 3-4 times a day.



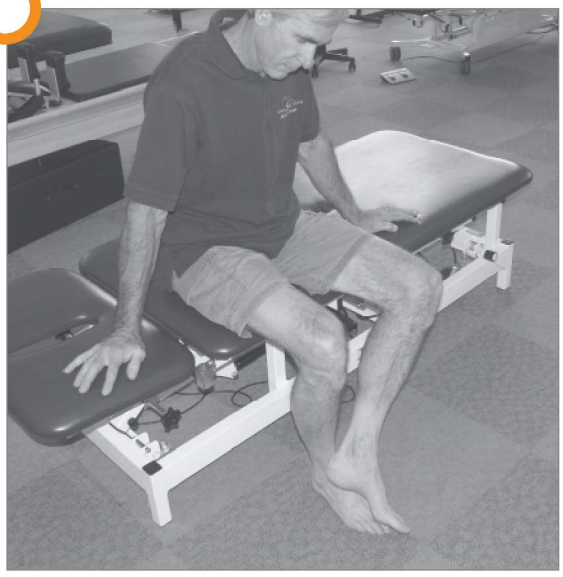
SEATED KNEE EXTENSION

Instructions: sit on the edge of your bed or chair. Straighten your operated knee as much as possible then lower down slowly.

Repeat the exercise: _____ times per set

Do: _____ sets per session

Repeat this: _____ times per day



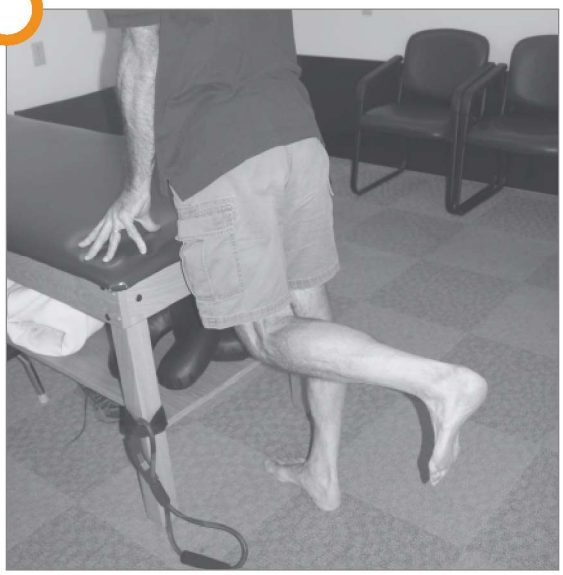
SEATED KNEE FLEXION

Instructions: sit on the edge of your bed or chair. Bend your knee and slide your heel back and underneath you as far as you can. You can use your unaffected leg in front of your operated leg to help slide the operated leg back.

Repeat the exercise: _____ times per set

Do: _____ sets per session

Repeat this: _____ times per day



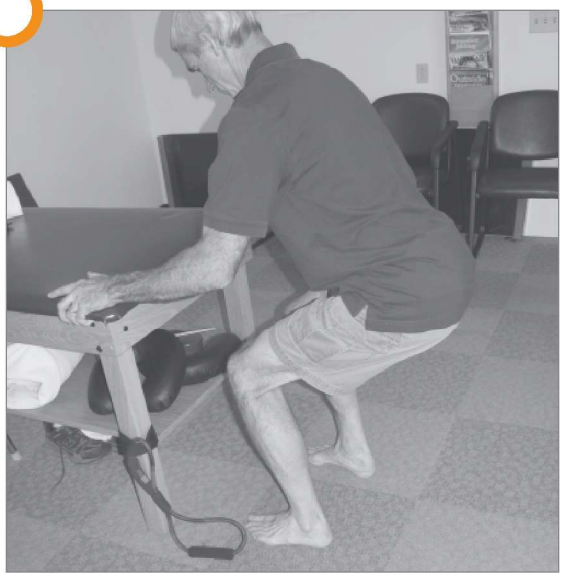
STANDING KNEE FLEXION

Instructions: hold onto a stable object such as your walker or the back of a couch. Bend your knee up as far as you can as if you were to kick your buttock. Keep the front of your hip straight and do not let it bend forward, only your knee should bend.

Repeat the exercise: _____ times per set

Do: _____ sets per session

Repeat this: _____ times per day



MINI SQUATS

Instructions: hold onto a stable object like your walker or the back of a couch. Try to keep your weight even between both legs. Keep your back flat, bend at the waist and stick your bottom back as if you were to sit in a chair. Make sure that your knees do not protrude over your feet. There is no need to squat down deeply.

Repeat the exercise: _____ times per set

Do: _____ sets per session

Repeat this: _____ times per day



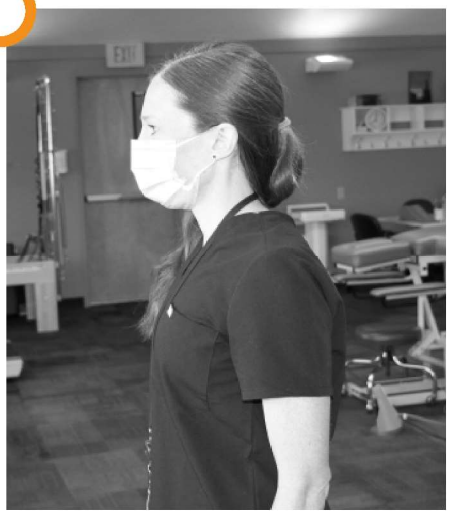
STANDING CALF RAISES

Instructions: hold onto a stable object like your walker or the back of a couch. Stand with your feet about hip distance apart. Try to keep your weight even between both legs. Lift your heels up off the ground while keeping your knees straight.

