

# Joint Adventures<sup>®</sup> Knee Replacement

at Delnor Hospital



now part of  
**M** Northwestern  
Medicine<sup>®</sup>



# Welcome to Delnor Hospital

Hello and welcome to Delnor Hospital's (Delnor) Joint Adventures program. By now, you've met with an orthopaedic surgeon and set a date for your joint replacement surgery.

From this point on, the Delnor orthopaedic care team will be with you every step of the way. We look forward to giving you excellent care and service.

Two important things to do before your surgery are to **read this book** and attend a **Joint Adventures class**. The information in this book, plus much more, will be covered in detail during the class. Knowing what to do before your surgery and knowing what to expect afterwards can help reduce the stress or fear you might have.

Besides reading this book and attending a class, your surgeon may recommend you watch a web-based Emmi® education program about your joint surgery. Your surgeon's office can provide you with the Web address and access code you'll need to view the video. Please contact your surgeon's office for this information.

Most of the questions you might have today should be answered after reading this book, watching the Emmi video and attending a Joint Adventures class. If not, please call your physician's/surgeon's office if you still have questions about your surgery schedule, physician appointments or medication.

Again, welcome to Delnor. The orthopaedic care team looks forward to helping make your joint adventure a pleasant one.

Sincerely,

Patient Care Team

Suite 2600

630.208.4410

TTY for the hearing impaired 630.933.4833



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# Getting Started





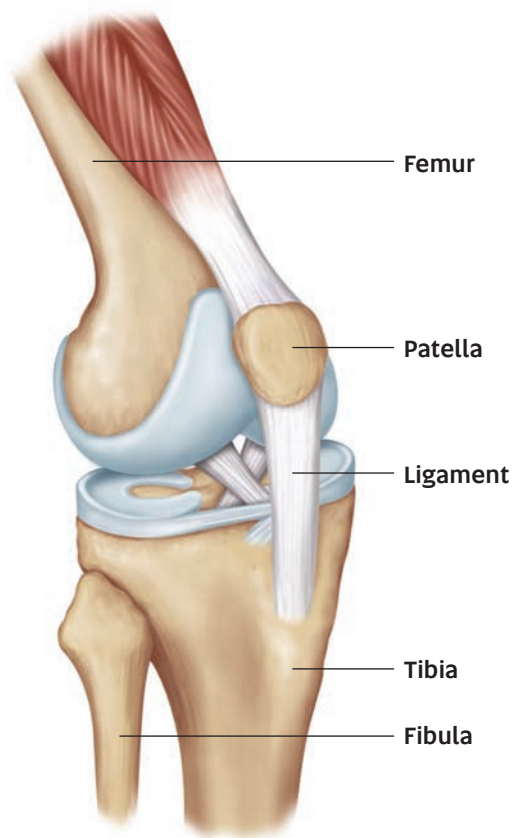
# Getting started

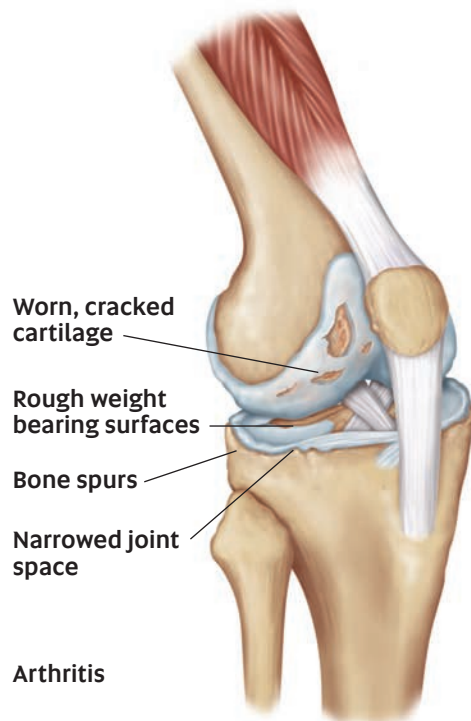
To help you better understand the process of knee replacement, it may be helpful to know more about your knee and how it works.

The knee is the largest joint in the body.

The ability to walk easily depends on the specific way the thigh bone (femur) meets the shin bone (tibia).

These bones are separated by cartilage which acts as a cushion and allows movement. In front of these bones, the kneecap (patella) glides in a groove and provides a round, protective shield. Much of the knee's stability and its main movements of bending and straightening depend on surrounding muscles and ligaments.



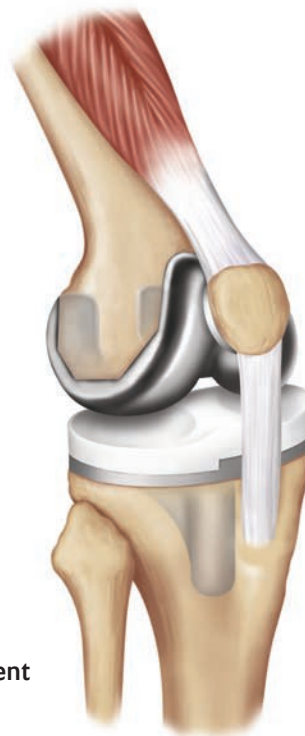
**Arthritis**

### Arthritis

The word “arthritis” means joint inflammation. Arthritis of the knee is a disease that wears away the cartilage of the knee joint. Without enough cartilage, the femur and the tibia rub on each other—bone on bone. When this happens, the joint becomes pitted and rough. The result is pain, stiffness and instability.

Osteoarthritis, often referred to as degenerative joint disease, usually gets worse with time. It is most common in people over age 50, but can occur at any age. Large, weight-bearing joints, such as the hip and knee, are the most common joints affected by osteoarthritis. People with osteoarthritis often get bone spurs around the joint. This can make it hard to move.

Rheumatoid arthritis is a disease that attacks any part of the body—including joints. In rheumatoid arthritis, the joint fluid contains chemical substances that attack and damage the joint surface.

**Knee replacement**

Swelling, pain and stiffness are usually present even when the joint is not used.

### Knee replacement

Knee replacement surgery removes damaged and worn parts of the knee and replaces them with artificial parts called prostheses. This makes the knee strong, stable and flexible again. The prosthesis has the same basic parts as your own knee. The femoral component is inserted into the thigh bone. The tibial component is inserted into the top of the shin bone. The patellar component replaces the kneecap.

The new joint may be secured in two ways. The cemented method secures the knee joint in place using acrylic bone cement that sets within 15 minutes. The uncemented, or ingrowth method, allows the new joint to be secured into place by the body’s own bone growth. The decision about which method you will have should be discussed with your surgeon\*.

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## Joint Adventures®

Congratulations.  
You've taken the first  
step to regaining your  
active lifestyle.

However, you need to take a few more to ensure you, your home and your caregiver are fully prepared for your joint replacement surgery.

#### DURING THE NEXT FEW DAYS AND WEEKS YOU WILL NEED TO:

---

Register and attend a Joint Adventures preoperative knee replacement class at Delnor Hospital

---

Watch Emmi® educational internet programs

---

Prepare your home for your return

---

Complete and return the Care Coordination form

---

Complete lab work or other tests ordered by your physicians\*

---

Select a caregiver or support person to assist you at home for the first week after surgery

## Joint Adventures® class

The Joint Adventures class and this book were specially created to help patients and family members better understand what to expect before and after joint replacement surgery. The class is generally held once a month and lasts about one hour. **Please bring this book with you to class and to the hospital the day of your surgery.** You also should select a family member or close friend who can be your “support person.” Your support person will need to attend the Joint Adventures class with you so they learn and understand how they can assist you. **Please register for class two to six weeks prior to your surgery** by calling the Information and Physician Referral Line at 630.933.4234, TTY for the hearing impaired 630.933.4833.

## Emmi® programs

Prior to your surgery, we recommend you watch two web-based programs—one on your knee surgery, the other on anesthesia. Your surgeon’s\* office will provide you with an access code and web address (internet site) so you can view these programs. A pre-procedure nurse will provide the code for the anesthesia program. If you do not have a computer, please ask a family member or friend if they will help you, or visit your local library.

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### Notes:

# Preparing for Surgery



# Preparing for surgery

Joint replacement is an elective surgery. Therefore, it is important the patient's state of health be evaluated thoroughly prior to this major surgery.

## Physician visits and lab tests

Before surgery, most patients will complete an evaluation which may include a physical exam, lab tests, EKG and X-rays. These tests can be coordinated by your physician.\* Your physician also may discuss temporarily stopping the use of some medications such as aspirin or other anti-inflammatory medications about one week prior to surgery. These medications tend to make your blood thinner and could cause more bleeding during your surgery.