Repeat the exercise: _____ times per set

Do: _____ sets per session

Repeat this: _____ times per day



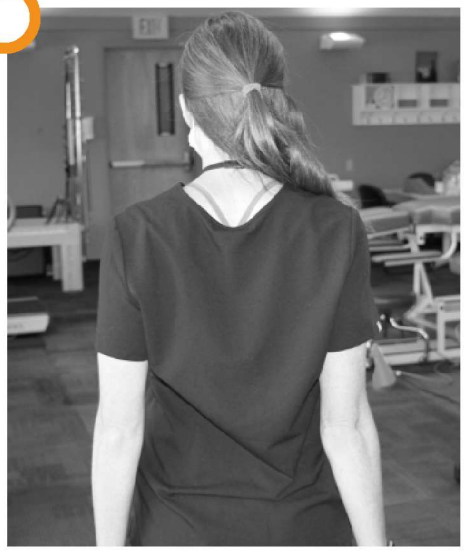
SHOULDER CIRCLES

Instructions: Move shoulder forward in a circular motion for a count of 10. Then, move shoulders backwards for a count of 10.

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**



SHOULDER PINCH

Instructions: Pinch shoulder blades together by pulling arms back toward each other. Remember to keep elbows straight. Hold for 5 seconds, then relax

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**



BICEP CURLS

Instructions: Stand with one arm bent to 90 degress at side. Slowly bend elbow and raise the weight toward the shoulder. Remember to keep the palm up. Repeat with the opposite arm. Movements should be slow and controlled.

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**



TRICEP EXTENSION

Instructions: Stand or sit and bring arm up so elbow is near the ear. Support the arm that is holding the weight with the other hand by the elbow. Now slowly straighten the arm then bend it. Repeat using opposite arm.

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**



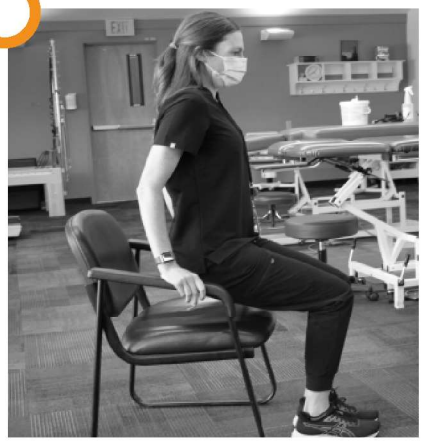
ARM RAISE

Instructions: Keep elbow straight and raise arm above the head. Very slowly return arm to side. This exercise may be performed laying or standing. Repeat with opposite arm.

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**



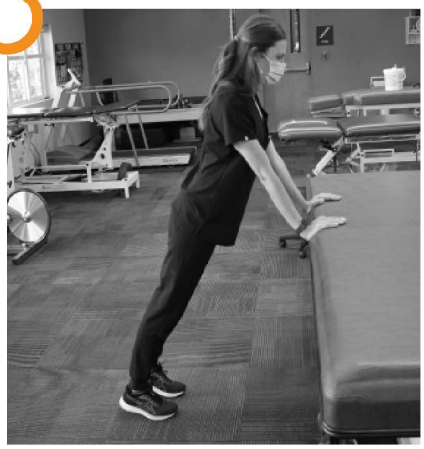
CHAIR PUSHOFFS

Instructions: Sitting on the edge of the chair, place hands on arms of the chair and push body up out of the chair. Lower body slowly back into the chair. Remember to use both arms during this activity.

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**



PUSH UPS

Instructions: Leaning agnist a raised counter or against the wall, push arms up straight. Then slowly bend elbows to 90 degrees and slowly push back out.

Repeat the exercise: _____ **times per set**

Do: _____ **sets per session**

Repeat this: _____ **times per day**

NOTES

MY HOSPITAL STAY

MY SAFETY

We want you to understand how we work to provide a safe environment for you. You are part of the health care team. Safe and effective health care requires your participation; by involving you, we work together to ensure your safety.

PATIENT IDENTIFICATION

You may think "Don't they know why I am here?" For patient safety, we repeatedly check patient identification and confirm the procedure you are having. Be prepared for hospital staff to ask you some of the same questions; we are just double-checking the information we have for you.

PATIENT POINT: Do not let anyone give you medications or perform tests without checking your ID band first!

ILLNESS

If you develop new symptoms of fever with body aches, sore throat, or cough (flu like symptoms) before you are scheduled to come to the hospital for surgery, please notify the PASS Center at 760.924.4109.

PREVENTING INFECTIONS

Let your surgeon know as soon as possible if you have breaks in the skin such as an insect bite, rash or cut. An opening on your skin could put you at risk for infection.

HAND HYGIENE

All hospital personnel should wash their hands before and after entering your room or providing care:

- Cleaning hands can be done using a hand sanitizer or soap and water.
- A friendly reminder, by you, to anyone if they forget to cleanse their hands is always appropriate.
- Visitors should be encouraged to wash their hands. Hand sanitizers are located in the hallways and rooms.

PATIENT POINT: Listen carefully to questions you are asked, and speak up immediately if something is not right or if you have a question.

PRE-OP ANTIBIOTIC

An antibiotic will be given through your IV shortly before your procedure to help with infection prevention.

EXPAREL

Your surgeon may use the exparel protocol for your surgery. This is a series of medications you will be given the day of your surgery, throughout your stay, and at discharge. This will include an injection into the surgical site during surgery. These medications will help with pain management and promote quicker recovery.

TRANSEXAMIC ACID

Your surgeon may use transexamic acid during your surgery. It is a medication given as an injection into the surgical site to help reduce blood loss or bleeding during the procedure.

MARKING THE SURGERY SITE

The surgeon will verify the location of your surgery with you. Prior to taking you to the operating room the site will be marked by your surgeon.

TIME OUT

Before your surgery or procedure the staff will perform a "Time Out" using a checklist. This can be compared to a pilot completing a pre-flight checklist. Staff will verify important tasks such as your identification, verifying the surgical site, allergies or other medical considerations and that the antibiotic has been given.

MY SURGERY

ARRIVAL TIME AND PLACE

- Your arrival time is different than your surgery time generally 1.5-2 hours prior to scheduled surgery time.
- Check in at Admitting which is the entrance to the ER around the backside of the hospital.
- You will be escorted to the pre-op area where you will be prepared for surgery.
- A perioperative staff member will call you with your arrival time the day before surgery.

SURGERY TIME

Please note that your surgery time is an estimate, not a promise. Unfortunately, emergency or unexpected circumstances may cause your surgery to start later than estimated. The surgery staff make every effort to keep your surgery as close to the estimated time as possible. To help pass the time we encourage you and your visitors to bring a book, magazine, crossword, etc. to pass the time.

PATIENT POINT: All surgeries require preparation and recovery time. Remind your family members that you are not in surgery the entire time you are away from them.

PREOPERATIVE AREA

- A registered nurse will finish your admission questions, orient you to your surroundings, and address any concerns.
- A family member or coach can stay with you while you wait to go to surgery, but there is not enough room for a large group.
- You will be asked to change into a hospital gown, cap and socks.
- Your gown is made of a special paper material that acts as a heated blanket that will keep you warm and comfortable while you wait. You will be able to adjust the temperature controls yourself.
- Your vital signs will be taken.
- Additional lab tests may be done as ordered by your doctor.
- An IV will be started to provide you with fluids and to give you medications.
- You will meet with the anesthesiologist who will be caring for you.
- Your surgeon will see you and mark the surgical site.
- You may be given medicine to help you relax.
- You will be given a product called Nozin to use to kill bacteria that is potentially in your nose. This will help decrease risk of infection after surgery.

WAITING AREA FOR FAMILY AND FRIENDS

- Your family members should generally expect to be away from you for about 3-4 hours, but you will not be in surgery the entire time.
- When family members or visitors check in they may be asked to wait in the lobby area. Perioperative staff will be able to assist them if they have questions or concerns.

PATIENT POINT: You are the most important person in the operating room. Your safety, comfort and care are our priorities!

OPERATING ROOM

- You may notice a lot of activity in the operating room. This is normal.
- The operating room has bright surgical lights overhead and lots of technical equipment.
- Sticky patches will be applied to your chest to monitor your heart rate and rhythm.
- A soft finger probe will monitor the oxygen content of your blood.
- An automatic blood pressure cuff will squeeze your arm as it takes your blood pressure.
- Your family should be reassured that you are not in surgery the entire time you are away from them.

Some of the time is spent in preparations for the procedure and transporting you to different areas.

ANESTHESIA

- Anesthesiologists are doctors who have completed specialty training in anesthesia. The anesthesiologist will care for you the entire time you are in the operating room and ensure you have a smooth and safe anesthetic.
- The anesthesiologists are not employed by the hospital and charge a professional fee for their service.

The hospital charges for supplies and medications. You may wish to contact your insurance company to determine your coverage.

GENERAL ANESTHESIA

This is one type of anesthesia used for surgery. You will be given medicines through your IV that make you unconscious throughout the surgery. These medications, called anesthetics, keep you from having pain during your surgery. A small breathing tube will be placed in your airway (trachea) after you are asleep. When your surgery is finished, the medications will be stopped to allow you to wake up. Side effects can include nausea, sore throat, headache or a generalized "hangover" feeling.

SPINAL ANESTHESIA

This type of anesthesia is particularly well suited for certain procedures performed below the waist. Spinal anesthesia is placed in the low back (lumbar region) to numb the lower body. Once the needle is placed, medicines, including local anesthetics and sometimes narcotics are given through the needle. The needle is removed after the medications are injected. You may be sedated with IV medications during the surgery and before your spinal procedure. Minor side effects can occur from the narcotics: itching, nausea, vomiting and/or diminished respiratory rate.

PATIENT POINT: The type of anesthesia you receive depends on the evaluation by the anesthesiologist, your surgeon and your state of health.

MAJOR NERVE BLOCKS

An adductor canal block may be performed before surgery. This is different than local anesthesia because it is placed near large nerves traveling to the surgical area. Major nerve blocks are usually placed by anesthesiologists. Medications will be given to you through your IV to make you drowsy and comfortable during surgery. Sometimes, major nerve blocks may be used to control pain after surgery. Numbness and pain control is temporary and the effects will vary from patient to patient.

POST ANESTHESIA CARE UNIT (PACU OR RECOVERY ROOM)

- After your surgery you will be taken to PACU. Your recovery time will depend upon the type of procedure you have had and the anesthesia used.
- A nurse will closely monitor your vital signs. You will have a blood pressure cuff on your arm, oxygen on your face (by mask or nasal prongs), and a finger probe to monitor your oxygen.
- Because we want to ensure that each patient's privacy is protected, family and friends are not allowed to visit you in the PACU. We will keep you and your family updated concerning your condition and bed status.
- When you begin to wake up and your vital signs are stable you will be taken to the nursing unit.

RECOVERY FROM SURGERY

PREVENTING BLOOD CLOTS

- **Mobility:** Decreased mobility following surgery and normal postoperative swelling put you at risk for blood clot formation in your legs. This is why activity is emphasized after surgery. Many steps will be taken to prevent blood clots.
- **Anticoagulant Therapy:** You will be receiving medication (by mouth or injection) to prevent your blood from clotting as easily. The surgeon commonly will use aspirin for your blood thinner medication. Occasionally a patient may need an injection called Lovenox to thin their blood. The dosage for aspirin is 81 mg (yes the "baby" dose) and should be taken 2 times a day for 1 month! You can discontinue taking the aspirin after 1 month. Lovenox should be taken 1 time per day for 14 days unless directed otherwise.
- **Foot/Leg Pumps:** You may have special wraps placed on your feet or legs. These wraps gently squeeze your legs to promote circulation. Pumps should be worn at all times while you are in bed. If they are taken off and not reapplied, let nursing staff know so they can put them back on.
- **Compression Stockings (Ted Hose):** Your surgeon will order these support stockings for you to wear. These can be taken off after 7 days.
- **Leg Exercises:** Perform these gentle exercises after surgery to promote circulation in your legs.
- **Early Ambulation (walking):** Every effort will be made to get you up and moving as soon as possible. Your physical therapist will assist you with this.