## Dental care before surgery

Any invasive dental work, including routine cleanings, cavity filling, extractions, root canals or implant work for example, can introduce bacteria into the bloodstream. If you are scheduled to have dental work within the six weeks prior to your joint replacement surgery, please tell your surgeon's office staff. Your surgeon\* may provide specific instructions or guidelines for you to follow. Consult your surgeon regarding the length of time to wait after surgery before scheduling any future dental appointments.

## Infection prevention

Infection is a rare complication of joint replacement surgery. We take special precautions to prevent infections. **If you have any signs or symptoms of infection prior to surgery such as an open sore, flu symptoms, a cut, infected teeth or bladder infection, tell your physician immediately. Your surgery may need to be delayed until you receive appropriate treatment.**

While in the hospital, you will receive antibiotics before and after surgery to reduce your risk of infection. Your incision needs to be kept clean and

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dry until it is healed. Your new joint is artificial and does not have your body's natural protection against infection, so it is possible to develop an infection years later. Bacteria can enter your bloodstream and invade your new joint causing it to become loose and painful. **Call your physician\* immediately if you experience signs or symptoms of infection such as fever, chills, pain, redness or drainage. Common infections include sore throat, urinary tract infection, deep cuts or an ear infection. Your doctor\* may prescribe antibiotics.**

If you have any signs or symptoms of infection prior to surgery, tell your physician immediately.

### Health history

Once you have a confirmed surgery date, you will need to provide a complete health history. A member of the pre-admission testing department will call you to arrange a time to discuss your medical history. You can note your scheduled call below:

Date: \_\_\_\_\_

Time: \_\_\_\_\_

One of our experienced pre-admission nurses will call you to obtain your detailed health history. It should take somewhere between 15 and 30 minutes to complete.

Using the medication card in the joint replacement folder, please make a list of all your medications and the dosages. Include any over-the-counter drugs as

well. You may be asked again for this information the day of your surgery.

Once your health history has been reviewed, you may need to have additional tests. The pre-procedure nurse will schedule the tests at Delnor during your pre-admission testing visiting with an anesthesiologist.

### Anesthesia

The anesthesiologist\* will review your medical and surgical history and meet with you during your pre-admission testing visit to discuss the anesthesia plan. If you have questions or special concerns regarding your anesthesia, the anesthesiologist will be present to answer them at this time.

### When's my surgery?

Your surgery time will not be determined until the day before your surgery. We will be able to confirm your surgical time after 2 pm the business day before your scheduled procedure. A member of the Surgical Services staff will call and tell you what time to arrive at Delnor and also inform you of any day-of-surgery tests that have been ordered. If you will not be at your home or you missed our call, please call us at 630.208.3083 after 5 pm, Monday through Friday. TTY for the hearing impaired 630.933.4833.

### WHEN YOU CALL, YOU WILL BE TOLD:

\_\_\_\_\_  
Your scheduled surgery time

\_\_\_\_\_  
What time you need to arrive at the hospital

\_\_\_\_\_  
What time to stop eating and drinking the night before surgery

\_\_\_\_\_  
What medication(s) you are to take, if any, the morning of surgery, including insulin or any medications they would like you to bring

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### What to bring to the hospital

Although you'll be in the hospital for a few days, you don't need to pack much. In fact, we recommend you pack as lightly as possible.

#### THE FOLLOWING IS A SUGGESTED LIST OF WHAT YOU SHOULD BRING TO THE HOSPITAL

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Insurance and Medicare cards

---

The medications card you received at class listing your current medications and dosage. The list should include all prescription and non-prescription drugs. **Do not bring your medications to the hospital unless otherwise directed.**

---

A list of all known allergies (medication, food and environmental) and a description of your allergic reactions to each

---

Walker or crutches if you already own them, labeled clearly with your name. A physical therapist will assess them for correct fit and safety.

---

Toiletries: toothbrush, toothpaste, comb, brush, deodorant, lotion, contact case or eye glass case, denture case, etc.

---

Your C-Pap mask if you use one at night when you sleep

---

List of any special dietary requirements

---

Do not wear makeup the day of surgery

---

Do not bring cash or personal items such as jewelry or items of great value

---

Underwear, socks, loose comfortable pants or shorts, shirt and non-skid shoes to wear during therapy. These can be the same clothes you wear to the hospital the day of surgery.

---

This book and any materials provided to you in class or by your surgeon

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### Prepare your home

Most patients go directly home after surgery. You need to prepare your home so it is ready for your return following joint replacement surgery.

#### SOME THINGS YOU MAY NEED TO DO INCLUDE:

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Prepare meals ahead so they can be easily reheated

---

Put anything stored in high places on the counter or table for easy access without reaching or stretching

---

Remove throw rugs and move small tables, ottomans (footstools) and chairs out of your path

---

Upon request a therapist from CNS Home Health and Hospice, a member of Cadence Health, can visit your home prior to surgery and evaluate what you need to prepare your home. There is a charge for this service. Check with your insurance carrier to determine coverage for this service. To arrange a home assessment, call 630.665.7000.

### Rehabilitation/extended care facilities

Sometimes going home after surgery isn't the best option for you. In that case, you need to have **preselected** several possible rehabilitation/extended care facilities you like and are covered by your insurance provider. Prior to surgery, you will be asked to provide the names of at least two rehabilitation facilities when you complete and submit the **Care Coordination Form**. We ask you to provide two locations should your first choice not be available at the time of your discharge. Your care coordinator will meet with you to discuss your discharge plans. Your care team will coordinate the discharge arrangements on your behalf.

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## TOURING A REHABILITATION UNIT WITHIN AN EXTENDED CARE FACILITY

### THINGS TO CONSIDER

It is important to tour an extended care facility that has a subacute rehabilitation unit as an optional discharge plan, should you need those services. Below are some things to consider when touring an extended care facility that offers therapy for your knee or hip. Make notes of your observations as you tour so you can compare facilities when deciding which one you prefer.

<b>Tours</b>	<p>You can tour a facility at any time. You do not need an appointment.</p> <p>Once you've toured the facility, ask yourself: Does the facility feel comfortable? Does the facility have a separate wing or unit for its subacute rehab patients? Are the dining areas separate?</p>
<b>Therapy</b>	<p>Ask to see the rehabilitation gym area. Ask about available therapy equipment.</p> <p>Ask if the facility employs its own therapy staff or if it contracts outside staff.</p> <p>Ask if you get therapy if your therapist calls in sick or is off that day.</p> <p>Ask whether therapy is offered on weekends and holidays.</p>
<b>Medical staff</b>	<p>Does the facility have a medical director for the rehab unit?</p>
<b>Progress</b>	<p>Does the staff have meetings to discuss the patient's progress? Who attends?</p> <p>Are the patient and family included in discussions regarding progress and goals?</p> <p>Does the facility have someone to assist with discharge needs?</p>
<b>Diagnoses</b>	<p>Is the staff experienced in caring for patients following joint replacement surgery?</p> <p>How does the staff address communication issues, such as hearing impairment, sight impairment or patients who are non-English speaking?</p>
<b>Environment</b>	<p>Does the facility appear neat and clean? Does it smell clean?</p>
<b>Financial</b>	<p>Ask questions you may have about insurance. What is covered by your insurance?</p> <p>For what costs might you be responsible?</p>
<b>Survey</b>	<p>Feel comfortable to ask about the facility's last public health survey.</p>
<b>Geography</b>	<p>Is the facility easy for family and friends to find? Is it near your preferred doctors and hospital?</p>
<b>Cell phones</b>	<p>Are cell phones allowed at the facility?</p>

### Are you covered?

Healthcare insurance is everchanging. We suggest you call your insurance provider to discuss your coverage. It is much easier to plan for services and care when you know in advance what your insurance covers and what it doesn't.

### Care coordination form

The Care Coordination Form in the packet you received from your physician is very important. This helps us know more about you and your post-surgery care preferences. **Please take the time to fill out the Care Coordination form and return to us at the end of the Joint Adventures PreOp class.** If you are unable to complete the form at the time of the PreOp class, please bring it with you on the day of surgery.

### CNS Home Health and Hospice

If you are discharged to your home, you may need visits from a home health nurse and physical therapist.

CNS Home Health and Hospice, a member of Northwestern Medicine, offers a joint replacement program designed to provide you with excellent care after your joint procedure. These services are available immediately after surgery and continue until you make the transition to outpatient therapy. CNS cares for more than 100 joint replacement patients each month and is dedicated to maximizing your potential and providing the education required to minimize complications.



### CNS post-surgery care

CNS is just one of the choices you have for post discharge care. If you do not have Medicare, we

A Delnor discharge coordinator will help make the final arrangements with the home healthcare provider of your choice.

recommend you check with your insurance provider to see which agencies are in your "network" of providers.