ON THE ORTHOPEDIC UNIT

- You will be cared for by a registered nurse.
- Upon arrival from the PACU, your registered nurse will meet you in your room, orient you to your room, assess your surgical site, and explain the unit's nursing routines to you. At this point your family may join you in your room if you wish.
- You will be assessed every four hours (awakened as needed) to check the pulses and feeling in your leg or arm and take your vital signs.
- Antibiotics and anticoagulants (blood thinners), along with other medications ordered by your physician, will be given during your stay.
- You will be given a bottle of nozin to use during your stay and after discharge to kill bacteria in your nose.
- Ask your caregivers if you are permitted to change positions. Performing your post-operative exercises and walking will increase your circulation and help prevent blood clots and pneumonia.
- Perform the breathing exercises you were taught hourly while awake.
- Please call your nurse any time you would like to get out of bed. For your safety, please do not get out of bed on your own.

COACH'S ROLE

- A coach's involvement can help you reach your goals. Recovery from surgery is hard work and a coach's guidance and encouragement can help.
- After surgery, you may not remember instructions due to effects of pain medication and anesthesia. Having someone help you with your exercises and to provide general moral support is very important.
- Let your coach help you with "visitor overload" discuss ways to deal with this in advance. The hospital staff can place a sign outside your room to regulate visitors if needed. This lets you limit visitors without offending your family and friends. Let them help you get some much-needed rest.
- Ideally, your coach will be with you in the hospital during the daily therapy session and help in the transition from the hospital to home.

VISITOR GUIDELINES

Before your surgery, educate your family and friends about those things that will be helpful to your recovery. Some issues to consider are:

- Not visiting if cold and flu symptoms or other illness is present.
- The charge nurse and unit manager will also introduce themselves to you each day and check to see that you are being well cared for.
- Wash hands (or use hand sanitizer) before and after visiting.
- Not sitting or lying on your bed
- Not using your private restroom
- Discouraging visits from babies and small children.
- Observing visiting hours.
- Not providing any medications to you.
- Not bringing food to you, if you are on a special diet.

STAFF ROUNDING

- Staff makes rounds hourly during the day and every two hours at night in an effort to increase your safety and satisfaction. They will not wake you during the night if you are sleeping during their rounds.
- The charge nurse and the unit manager will also introduce themselves to you each day and check to see if you are being well cared for.
- Staff will ask you if you need to be repositioned, go to the bathroom, are having pain and check if everything you need is within reach, such as your call light, water, phone, bedside table, etc.
- Staff will do everything they can to create a quiet environment at night to allow you to sleep and rest as much as possible, but must continue to provide you with medications, monitoring, and therapies to assist in your successful recovery.

PAIN MANAGEMENT

- Managing your pain is crucial to your recovery. Our goal is for you to be able to participate in all the activities of your recovery such as deep breathing, coughing, walking, sitting in a chair, and resting. Good pain management will help you feel more comfortable, which will help you heal and regain your strength more quickly.
- Everyone feels pain differently and responds differently to treatment. Both drug and non-drug treatments can be successful in helping to prevent and control pain.
- You may be surprised at where you experience pain after surgery. Often the incision is not the area of greatest discomfort. You may feel:
    - Muscle aches and pain in the back, shoulders, or chest from lying on the operating table.
    - Sore or scratchy throat from the breathing tube placed during surgery
    - Pain at the incision site when you move about, such as sitting up and walking.
    - Cramping in the quad can be normal for weeks after surgery.
- Work to keep your pain under control. The nurse will help you set an appropriate comfort goal and explain the rating scale. Reporting your pain as a number helps the health care team treat your pain. Use the pain scale on the following page to rate your pain between 1 and 10. "1" is minimal pain and "10" is the worst pain you can imagine. Your nurse will ask you to rate your pain before and after time you receive pain medication, with activity, and at regular intervals. You will have some pain after surgery, but we will work hard to keep the pain manageable and you comfortable.

PATIENT POINT: Pain medication is more effective if taken before pain is severe. When you feel pain, tell your nurse. Don't wait for it to become severe before asking for pain medication.

PAIN RATING SCALE



It is not realistic to set a comfort goal of zero (no pain) after surgery, because there is some discomfort even after minor procedures. Your doctors and nurses want and need to know when your pain is not under control. We will assist you in managing your pain. See appendix for article explaining why you hurt long after surgery.

ORAL PAIN MEDICATIONS

Depending upon the type of anesthesia that you have and what your surgeon orders for pain control, you may receive oral pain medications once you are awake and able to take liquids. Oral medications can be supplemented with IV pain medication as ordered by your surgeon. Some oral pain medications may be given routinely around the clock or you may need to ask for them as you need them. Your nurses will explain your pain medication to you.

NERVE BLOCKS

- Nerve blocks may be used for anesthesia during the surgery
- YOUR LEG WILL BE NUMB AND WEAK • DO NOT GET UP WITHOUT STAFF ASSISTANCE
- YOUR LEG WILL NOT SUPPORT YOUR WEIGHT WHEN YOU STAND
- YOU WILL NOT HAVE CONTROL OVER YOUR LEG
- Nerve blocks may last one to three days. • Nerve blocks reduce the amount of pain medication needed.