If you would like to speak with a CNS representative prior to surgery for a home assessment (fee applies) or to discuss post discharge care, you can call 630.665.7000 or visit the website at [www.cnshomehealth.org](http://www.cnshomehealth.org).

### BEFORE YOU GO HOME

The CNS Home Care liaison is available to meet with you during your hospital stay and be available to answer any questions you may have regarding home care.

The CNS Home Care liaison can review all pertinent information regarding your medical history, surgical procedure and postoperative care and report it to your home health team.

Needed equipment can be identified and ordered.

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## AFTER YOU GO HOME

A registered nurse will assess your overall health, review medications and comfort level, and evaluate the surgical incision.

The nurse and therapist will tailor a home program to meet your specific needs. It will include physical therapy and occupational therapy if needed.

We will conduct a home safety evaluation and make recommendations for making your environment safer during recovery.

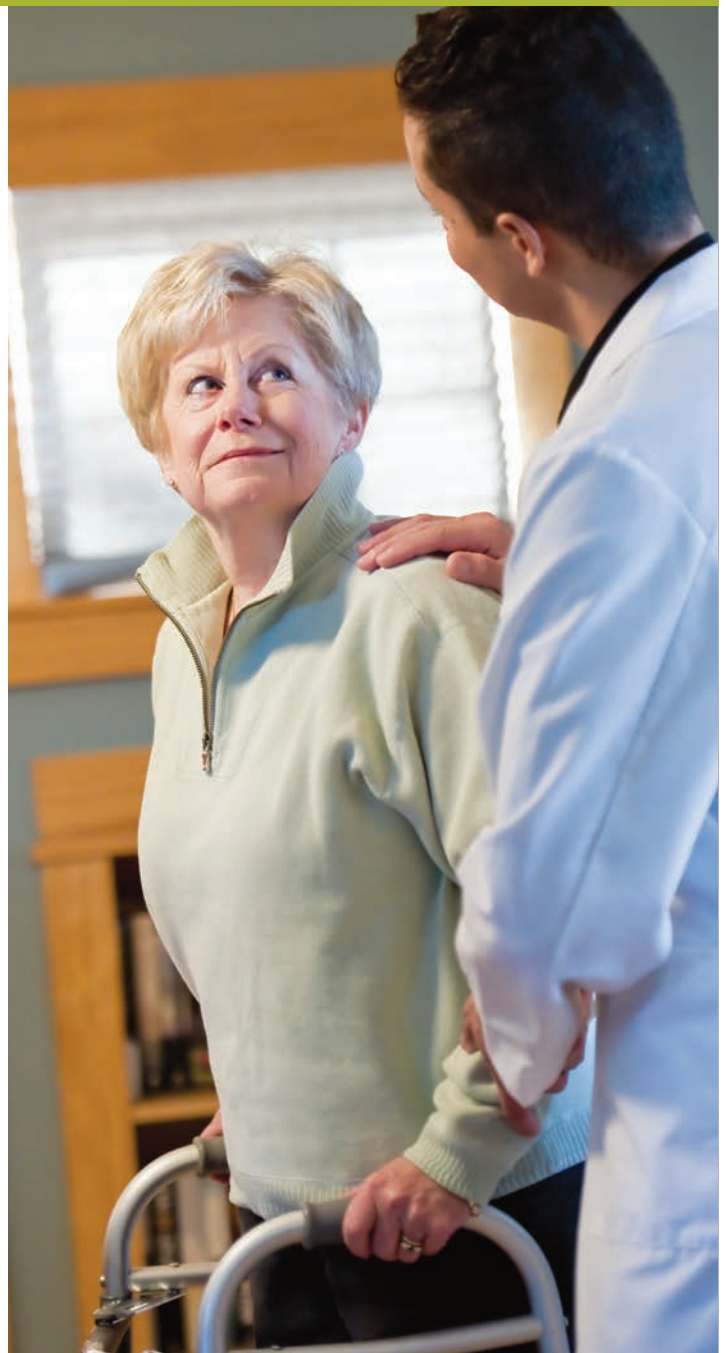
Lab work will be performed as ordered to monitor blood-thinning medications. Results will be reported to your physician.

When it is time for you to start outpatient therapy, we can provide assistance in determining your needs and preferences.

We will communicate regularly with your physician.

### Choosing your partner in care

As you prepare for surgery, another important thing to decide is who will be your partner in care or support person once you're home. This can be a family member or friend. After attending the Joint Adventures PreOp class, please have your partner in care watch the Emmi programs and help prepare your home if you're not feeling up to the task. Most important, they need to be with you at least the first week after you return home. You may need assistance with meal preparation and daily living activities the first couple of days so you don't fall. Your partner in care also will encourage and remind you to do your home physical therapy exercises to get your new joint moving.



**CNS Home Health and Hospice**  
**690 East North Avenue**  
**Carol Stream, IL 60188**

630.665.7000 24-hour phone  
 630.933.4833 TTY for the hearing impaired  
 630.665.7006 Referrals  
 630.665.7059 Fax

[cnshomehealth.org](http://cnshomehealth.org)

# Health and Nutrition

the 1990s, the number of people in the world who are under 15 years of age has increased from 1.1 billion to 1.5 billion, and the number of people aged 65 and over has increased from 0.4 billion to 0.6 billion (United Nations, 2002).

There are a number of reasons why the world's population is ageing. First, the number of people who survive to old age has increased. In 1950, the life expectancy at birth was 47 years for men and 51 years for women. By 2000, life expectancy at birth had increased to 71 years for men and 76 years for women (United Nations, 2002). This increase in life expectancy is due to a number of factors, including improvements in medical care, better nutrition, and a reduction in the number of people who die from infectious diseases.

Second, the number of people who are aged 65 and over has increased. In 1950, there were 0.4 billion people aged 65 and over in the world. By 2000, there were 0.6 billion people aged 65 and over in the world. This increase is due to a number of factors, including improvements in medical care, better nutrition, and a reduction in the number of people who die from infectious diseases.

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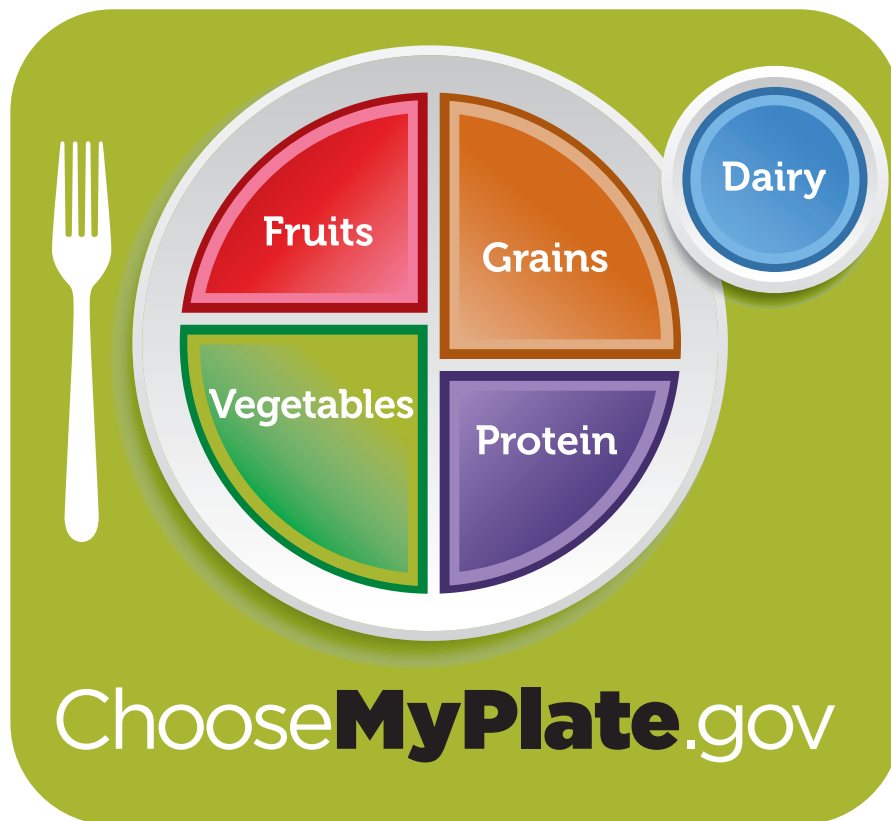
Seventh, the number of people who are aged 65 and over has increased. In 1950, there were 0.4 billion people aged 65 and over in the world. By 2000, there were 0.6 billion people aged 65 and over in the world. This increase is due to a number of factors, including improvements in medical care, better nutrition, and a reduction in the number of people who die from infectious diseases.

# Health and nutrition

Good nutrition before and after surgery is important. A healthy diet helps build muscle strength, which is needed for a full recovery.