OTHER PAIN CONTROL OPTIONS AND RELAXATION TECHNIQUES

- **Ice:** Cold therapy helps reduce swelling and pain and is an important treatment in your recovery. This can be applied in several ways. Ice packs may be used, or a device called an ice machine. No matter which you have, the purpose is the same. Ice will be applied to your operative site as your surgeon has ordered
- **Relaxation breathing:** Focus on your breathing. Breathe in slowly and deeply. As you breathe out slowly, feel yourself begin to relax and let the tension leave your body.
- **Mental imaging:** Close your eyes and imagine a peaceful and comfortable place. Breathe deeply and think peaceful and relaxing thoughts.
- **Positioning:** Ask staff to help you change your position when you become uncomfortable.
- **Music:** Listen to your favorite music (iPod, TV, etc.)
- **Surroundings:** Keep the lights and noise in your room as low as possible.

BOWEL FUNCTION

Your bowel activity may be slow to return to normal due to anesthesia, pain medication, and inactivity. You may be given a daily stool softener to prevent constipation which is a common side effect of pain medication. A laxative may also be ordered if you need it. Please let your nurse know if you have not had a bowel movement.

PATIENT POINT: Constipation is a common side effect of pain medications; stool softeners are given routinely.

COUGHING EFFECTIVELY

Deep breathing and coughing helps prevent pneumonia after surgery. Take a slow deep breath and hold it for a second or two then push the air out of your lungs with a deep strong cough. You may also be given an incentive spirometer. This is a small plastic device that encourages you to breathe more effectively. You will be shown how to use the spirometer if indicated. This is an exercise you can do on your own.

HOW TO USE AN INCENTIVE SPIROMETER (IS)

- Sit on the edge of your bed, if possible, or sit up as far as you can in bed.
- Hold the spirometer in an upright position. Exhale normally.
- Place the mouthpiece in your mouth and seal your lips tightly around it.
- Breathe in slowly and as deeply as possible, raising the piston in the chamber.
- When inhaling, maintain top of the yellow flow cup in the "Best" flow range.
- Continue inhaling and try to raise the piston to prescribed volume level (top of piston indicates inspired volume). When inhalation is complete, remove mouthpiece, and hold your breath as long as possible (at least 5 seconds). Exhale and allow the piston to fall to the bottom of the chamber.
- Rest for a few seconds and repeat steps one through five at least 10 times every hour while you are awake.
- Position the indicator on the left side of the spirometer to show your best effort. Use the indicator as a goal to work toward during each repetition.
- After each set of 10 deep breaths, practice coughing to be sure your lungs are clear.
- Once you are able to get out of bed, walk in the hallway and cough well.

Inhale...hold it, hold it, hold it, hold it, hold it...Exhale...slowly!

POST-OPERATIVE ACTIVITY

Postoperative exercises are extremely important; activity stimulates circulation and deep breathing which speeds recovery. Remember that you are part of the health care team and can ask for help if you need it to move around.

- During the first 24 hours it is important to all nursing staff for assistance getting in and out of bed. Please refrain from getting up alone until you have been cleared by physical therapy.

FOR YOUR CIRCULATION

The risk of forming blood clots increases whenever the movement of blood is sluggish or if the blood vessel is diseased or damaged. The movement of blood can become sluggish during surgery and in the post-operative phase due to inactivity. To help prevent blood clots from occurring, you should increase activity as you are able to do so and do exercises as instructed by your nurse or physical therapist.

- **Compression stockings (Ted Hose):** your doctor may order Ted Hose for you to wear after surgery. These tight stockings mimic what your muscles usually do during normal activity and help with blood circulation.
- **Foot or calf pumps:** your doctor may order foot or calf pumps to be worn while you are in bed. These pumps gently squeeze to help with circulation. It is common to have both Ted Hose and foot or calf pumps after joint replacement surgery.
- You may be given medication to prevent blood clots orally or by injection.

PATIENT POINT: Breathing deeply and coughing helps keep the air moving in and out of the small air sacs in your lungs.

NOTES


AFTER
MY
SURGERY

MY DISCHARGE PLANNING TEAM – CASE MANAGEMENT DEPARTMENT

Planning your care both in the hospital and after discharge is an important step in your recovery. The PASS Center nurse and Case Management nurse will work with you and your family to ensure continuity in your care. Your discharge plan will be discussed and planned with you and your family. The PASS Center nurse and Case Management nurse will work with you to order equipment, make arrangements for home health care, and transfer to transitional care unit, skilled nursing or rehab, if needed.

PATIENT POINT: Preparation for going home starts well before your surgery! Remember to discuss discharge plans with your family and plan ahead before you come to the hospital for your surgery. Your case management team will continue to assist and help you prepare for discharge.

CASE MANAGEMENT REGISTERED NURSE:

- Assists in managing the health care team to meet your needs both during and after your hospital stay.
- Arranges, as needed, for home health care, skilled nursing, rehab and equipment (such as walkers, commodes, etc.).
- Serves as a link to your insurance company by providing information regarding your care.

Your progress and readiness will be assessed daily. Your case management nurse will discuss your discharge plan with you and your family and order any equipment you may need at home.

REHABILITATION AFTER SURGERY

You will stay in the hospital for at least one day following your surgery before you are discharged. The length of your stay will depend on both your clinical and physical status; you will not be discharged until it is safe to leave the hospital. Our goal is for you to go directly home following discharge from the hospital; however, there are instances where patients do not go directly home.

Here are some options after leaving the hospital:

- **Home with home health nursing and therapy:** your physician can order nursing and physical therapy care for home if you do not have enough or any help at home and you are not well enough to make it into an out-patient physical therapy clinic.

- **Home with outpatient physical therapy:** It is very important that you attend physical therapy following a total joint replacement. Once you return home, if someone can drive you to an outpatient physical therapy clinic, you will receive physical therapy as ordered by your surgeon.

- **Skilled nursing facility for continued therapy:** If you do not have enough help at home to return home safely, you could be transferred to a skilled nursing facility of your choice. At this facility, you will continue to receive physical and occupational therapy several times a day until you are safe and ready to go home.