## USDA dietary recommendations

The U.S. Department of Agriculture's Food MYPLATE guidelines on the next page and 10 tips to a Great Plate can help you make good choices to make sure you get all the nutrients you need.





## 10 tips to a great plate

Making food choices for a healthy lifestyle can be as simple as using these 10 Tips. Use the ideas in this list to balance your calories, to choose foods to eat more often, and to cut back on foods to eat less often.

### 1 BALANCE CALORIES

Find out how many calories YOU need for a day as a first step in managing your weight. Go to [www.ChooseMyPlate.gov](http://www.ChooseMyPlate.gov) to find your calorie level. Being physically active also helps you balance calories.

### 2 ENJOY YOUR FOOD, BUT EAT LESS

Take the time to fully enjoy your food as you eat it. Eating too fast or when your attention is elsewhere may lead to eating too many calories. Pay attention to hunger and fullness cues before, during, and after meals. Use them to recognize when to eat and when you've had enough.

### 3 AVOID OVERSIZED PORTIONS

Use a smaller plate, bowl, and glass. Portion out foods before you eat. When eating out, choose a smaller size option, share a dish, or take home part of your meal.

### 4 FOODS TO EAT MORE OFTEN

Eat more vegetables, fruits, whole grains, and fat-free or 1% milk and dairy products. These foods have the nutrients you need for health—including potassium, calcium, vitamin D, and fiber. Make them the basis for meals and snacks.

### 5 MAKE HALF YOUR PLATE FRUITS AND VEGETABLES

Choose red, orange, and dark-green vegetables like tomatoes, sweet potatoes, and broccoli, along with other vegetables for your meals. Add fruit to meals as part of main or side dishes or as dessert.

### 6 SWITCH TO FAT-FREE OR LOW-FAT (1%) MILK

They have the same amount of calcium and other essential nutrients as whole milk, but fewer calories and less saturated fat.

### 7 MAKE HALF YOUR GRAINS WHOLE GRAINS

To eat more whole grains, substitute a whole-grain product for a refined product—such as eating whole wheat bread instead of white bread or brown rice instead of white rice.

### 8 FOODS TO EAT LESS OFTEN

Cut back on foods high in solid fats, added sugars, and salt. They include cakes, cookies, ice cream, candies, sweetened drinks, pizza, and fatty meats like ribs, sausages, bacon, and hot dogs. Use these foods as occasional treats, not everyday foods.

### 9 COMPARE SODIUM IN FOODS

Use the Nutrition Facts label to choose lower sodium versions of foods like soup, bread, and frozen meals. Select canned foods labeled “low sodium,” “reduced sodium” or “no salt added.”

### 10 DRINK WATER INSTEAD OF SUGARY DRINKS

Cut calories by drinking water or unsweetened beverages. Soda, energy drinks, and sports drinks are a major source of added sugar, and calories, in American diets.



## Calcium

Most of the calcium in your body is stored in your bones and teeth. The rest is used in your blood, muscle and fluid between cells.

### CALCIUM

Regulates muscle contraction, including heart beat

May help control blood pressure

#### RECOMMENDED DAILY ALLOWANCE (RDA)

Adult women age 19-50	1000 mg
Adult women age 51-70	1200 mg
Adults over age 70	1200 mg

#### TOLERABLE UPPER LIMITS

Age 19-50	2500 mg
Age 51 and over	2000 mg

## Osteoporosis

Osteoporosis is a disorder where bone becomes weak and brittle. People with osteoporosis have an increased risk for broken bones. Osteoporosis may develop if your body doesn't get enough calcium.

### OSTEOPOROSIS RISK FACTORS

Post-menopausal women

Small-boned women

Fair-skinned women of Northern European origin

Physically inactive individuals

Family history of osteoporosis

Alcohol and caffeine drinkers

Tobacco users

### FACTORS THAT INCREASE CALCIUM ABSORPTION

Lactose	Calcium deficiency
Vitamin D	Pregnancy and lactation

### FACTORS THAT DECREASE CALCIUM ABSORPTION

Fiber	Vitamin D deficiency
Oxalate	Menopause
Alcohol	Old age

## Calcium supplements

Some people may need a calcium supplement because they don't get enough calcium from the foods they eat. Calcium carbonate is the least expensive supplement. It contains the highest amount of calcium per tablet. Calcium carbonate is available under the brand names—OS Cal®, Caltrate® and “generic” calcium carbonate. Calcium also can be found in Tums®, an over-the-counter-antacid. The ingredient label on the back of the product lists the calcium content. Don't take more than 500 milligrams. Your body only can accept 500 milligrams of calcium at a time.

FOODS RICH IN CALCIUM	CALCIUM (MILLIGRAMS)	PERCENT DAILY VALUES
Yogurt, plain, low fat, 8 ounces	415	42%
Yogurt, fruit, low fat, 8 ounces	245-384	25%-38%
Sardines, canned in oil, with bones, 3 ounces	324	32%
Cheddar cheese, 1 ½ ounces shredded	306	31%
Milk, non-fat, 8 fluid ounces	302	30%
Milk, reduced-fat (2% milk fat), no solids, 8 fluid ounces	297	30%
Milk, whole (3.25% milk fat), 8 fluid ounces	291	29%
Milk, buttermilk, 8 fluid ounces	285	29%
Milk, lactose reduced, 8 fluid ounces	285-302	29-30%
Mozzarella, part skim 1½ ounces	275	28%
Tofu, firm, made with calcium sulfate, ½ cup	204	20%
Orange juice, calcium fortified, 6 fluid ounces	200-260	20-26%
Salmon, pink, canned, solids with bone, 3 ounces	181	18%
Pudding, chocolate, instant, made with 2% milk, ½ cup	153	15%
Cottage cheese, 1% milk fat, 1 cup unpacked	138	14%
Tofu, soft, made with calcium sulfate, ½ cup	138	14%
Spinach, cooked, ½ cup	120	12%
Instant breakfast drink, various flavors and brands, powder prepared with water, 8 fluid ounces	105-250	10-25%
Frozen yogurt, vanilla, soft serve, ½ cup	103	10%
Ready to eat cereal, calcium fortified, 1 cup	100-1000	10%-100%
Turnip greens, boiled, ½ cup	99	10%
Kale, cooked, 1 cup	94	9%
Kale, raw, 1 cup	90	9%
Ice cream, vanilla, ½ cup	85	8.5%
Soy beverage, calcium fortified, 8 fluid ounces	80-500	8-50%
Chinese cabbage, raw, 1 cup	74	7%
Tortilla, corn, ready to bake/fry, 1 medium	42	4%
Tortilla, flour, ready to bake/fry, one 6" diameter	37	4%
Sour cream, reduced-fat, cultured, 2 tablespoons	32	3%
Bread, white, 1 ounce	31	3%
Broccoli, raw, ½ cup	21	2%
Bread, whole wheat, 1 slice	20	2%

Vitamin D

Vitamin D is a fat-soluble vitamin that is stored in the body’s fatty tissue. It’s also called the sunshine vitamin because the body makes vitamin D after being in sunlight.

VITAMIN D HELPS

- Promote calcium absorption
- Form and maintain strong bones
- Maintain the proper phosphorus levels in blood
- Prevent rickets

RECOMMENDED DAILY ALLOWANCES (RDA)

The Recommended Daily Allowance (RDA) for adults age 19 to 70 is 15 micrograms (mcg) or 600 international units (IU)

The RDA for adults over age 70 is 20 mcg or 800 IU

Tolerable upper limit for any age is 4000 IU

RISK FACTORS FOR VITAMIN D DEFICIENCY

- Adults age 50 and older have decreased absorption
- People who don’t get enough sunlight
- People with darker skin tones

Vitamin D supplements

Vitamin D is needed to help your body absorb calcium. If you are not consuming the RDA for vitamin D, you should talk with your physician\* about taking a daily supplement.

Vitamin D supplements are available over-the-counter from your local drug or vitamin stores.

FOODS RICH IN VITAMIN D

	INTERNATIONAL UNITS (IU) PER SERVING	PERCENT DAILY VALUE
Cod liver oil, 1 tablespoon	1,360	340
Salmon, cooked, 3½ ounces	360	90
Mackerel, cooked, 3½ ounces	345	90
Tuna fish, canned in oil, 3 ounces	200	50
Sardines, canned in oil, drained, 1¾ ounces	250	70
Milk, nonfat, reduced-fat, and whole, vitamin D fortified, 1 cup	98	25
Margarine, fortified, 1 tablespoon	60	15
Pudding, prepared from mix and made with vitamin D fortified milk, ½ cup	50	10
Ready-to-eat cereals fortified with 10% of the DV for vitamin D, ¾ cup to 1 cup servings (servings vary according to the brand)	40	10
Egg, 1 whole (vitamin D is found in egg yolk)	20	6
Liver, beef, cooked, 3½ ounces	15	4
Cheese, Swiss, 1 ounce	12	4

### Vitamin K

Vitamin K is a fat-soluble vitamin. It is needed for normal blood clotting and for making proteins found in our plasma, bone and kidneys. Our body stores very little vitamin K, but it can be easily replenished with a balanced diet.