PHYSICAL AND OCCUPATIONAL THERAPY IN THE HOSPITAL FOLLOWING YOUR SURGERY

Make sure Physical therapy appointments are set up prior to surgery! Physical and occupational therapy is a very important part of your recovery and post-operative care. Our therapy team will work with you to decrease your pain, increase your function, and help you return to the activities you need and like to do. Your therapy in the hospital will usually begin the day after your surgery and consist of two physical therapy sessions per day. If your doctor orders occupational therapy, you will have one to two occupational therapy sessions.

During your therapy sessions, you and your therapist will work on activities that include:

- Range of motion and strengthening exercises.
- Walking with an assistive device (walkers, crutches) if you have had a hip or knee replacement.
- Going up and down stairs safely.
- Performing transfers: getting in and out of bed, a chair, the car, the toilet, and possibly the tub or shower.
- Self-care activities such as dressing and grooming
- Use of adaptive equipment such as a sock aid or a reacher.
- Practice with any other assistive equipment that your therapist thinks you may find useful.

Common therapy goals to be met before going home:

- You should be able to follow all precautions determined by your surgeon.
- You should be able to get in and out of the bed safely with the proper technique.
- You should be able to walk safely with either a walker or crutches if you have had a hip or knee replacement.
- You should be able to dress and bathe yourself with some assistance.
- If you have stairs at home, you should be able to go up and down stairs safely with some assistance.
- You should be able to perform your home exercise program issued by your physical therapist independently while abiding by precautions set by your surgeon.

SPECIAL INSTRUCTIONS FOR THERAPY

- Physical and occupational therapy are a very important part of your recovery following surgery. Your participation is essential as you prepare to go home. Be encouraged, as the more your rehabilitation progresses, the more your pain and stiffness will decrease.
- If you are having a knee replacement and you have a walker, bring it on the day of your surgery. If you own a walker you can have a family member bring it to the hospital the day after your surgery. If you do not own a walker, the hospital will either help you obtain one from a medical supply company ahead of time or will issue you one for home during your stay here and bill your insurance company if your insurance covers durable medical equipment.
- Feel free to bring clothes to the hospital so you do not have to wear a gown the whole time. For therapy session please wear shorts or pants with baggy legs that can be rolled up over the knee.

USING COMPRESSION STOCKINGS AT HOME

Purpose of compression stockings (Ted Hose):

- In the days and weeks after surgery you have the highest chance of developing a deep vein thrombosis (DVT).
- This condition occurs when a blood clot forms in a deep vein in the leg. If a clot breaks loose and travels to the heart or lungs, severe problems and even death can result.
- Compression stockings help keep blood flowing toward the heart, so that it is less likely to pool in the legs and cause a blood clot.

When wearing compression stockings be aware of the following:

- Do not turn the tops of the stockings down; this may constrict your circulation.
- Ensure there is no bunching up of the stockings. When sitting out of bed ensure stockings are not restricting the circulation at the knee.
- Stockings can be worn up to 24 hours but remove at least once daily for inspection of the legs and skin care.
- Stockings should be worn for the first week and can be taken off after the first week.
- STOP wearing stockings if you experience any of the following:
    - Pain or discomfort from compression stockings.
    - Changes to skin under compression stockings.
    - Redness, rash or itching under compression stockings.
    - TED hose should be worn for the 1st week and can be taken off after the 1st week.

Check your toes and foot for sensation, circulation and movement. Report to you healthcare provider immediately if there are any problems. Look for the following symptoms:

- Discolored toes- blue or white.
- Cold toes.
- Tingling: pins and needles feeling in your toes.
- Swelling in your toes.

For any of the above symptoms stop wearing the compression stockings and report immediately to your health care provider.

How to apply compression stockings:

- Insert your hand into the stocking until seamed area is reached at heel.
- Grasp the center of heel pocket and turn inside out to heel area.
- Carefully position over your foot and heel. Be sure heel is in the heel pocket.
- Begin pulling body of stocking up and around ankle and calf. Smooth out any excess material. Pull toe section forward to smooth ankle and instep area and allow for comfort.
- It may be necessary to have another person help you apply the compression stockings.

MY CARE AT HOME

PREVENTING FALLS

A fall during the first few weeks after surgery can damage your new joint and lead to further surgery. You should use a walker, crutches or cane until otherwise instructed by your surgeon or therapist.

SHOWERING OR BATHING

- No tub baths. Walk-in showers with grab bars are preferable.
- You may shower as instructed by your doctor.
- Do not scrub surgical site and gently pat dry.
- To prevent falls, do not use bath oils while in the shower.
- Do not use lotion on incision until completely healed (no scab, no open areas, no drainage.)

WOUND CARE

- Keep the Jump Start dressing in place until first post-op appointment at least 14 days from surgery. The Jump Start dressing creates a charge across the skin helping to prevent bacteria from growing on the skin.
- Your incision may have staples. These are usually removed about two weeks after surgery.
- Keep your incision dry until your doctor tells you otherwise.
- Do not touch your animals and then touch your healing incision.

ICE THERAPY

- Your surgeon may request that you use ice therapy at home to help with pain and swelling.
- Do not leave the ice pack on for more than 20 minutes at a time.
- Use a thin cloth between the ice pack and your skin, or wear it over pants so that it does not become too cold for your skin.
- Keeping the ice pack on your skin for an extended amount of time may cause tissue damage.

PLANNING MY ACTIVITIES

- Plan each day by setting priorities and eliminating unnecessary tasks.
- Perform only light tasks and rest as needed until your energy level increases.
- Plan your menu in advance to avoid frequent shopping.
- Shop when the stores are not as busy.
- Shop in stores where assistance is available and seek help to load and unload your car.

SEX

- When cleared by surgeon.