### Recommended daily allowances

Vitamin K deficiency is uncommon in healthy adults because it is found in a wide variety of foods. Your level of vitamin K may be lower if you are taking blood-thinning medicine such as Coumadin®, have significant liver damage or disease or suffer from fat malabsorption. The Recommended Daily Allowance (RDA) of vitamin K for adults over age 18 is 80

micrograms (mcg) per day. Limit eating foods that provide more than 60 percent of the daily value (DV) for vitamin K to help keep your blood clotting ability in the desired range.

### TO MAKE IT EASIER TO KEEP YOUR INTAKE OF VITAMIN K CONSISTENT

Limit intake of foods considered “high” in vitamin K to no more than one serving each day.

Limit intake of foods “moderately high” in vitamin K to no more than three servings each day.

Report any significant changes in your diet or your weight to your physician.\*

### FOODS HIGH IN VITAMIN K

Eat no more than 1 serving per day

	SERVING SIZE	% DAILY VALUE
Kale, fresh, boiled	½ cup	660
Spinach, fresh, boiled	½ cup	560
Turnip greens, frozen, boiled	½ cup	530
Collard, fresh, boiled	½ cup	520
Swiss chard, fresh, boiled	½ cup	360
Parsley, raw	¼ cup	300
Mustard greens, fresh, boiled	½ cup	260

### FOODS MODERATELY HIGH IN VITAMIN K

Eat no more than 3 servings per day

	SERVING SIZE	% DAILY VALUE
Brussels sprouts, frozen, boiled	½ cup	190
Spinach, raw	1 cup	180
Turnip greens, raw, chopped	1 cup	170
Green leaf lettuce, shredded	1 cup	125
Broccoli, raw, chopped	1 cup	110
Endive lettuce, raw	1 cup	70
Romaine lettuce, raw	1 cup	70

**Coumadin®**

Coumadin® and vitamin K

**Coumadin function**

Coumadin®, generically known as warfarin, is a prescription medicine that helps prevent blood clots. Clots can block blood flow to the heart or brain resulting in serious complications and even death.

**Coumadin (warfarin) and vitamin K interaction**

Vitamin K helps blood clot. Coumadin (warfarin) decreases the activity of vitamin K, lengthening the time it takes for a clot to form. International Normalized Ratio (INR) and Prothrombin Time (PT) are blood tests that measure how long it takes a clot to form. Individuals at risk for developing blood clots take Coumadin (warfarin) to prolong the usual time it takes for a clot to form, resulting in a higher INR/PT. Physicians\* usually measure the INR/PT every month in patients taking Coumadin (warfarin) to make sure it stays in a desired range.

To help Coumadin (warfarin) work effectively, it is important to keep your vitamin K intake consistent. Sudden increases in vitamin K intake may decrease the effect of Coumadin (warfarin). On the other hand, greatly lowering your vitamin K intake could increase the effect of Coumadin (warfarin).

**TO KEEP YOUR INR/PT STABLE AND WITHIN THE RECOMMENDED RANGE, IT IS IMPORTANT TO:**

---

Take the correct dose of Coumadin (warfarin) at the same time every day

---

Have your INR/PT checked regularly

---

Keep your vitamin K intake consistent from day to day

---

Have your physician's\*, pharmacist's\* and registered

dietitian's\* phone numbers easily accessible or posted so you can call them with any questions or concerns about Coumadin, vitamin K and your INR/PT blood tests.

**Coumadin, antibiotics and vitamin K**

Some antibiotics can lower vitamin K levels in the body or interfere with the activity of Coumadin (warfarin). Check with your physician\* or pharmacist\* about whether you need to adjust your vitamin K intake or Coumadin dose when taking antibiotics.

**Coumadin and alcoholic beverages**

Alcohol intake greater than three drinks daily can increase the effect of Coumadin/warfarin. However, some medical doctors advise those taking Coumadin/warfarin to avoid all alcoholic beverages. Ask your physician\* about consuming any alcoholic beverage while on Coumadin/warfarin.

**ONE DRINK EQUALS**


---

5 ounces wine *or*

---

12 ounces beer *or*

---

1½ ounces liquor

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### Coumadin dietary supplements and herbal medications

Many dietary supplements can alter the International Normalized Ratio (INR) and Prothrombin Time (PT).

#### DIETARY SUPPLEMENTS KNOWN TO AFFECT THE INR/PT INCLUDE:

Arnica	Bilberry
Butchers broom	Cat's claw
Dong quai	Feverfew
Forskolin	Garlic
Ginger	Ginkgo

Horse chestnut	Insositol hexaphosphate
Licorice	Melilot (sweet clover)
Pau d'arco	Red clover
St. John's wort	Sweet woodruff
Turmeric	Willow bark
Wheat grass	

Much is unknown about dietary supplements. The safest policy is for individuals on Coumadin/ warfarin to avoid all dietary supplements unless their physicians\* approve. This includes any vitamin/mineral supplements that list vitamin K on the label.

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The information on Coumadin is based upon material prepared specifically for patients participating in clinical research at the Warren Grant Magnuson Clinical Center at the National Institutes of Health (NIH), Bethesda, Maryland, 20892, and is not necessarily applicable to individuals who are patients elsewhere. If you have questions about the information, please talk to your surgeon\*, physician\* or your Orthopaedic Care Team. For questions about the Warrant Grant Magnuson Clinical Center visit [www. OCCC@nih.gov/](http://www.OCCC@nih.gov/).

Nutrition and dietary information was obtained from the USDA National Nutrient Database for Standard Reference, releases 18-22.

Where applicable, brand names of commercial products are provided only as illustrative examples of acceptable products and do not imply endorsement by NIH; nor does the fact that a particular brand name product is not identified imply that such product is unsatisfactory.

Coumadin® is a registered trademark of Bristol Meyers Squibb.

# Day of Surgery





# Day of surgery

For the day of your surgery, we have a few suggestions and recommendations to help ensure it goes smoothly for you and your family.

## Arrival and parking

Use Entrance #1 on Williamsburg Road and enter the hospital through the North Entrance. Valet parking is complimentary and recommended the day of surgery. Wheelchairs are available if needed. Valet service is available starting at 5 am.

## Check-in and registration

Registration is located at the North Entrance. After you have completed registering, you will be escorted to the second floor surgical services area. You and your family will wait there until you are taken to the pre-operative holding area.

## Waiting room

During your surgery, your family/friends may wait in the surgery waiting room. The patient tracking board provides up-to-date progress information to your family. Your surgeon\* will speak with your family when your surgery is over.

## Recovery room

You will be in the recovery room for one to two hours. The medications used in anesthesia may cause you to have blurry vision, a dry mouth, chills, nausea or a sore throat. You may have a drain near your surgical incision. When you are stable, you will be transferred to your room. Once awake, you will be encouraged to breathe deeply and cough. This will help you clear out your lungs and prevent pneumonia.

## Food and fluids

After surgery, you will be able to have ice chips if you are not sick to your stomach. You can progress to solid food when you and your surgeon\* feel you are ready. You will have intravenous (IV) fluids for one to two days after surgery. You will receive antibiotics, fluids and blood, if needed, through your IV.

## Visitors

On the day of surgery, we suggest that you keep visitors to a minimum and limit the amount of time they stay. You will feel very drowsy from the medications.

## Privacy

To protect your privacy after surgery, you will be requested to communicate directly with your family and friends regarding your condition. You or someone you designate will be asked to choose a password to protect your privacy if you are unable to update your family/friends yourself. Any family or friends will need to provide the password to a nurse in order to obtain updates on your condition.

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Notes:

# Your Hospital Stay



# Your hospital stay

## Post surgery

Your orthopaedic care team will continue to closely monitor you after your surgery. They will check the color, movement and sensation in your legs. They will orient you to your new environment. A nurse will create a personalized plan of care to meet your individualized needs and work with other members of the orthopaedic care team. Your patient care technician (PCT) will assist you with activities of daily living such as bathing, turning in bed, toileting, etc. The care coordinator assesses your discharge needs, handles any insurance issues and arranges for services and equipment you may need after discharge.

## Inpatient physical therapy

Physical therapy is one of the most important parts of your recovery. You will begin physical therapy either the day of your surgery or the next day, depending upon your surgeon's\* orders and the time you arrive in your room. As an inpatient, you will

receive physical therapy twice a day. Your surgeon\* and the rehabilitation services staff work together to develop an individualized therapy plan for you. You are encouraged to take pain medication on a regular basis while hospitalized. It is important to have adequate pain management to complete your rehabilitation.

During your therapy sessions, you will be instructed in exercises to help restore joint motion and strengthen the surrounding muscles. As you become stronger and progress toward your mobility goal, you will learn and practice how to properly move and turn in bed, get in and out of bed and chairs, walk and climb stairs—if appropriate to your home setting. Therapy after your discharge will be based on your health status, abilities and the mobility level you achieved in the hospital. Your focus should be to work toward your optimal functional level with your home health therapist.

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### Continuous Passive Motion machine and knee immobilizer

Following surgery, your surgeon\* may request a Continuous Passive Motion (CPM) knee machine for you. This device slowly bends (and straightens) your knee. The amount of bending is increased each session based on your therapy. Your surgeon\* determines the maximum amount of bending allowed. Your discharge goal is to bend your knee between 60-110 degrees based on your surgeon's instructions.

After surgery, you will have a dressing on your leg. You might need to wear a knee immobilizer until your leg muscles become stronger and you are able to lift your leg off the bed by yourself.

### Bladder and bowel care

Some people may find it difficult to urinate after surgery because of the anesthesia, pain medications and decreased mobility. If necessary, your surgeon\* may request a catheter be inserted to drain your urine. It may remain in for a day or two.

Constipation can become another problem several days after surgery. Drink a lot of fluids and eat foods

that are high in fiber. A stool softener and laxatives may be given to you.

### Incision care

Your incision will be covered by a large pressure bandage. The bandage will be changed one to two days after your surgery and daily after that. Your wound must be kept clean, dry and covered.

### Respiratory care

Secretions tend to pool in the lungs and can lead to pneumonia. To prevent this, we will teach you to breathe deeply and cough, as well as how to use the breathing device (incentive spirometer). This allows air to fill the tiny air sacs in the bases of your lungs. The deep breathing also helps to break up the mucus so you can "cough it out."

### Circulation

Lack of activity causes the blood to circulate more slowly and pool in the legs. This can lead to the formation of blood clots. To reduce this risk, your surgeon\* will order intermittent compression sleeves or foot cuffs for you to wear. Blood thinners may also be prescribed to "thin" your blood.

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# Managing Your Pain





# Managing your pain

You are at the center of your healthcare team. For the best possible outcome, we encourage you to be an active participant in your health care.

## PARTICIPATION TAKES MANY FORMS AND INCLUDES:

---

Providing information to your team

---

Educating yourself about your diagnosis and care plan

---

Knowing the medications you are taking

---

Expressing your questions and concerns

---

Telling your caregivers how you are feeling

---

## Managing your pain

Pain is experienced by people of all ages and can occur anywhere in your body. Feelings can vary from dull aches to severe sensations. You have the right to have your pain assessed and treated. To help us make you as comfortable as possible, we will regularly ask you to rate your level of pain using a numeric scale. The scale is from 0 to 10 with zero being no pain and 10 being the worst pain possible. We are committed to helping you manage your pain throughout your stay.

## Comfort-function goal

In order to perform your daily activities, you will need to set a goal for managing your pain. This is called a comfort-function goal. Your comfort-function goal should be a pain rating that allows you to continue your important activities.



Numeric scale



Picture scale

*If you cannot verbalize your pain level, you can use a picture scale.*

TO HELP SET YOUR COMFORT-FUNCTION  
GOAL CONSIDER:

The daily activities you need to do such as coughing or breathing deeply after surgery to prevent complications

The pain rating that will allow you to manage those activities comfortably

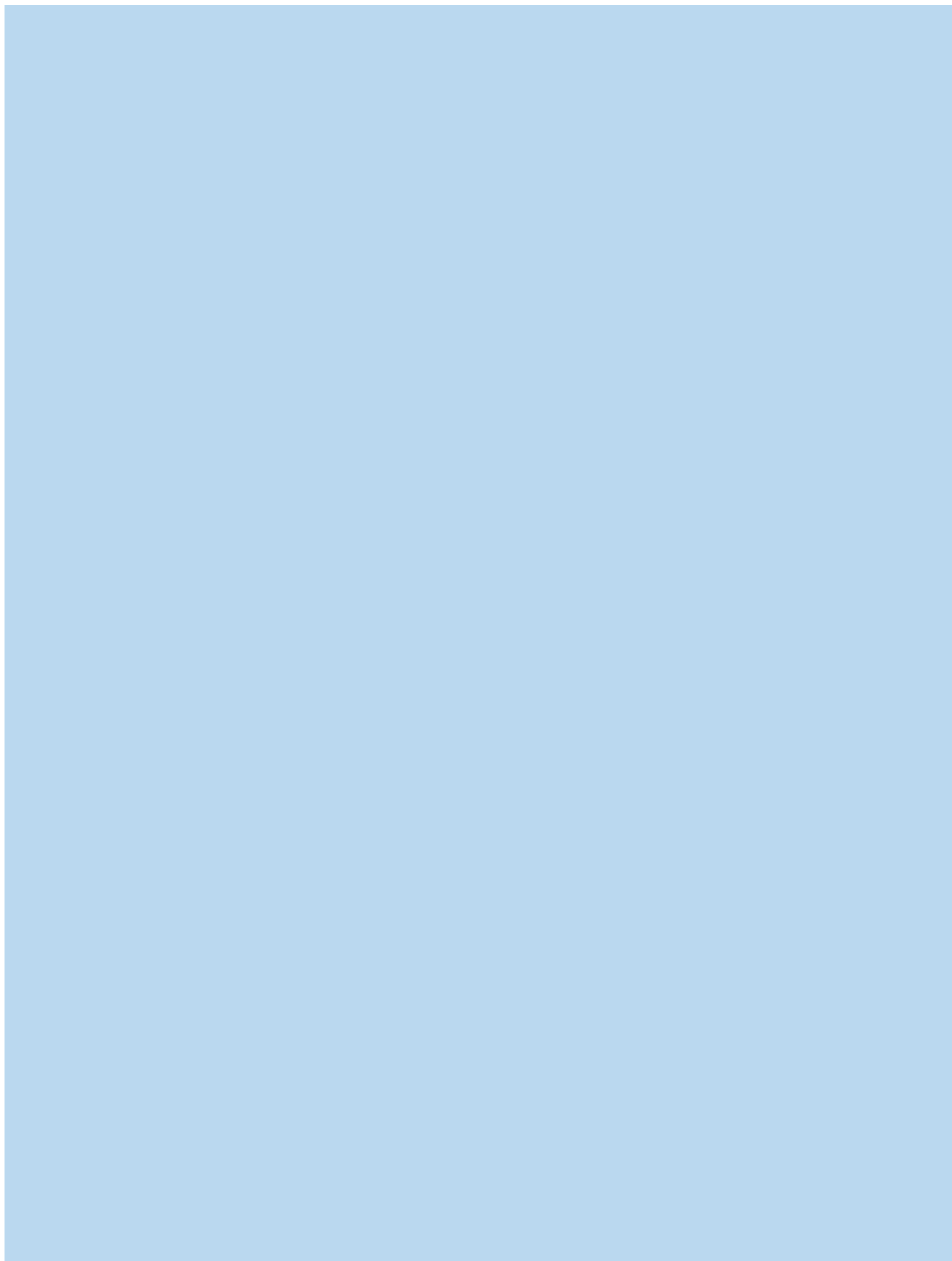
Your caregiver will help you with your comfort-function goal and answer questions about the pain rating scale.

## Music therapy

Music therapy is the compassionate and structured use of music to facilitate the healing process. The program offers a variety of music therapy techniques designed to meet the needs of each patient.

Notes:

# Patient Care Map



# Patient care map

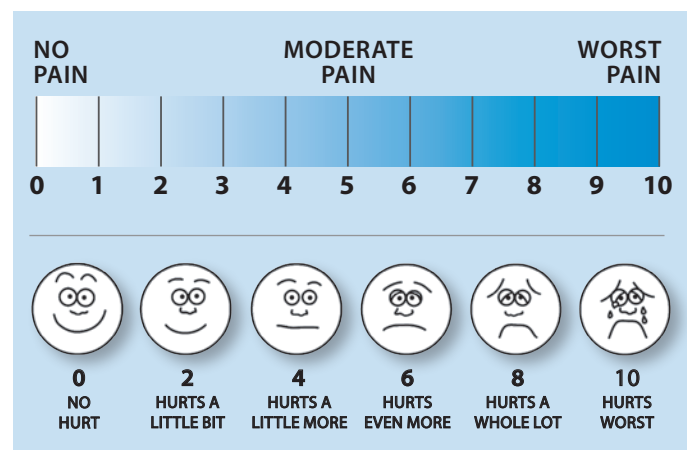
## Day of surgery

Now that you have had surgery, you, your caregiver and your care team immediately begin your recovery. Use the daily care logs to track your progress.