DRIVING

- Do not drive until cleared by surgeon.
- DO NOT DRIVE if you are still taking narcotic pain meds.It is considered a DUI if driving under the influence of narcotic pain medications.

SYMPTOMS OF CONCERN. CALL YOUR SURGEON IF YOU HAVE:

- Increased pain in your thigh, calf or ankle.
- Increased swelling in your thigh, calf or ankle.
- Redness or heat in calf or ankle.
- Shaking chills.
- Increased redness, tenderness or swelling of the wound.
- Drainage that has a foul odor (pus-like) from the surgical incision.
- Severe pain that prescription medication does not control.
- Sudden sharp pain with a clicking or popping sound at your joint.
- Leg shortening with your foot turning outward.
- Loss of control over leg motion or complete loss of leg motion.

EMERGENCY SYMPTOMS: CALL 911 IF YOU HAVE:

- Sudden increased shortness of breath.
- Sudden onset of chest pain.
- Localized chest pain with coughing.
- Uncontrolled bleeding.
- Joint dislocation.
- Stroke-like symptoms (Remember FAST):
    - Face-numbness or drooping.
    - Arm- weakness.
    - Speech – slurred.
    - Time – Is of the essence – Call 911!

GETTING BACK TO MY LIFE

EXERCISE

Once you have fully healed, your new joint will allow you to complete many leisure activities. You are encouraged to exercise 30-60 minutes most of the days of the week.

Recommended Activities	To Be Avoided
Swimming	Jogging/Running
Stationary Bicycling	Softball
Walking	Basketball
Golf	Soccer
	Racquetball/Singles Tennis

PROTECTING YOUR JOINT FROM INFECTION

Infection can be very serious after a joint replacement. The chance of getting an infection following a joint replacement is very small.

The most common cause of infection following total joint replacement surgery is bacteria entering your bloodstream during dental procedures, urinary tract infections, or skin infections. These bacteria lodge around your total joint replacement.

Your surgeon may want you to take antibiotics when you have surgical procedures on your bladder or colon to reduce the risk of spreading germs to the joint. Check with your surgeon prior to any procedures.

MRI – MAGNETIC RESONANCE IMAGING

If anyone schedules an MRI for you, make certain they know you have had a total joint replacement.

SECURITY CHECKPOINTS

Your new joint may activate metal detectors required for security in airports, courtrooms, etc. If an alarm is activated, tell the security agent about your joint replacement.

MY JOINT REPLACEMENT EXPERIENCE

We are interested in your feedback. You will receive a survey in the mail regarding your hospital stay. Thank you in advance for taking time to complete this survey. We will use this valuable information to continually improve our service. All information is strictly confidential.

THANK YOU FOR CHOOSING MAMMOTH HOSPITAL!

FREQUENTLY ASKED QUESTIONS AFTER SURGERY

How long do I need to take my Aspirin or Lovenox?

You should take 81 mg of aspirin 2 times a day for 1 month after surgery. The dose of Lovenox is 40 mg and should be injected 1 time daily for 14 days unless otherwise directed by your physician.

How long do I need to wear the TED Hose?

TED hose should be worn for the 1st week after surgey and can be take off after the first week.

After surgery, my knee makes a clicking noise?

Your knee is a mechanical device and will make clicking and clacking noises. The stronger you can make your quadricep muscle, the less this usually happens.

Why can I not sit on my heels anymore?

Once again, your knee is a mechanical device and has an end point. That end point is roughly 135 degrees of flexion. It can be detrimental to try and push past 135 degrees of flexion.

Why is my knee warm to the touch compared to the other side?

Your knee is going to be warm to the touch for many months after a total knee replacement. This is normal. Rarly, this can also be a sign of an infection. If concerned, contact your doctor with any questions.

Why is my knee swollen compared to the other side months after surgery?

Your knee is always going to look "larger" compared to the other side when you look in a mirror.

APPENDIX

Title: Why You Hurt Long After Surgery
Purpose: Explain how your nerves experience pain, surgery and recovery

Introduction to your Nervous System

The nervous system is a vast network of nerves that run through your entire body. In our body there are over 400 individual nerves, totaling 45 miles. All these nerves are connected, similar to how roads are connected through the highway system. Their job is to alert the brain about any changes or dangers inside or outside of your body. There are many different types of nerves, but the ones we are concerned about are the ones that sense pain. These are meant to act as an "alarm" for your nervous system to alert you to danger.

At all times, nerves have a low level of electricity running through them. Think of it as a quiet "chatter". They are continuously sending messages from your body to the brain but the brain filters the information and only brings our awareness to something that causes enough "chatter" to trigger the alarm system. For example, when we get a splinter in our finger, the "chatter" increases to a threshold that brings our awareness to the finger. What we feel is pain. This is an example of the alarm system.

Normally, when we are in pain or danger, or perceive something as being dangerous, this triggers our alarm system to do something about it. After we address the threat, our alarm system returns back to the quiet "chatter" that the brain mostly ignores. For example, once we remove the splinter from our finger, the pain goes away and we can go about our day. We now also keep a careful eye out for any other threats (i.e. splinters).

Your nerves and your joints

Like the splinter in our foot, the pain in your joint has triggered the alarm system. With age, our joints naturally go through a life cycle, including wearing out. Your doctor may have mentioned that you have "bone on bone". This is a natural occurrence that sometimes happens faster in some people due to history of injuries, genetics, demands of your job and other lifestyle factors.

Most people, when considering a total joint replacement, have been in pain for many years. Overtime, pain, swelling and inflammation keep triggering your alarm system, motivating you to seek help. Many of people say they have a "high pain tolerance". In reality, they have become very good at ignoring this alarm system. When you ignore the alarm system for an extended amount of time, it'll get louder and more sensitive to stimuli. In about one in four people, the alarm doesn't go back down and stays sensitive.