Date: \_\_\_\_\_

### PAIN MANAGEMENT

- ☐ Pain pills
- ☐ Intrathecal
- ☐ Patient Controlled Analgesia (PCA)
- ☐ Injections for pain management
- ☐ Epidural
- ☐ Femoral nerve block
- ☐ I discussed my comfort/function goal with my nurse



#### DECREASE RISK FOR BLOOD CLOTS

---

- ☐ I did foot pumps every hour while I was awake
- ☐ I had my sequential sleeves or foot cuffs on while I was in bed
- ☐ If ordered, I had my compression stockings on today
- ☐ Blood thinners were started

#### ACTIVITIES

---

- ☐ I changed my position (turned) in bed with caregiver assistance every 2-3 hours as needed
- ☐ I had a physical therapy session today. (If ordered by my healthcare provider)
- ☐ I dangled on the side of my bed this evening. (If ordered by my physician)
- ☐ If ordered, I used the Continuous Passive Motion (CPM) machine today
- ☐ If ordered, I did my heel slides (range of motion exercises) today

#### TREATMENTS

---

- ☐ I used my incentive spirometer (breathing machine) every hour while awake
- ☐ I took deep breaths and coughed 10 times every hour while awake

#### DIET

---

- ☐ I started with ice chips and progressed to solid food as I was able to tolerate

#### EDUCATION

---

- ☐ My nurse discussed my plan of care with me
- ☐ A physical therapist has begun to teach me exercises I need to know
- ☐ I discussed my home situation, equipment needs, stairs and living arrangements with a physical therapist

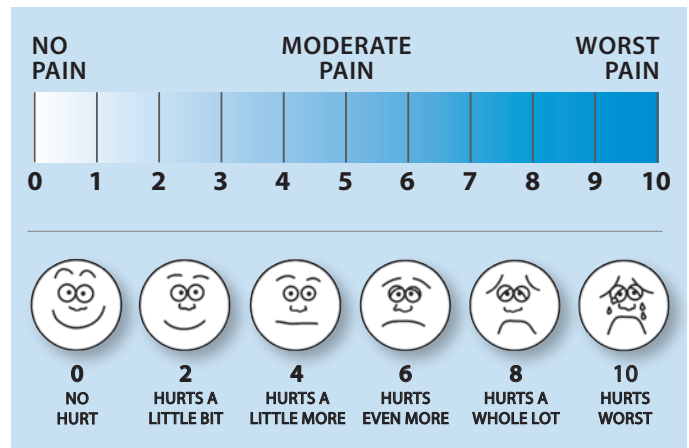
# Patient care map

## Post-op day 1

Date: \_\_\_\_\_

### PAIN MANAGEMENT

- ☐ Intrathecal
- ☐ Patient Controlled Analgesia (PCA)
- ☐ Injections for pain management
- ☐ Epidural
- ☐ Femoral nerve block
- ☐ Pain pills
- ☐ I discussed my comfort/function goal with my nurse



### DECREASE RISK FOR BLOOD CLOTS

- ☐ I did foot pumps every hour while I was awake
- ☐ I had my sequential sleeves or foot cuffs on while I was in bed
- ☐ If ordered, I had my compression stockings on today
- ☐ I received my blood thinner

### ACTIVITIES

- ☐ I changed my position (turned) in bed with caregiver assistance every 2-3 hours as needed
- ☐ I had a physical therapy session this morning
- ☐ I had a physical therapy session this afternoon
- ☐ I was able to extend and bend my knee \_\_\_\_\_ degrees (active assisted range of motion)
- ☐ I sat in the chair or took a short walk in the evening with my caregiver
- ☐ I walked to the bathroom with a nurse or physical therapist
- ☐ I had occupational therapy and learned tips on dressing, bathing and use of safety equipment
- ☐ If ordered, I used the Continuous Passive Motion (CPM) machine
  - ☐ Before breakfast
  - ☐ After supper
- ☐ My range of motion on my CPM was increased by at least 10 degrees to \_\_\_\_\_ degrees
- ☐ If ordered, I did my heel slides (range of motion exercises) at least 4 times today

### TREATMENTS

- ☐ I had blood drawn to check my hemoglobin
- ☐ I had blood drawn to monitor my blood thinner (if on Coumadin®)
- ☐ I used my incentive spirometer (breathing machine) every hour while awake
- ☐ I took deep breaths and coughed 10 times every hour while awake
- ☐ My wound drain was removed
- ☐ My dressing was changed
- ☐ My catheter was removed (if in place since surgery)

### DIET

- ☐ I ate solid food
- ☐ I drank lots of fluids

### EDUCATION

- ☐ My nurse discussed my plan of care with me
- ☐ My nurse started instructions regarding use of blood thinners at home
- ☐ My nurse started instructions about the signs and symptoms of infection
- ☐ My nurse started instructions regarding signs and symptoms of blood clots
- ☐ Physical therapy has begun to teach me exercises I need to know

### DISCHARGE PLANNING

- ☐ A discharge planner visited me to discuss my plan of care for discharge



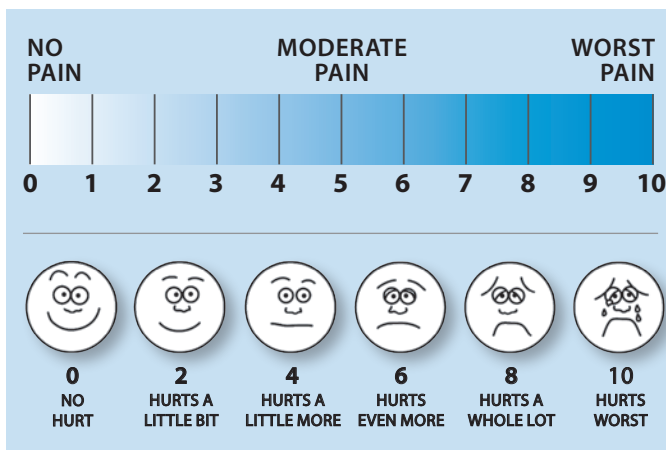
# Patient care map

## Post-op day 2

Date: \_\_\_\_\_

### PAIN MANAGEMENT

- ☐ Pain pills
- ☐ I discussed my comfort/function goal with my nurse



### DECREASE RISK FOR BLOOD CLOTS

- ☐ I did foot pumps every hour while I was awake
- ☐ I had my sequential sleeves or foot cuffs on while I was in bed
- ☐ If ordered, I had my compression stockings on today
- ☐ I received my blood thinner

### ACTIVITIES

- ☐ I changed my position (turned) in bed with caregiver assistance every 2-3 hours as needed
- ☐ I had a physical therapy session this morning
- ☐ I had a physical therapy session this afternoon
- ☐ I was able to extend and bend my knee \_\_\_\_\_ degrees (active assisted range of motion)

☐ I sat in the chair or took a short walk in the evening with my caregiver

☐ If ordered, I used the Continuous Passive Motion (CPM) machine

☐ Before breakfast

☐ After supper

☐ I walked to the bathroom with a nurse or physical therapist

☐ My range of motion on my CPM was increased by at least 10 degrees to \_\_\_\_ degrees

☐ If ordered, I did my heel slides (range of motion exercises) at least 4 times today

☐ I was able to transfer to a chair with minimal assistance

☐ I began to learn how to go up and down stairs and curbs

### TREATMENTS

☐ I had blood drawn to check my hemoglobin

☐ I had blood drawn to monitor my blood thinner (if on Coumadin®)

☐ I used my incentive spirometer (breathing machine) every hour while awake

☐ I took deep breaths and coughed 10 times every hour while awake

☐ My wound drain was removed

☐ My dressing was changed

☐ My catheter was removed (if in place since surgery)