When the "chatter" does not have a chance to return to baseline, it'll get louder and take less stimuli to trigger the alarm system. For example, 1 year ago, you may have been walking up to 5 miles before your joints ached. Now, you can't even make it through the grocery store. Yes, there may have been more degenerative changes in your joints over this period of time, but also, your nerves became more sensitive to stimuli.

Your nerves and stress

Not only does pain, inflammation, and swelling increase the sensitivity of your nerves, but so do other factors such as stress, having a cold, or even the temperature of the air. Has anyone ever told you that they can tell when it's going to snow because they feel it in their bones? Or have you ever had a cold or flu and felt achy all over? These are examples how nerves are sensitive to other factors. Nerves are also sensitive to stress.

The decision to undergo a joint replacement is a stressful decision and process. You have likely been to many doctor appointments, pondered the pros and cons, and have undergone unsuccessful treatments. You will also feel stressed when you undergo surgery and the days following. Going to the hospital, undergoing anesthesia, the hospital experience and learning how to function at partial capacity all contributes to rising stress levels. Not to mention, personal stresses in family and at your job may also be happening. All these stressors in life contribute to the louder "chatter" in our bodies, further sensitizing our nerves to stimuli.

Surgery

Your decision to have surgery is the right decision. Over the past decades (even centuries), surgical outcomes get better and better thanks to technological advances as well as medical understanding and training. It is also important that your trust your decision and the surgeon you chose. Studies have shown better outcomes in patients who have made up their minds about the surgery versus those who are unsure. The mindset is a very powerful contributor to the success or failure of your surgery.

The surgery is going to take care of the inflammation, swelling, and degeneration that is present in your joint. Once you recover from the surgical procedure, there will be no more structural causes for your pain or an irritated your alarm system. But, since the "chatter" in your nerves has been so loud for so long, you can expect this sensitivity to remain after the surgery. Therefore, the goal after surgery is not only to restore range of motion and strength, but to calm down the nervous system.

Calming down the nervous system

In order to help expediate your rehabilitation, it is important to turn down the "chatter" in your nerves. But you may be wondering how to do this.

1. Knowledge. You are on your way by reading this handout. The more you understand about pain, sensitization, and how it works, the better you will do. See the "Suggested Readings" for more resources on this topic.
2. Understanding. Understanding the process of de-sensitizing of your nerves is the second step in turning down the "chatter". Decreasing stress in your life by using mindful based exercises, such as yoga, meditation and breathing techniques, eating healthy and getting enough sleep, all help to turn down the sensitivity of your nerves. There are many other ways to do this and you should consult with you physical therapists about options that are appropriate for you.
3. Movement. The body and your nerves love blood. The more you move, the more blood is pumped around your body. Aerobic exercise, including walking, cycling or dancing, can help calm your nerves down. Finding an activity and appropriate dosage is done by trial and error guided by your physical therapist and your personal experience. It is helpful to keep a journal to track your exercise and response.
4. Medication. The pain you experience after surgery can be very intense and medication may be needed to help control it. After a few days, you should begin to wean from this medication. By weaning from the medication, it allows your brain (and central nervous system) to begin deregulating the pain through the release of hormones, such as endorphins, opioids (yes, your body naturally makes these) and serotonin to help decrease the pain.
    a. However, continue to take your Aspirin as prescribed. Aspirin is very important in preventing blood clots.

Tips for success

- The pain in your joints is normal and can be explained.
- Your experience undergoing a joint replacement is stressful and further triggers the alarm system. This is normal.
- Your pain is real.
- It is unlikely that your alarm system will just return to the quiet "chatter" after years of being triggered. It needs to be turned down over time.
- As your joint heals, your alarm system will naturally turn down. By understanding the process and the role of the nerves in perceiving pain, your sensitivity will naturally decrease over the next few weeks to months.
- You will have ups and downs in your recovery. Flare-ups are to be expected and are not harmful. These setbacks will become less frequent as your sensitivity decreases.
- Your nerves are barometers for the stresses of life. The more stressed you are, the more pain you may experience. The calmer you are, the less pain you will experience.
- Your recovery requires movement after surgery. As you heal after surgery, you will need to continue to increase the amount you exercise. By exercising, you increase your blood flows and oxygen that flows around your body. This is not only good for the heart, body and mind, but it's also good for your nerves.
- Medication after surgery helps calm down the nerves. Our brain is also capable of doing the same, so weaning from the medication after a few days is recommended. But, please continue to take aspirin to prevent blood clots, as directed by your physician.
- You will start physical therapy very soon after your joint replacement. They will focus on restoring range of motion and strength. Keep in mind, your nerves are sensitive and although you will be very aware of every movement and sensation in the joint, it does not mean that something is wrong. Your nerves are just sensitized.
- It is important to do your exercises at home. This will help you recover faster so you can return to your normal life.

Conclusion

Over time, your joint has become painful, swollen, and inflamed. This process has woken up your nerves, increasing the "chatter" or sensitivity of your nerves. After the surgery, the joint issues will be corrected, but the nerves around the joint will remain sensitive, which is normal and should be expected. The more you know how your nerves work and what causes their sensitivity, the easier it'll be to calm them back down. Knowledge, gentle movement and realistic goals will help your nerves calm down over time, leading to a successful surgery and resumption of your normal life activities.

The information in this handout was based off of the hard work and research by the folks at the International Spine and Pain Institute and Adriaan Louw, PT, PhD, CSMT.
For more information like this, please visit their website at: https://www.ispinstitute.com.

Recommended Reading:

Books

"Your Nerves are Having a Knee Replacement" by Adriaan Louw
"Explain Pain" by Lorimer Mosely and David Butler
"Painful Yarns" by Lorimer Mosely
"Pain: a Love Story (The Brain's Obsession with your Safety)" by Cheryl Wardlaw

Websites

"Recovery Strategies – pain guidebook" by Greg Lehman (FREE) at http://www.greglehman.ca/pain-science-workbooks

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