### DIET

☐ I am on a regular diet

☐ I drank lots of fluids

☐ I need to increase fiber to prevent constipation

### EDUCATION

☐ My nurse discussed my plan of care with me

☐ My nurse started instructions regarding use of blood thinners at home

☐ My nurse started instructions about the signs and symptoms of infection

☐ My nurse started instructions regarding signs and symptoms of blood clots

☐ Physical therapy has begun to teach me how to go up and down stairs and curbs

### DISCHARGE PLANNING

☐ I reviewed my discharge plan of care with my discharge planner

☐ I have equipment I will need at home

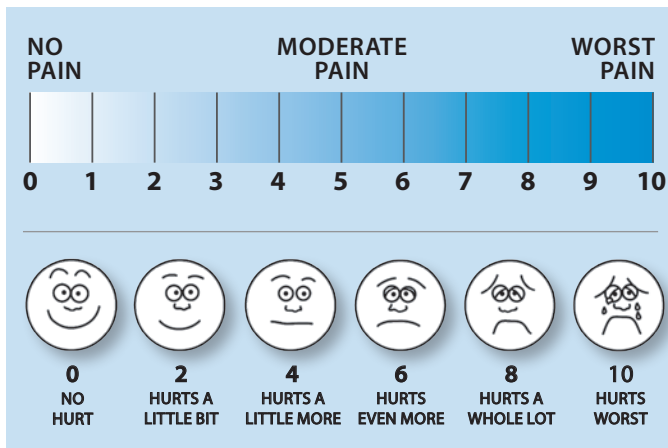
# Patient care map

## Post-op day 3

Date: \_\_\_\_\_

### PAIN MANAGEMENT

- ☐ Pain pills
- ☐ I discussed my comfort/function goal with my nurse



### DECREASE RISK FOR BLOOD CLOTS

- ☐ I did foot pumps every hour while I was awake
- ☐ I had my sequential sleeves or foot cuffs on while I was in bed
- ☐ If ordered, I had my compression stockings on today
- ☐ I received my blood thinner

### ACTIVITIES

- ☐ I changed my position (turned) in bed with caregiver assistance every 2-3 hours as needed
- ☐ I had a physical therapy session this morning
- ☐ I had a physical therapy session this afternoon
- ☐ I was able to extend and bend my knee \_\_\_\_\_ degrees (active assisted range of motion)

☐ I sat in the chair or took a short walk in the evening with my caregiver

☐ If ordered, I used the Continuous Passive Motion (CPM) machine

☐ Before breakfast

☐ After supper

☐ I walked to the bathroom with a nurse or physical therapist (or my caregiver if permitted)

☐ My range of motion on my CPM was increased by at least 10 degrees to \_\_\_\_\_ degrees

☐ If ordered, I did my heel slides (range of motion exercises) at least 4 times today

☐ I was able to transfer to a chair with minimal assistance

☐ I began to learn how to go up and down stairs and curbs

☐ If recommended, I had occupational therapy and practiced dressing, bathing and use of safety equipment

#### TREATMENTS

☐ I had blood drawn to check my hemoglobin

☐ I had blood drawn to monitor my blood thinner (if on Coumadin®)

☐ I used my incentive spirometer (breathing machine) every hour while awake

☐ I coughed and took deep breaths 10 times every hour while awake

☐ My dressing was changed

#### DIET

☐ I am on a regular diet

☐ I drank lots of fluids

☐ I need to increase fiber to prevent constipation

#### EDUCATION

☐ My nurse discussed my plan of care with me

☐ I received instructions regarding use of blood thinners at home

☐ I received instructions about the signs and symptoms of infection

☐ I received instructions regarding signs and symptoms of blood clots

☐ Physical therapy has begun to teach me how to go up and down stairs and curbs

#### DISCHARGE PLANNING

☐ I reviewed my discharge plan of care with my discharge planner

☐ I have equipment I will need at home

# Discharge Instructions



# Discharge instructions

Preparation for your discharge actually started the day your surgery was scheduled. Your orthopaedic care team works with your surgeon\* and medical

physician\* to ensure a timely discharge. It is very important that everyone involved fully understands the discharge expectations.

## DISCHARGE INSTRUCTIONS FOR KNEE REPLACEMENTS

BEFORE BEING DISCHARGED, THE FOLLOWING INFORMATION WILL BE DISCUSSED WITH YOU AND YOUR FAMILY OR PARTNER IN CARE

### Assistive device

- ☐ Walker
- ☐ Crutches
- ☐ Cane

### Weight bearing status for operated leg

- ☐ Weight bearing as tolerated
- ☐ \_\_\_\_\_% of weight bearing
- ☐ Touchdown weight bearing
- ☐ Non weight bearing

**No** pillows under operated knee

### Sock aid for putting on socks

### Follow up appointments

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Physician: \_\_\_\_\_

### Do not participate in running sports

### Resume driving when surgeon\* approves

### Return to work when surgeon\* approves

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**Incision care at home following joint replacement**

YOUR INCISION WILL BE CLOSED ON THE OUTSIDE BY ONE OF THE FOLLOWING:

---

Staples

---

Dermabond

---

Steri-strips

---

When you are discharged from the hospital, these will still be in place. You will need to keep the incision clean and dry. If steri-strips are present, keep them in place until seen by your physician. If the ends come loose and curl up, they may be trimmed off leaving the remaining steri-strip in place.

If your surgeon\* applied a silver dressing, the dressing should not be removed for seven days after surgery; your surgeon or your physical therapist will remove the dressing at your next appointment. You may shower with the dressing in place.

HERE ARE A FEW SUGGESTIONS TO HELP PROMOTE HEALING AND AVOID INFECTION:

---

Keep your incision clean and dry. You may not shower until directed by your surgeon.\*

---

You may wash the area gently with soap and water and pat dry after your first office visit. If you have staples, you may be asked to wait another couple of days after they are removed before showering.

---

Do not apply lotion or ointments to your incision unless directed by your surgeon.\*

---

NOTIFY YOUR SURGEON\* IF YOU NOTICE ANY OF THE FOLLOWING SIGNS:

---

Separation of incision line at any point

---

Increased temperature greater than 101 degrees or chills

---

Increased redness, swelling, or warmth of the skin around the incision

---

Increased pain at the incision site

---

Red streaks on the skin near the incision site

---

Tender bumps or nodules in your arm pits or groin

---

Foul smell from the incision

---

Pus leaking from the incision

---

Please call your physician\* with any questions or concerns.

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### Infection prevention

Infection is a possible complication of joint replacement surgery. Therefore, it is very important to take good care of yourself with preventative care, screenings, tests and procedures. If you ever experience signs or symptoms of an infection such as fever, chills, or pain, redness and/or drainage from the incision area, call your surgeon\*. It's possible an infection could start from a sore throat, urinary tract infection, deep cut or even an ear infection.

In the event of a major illness or emergency, you may need medical care. Unfortunately, some tests, diagnostic procedures and illnesses can place you at a greater risk for developing an infection in your new joint even years after surgery. That's because bacteria can be inadvertently introduced into your bloodstream in any number of ways. Once in the bloodstream, the bacteria can travel to your new joint and cause an infection because the artificial joint does not have your body's natural protection against infection.

Three of the most common healthcare situations you might encounter that can cause an infection are:

#### Dental care

Similar to dental care before your replacement surgery, dental care after surgery also can introduce bacteria into your bloodstream through cuts and trauma to the gums and gum lines. In anticipation of this risk, most surgeons\* recommend taking a one-time dose of antibiotics just prior to any dental work.

Your surgeon\* will have specific instructions and the length of time they need to be followed after joint surgery. Also, make sure your dentist and dental hygienist are aware of your new joint.

#### Urological care

Invasive procedures involving the urethra, bladder, ureters or kidneys are ways that bacteria can enter your system and contaminate your bloodstream. Needle biopsies of the prostate are included in this risk. Under normal circumstances, the body can usually fight off potential infection associated with these procedures. However, that's not necessarily true after joint replacement surgery. Your artificial joint is a potential infection site for these types of procedures so make sure to inform any medical personnel about your artificial joint before they perform an invasive urological procedure. More important, make sure you discuss any urological procedure with your orthopaedic surgeon\* before undergoing a procedure. Your surgeon\* will provide specific recommendations for you to follow. You also will be instructed how long to follow the recommendations after the procedure.

#### Colonoscopy

Colonoscopies can potentially introduce bacteria into the bloodstream and eventually your artificial joint. Speak with your surgeon\* and gastroenterologist\* about the precautions that need to be taken because it is important you have routine colonoscopy screenings. You want to make sure you follow their recommendations to protect you and your new joint.

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**Deep Vein Thrombosis (DVT)**

DVT is the formation of a blood clot within a deep vein, commonly the calf or thigh. The blood clot can either partially or completely block the blood flow in the vein.

**DVT CAN RESULT FROM LEG INACTIVITY BROUGHT ON BY:**


---

Surgery, especially on legs, hips, knees or abdominal area

---

Badly-broken leg bones or other trauma

---

Immobility or being bedridden

---

Cancer

---

Myocardial infarction (heart attack) or congestive heart failure

---

A severe infection

---

Pregnancy or use of oral contraceptives

---

Decreased circulation

---

Prior DVTs

---

Important activities you can do to increase your blood circulation are foot flexion and extension exercises. (See exercise on page 78). These involve moving your ankles up and down and tightening your leg muscles. Your physical therapist will show you how to perform these exercises.

**DVT signs and symptoms**

Because DVT can produce life-threatening complications, it is important for you to know and be able to recognize DVT symptoms.

ANY OR ALL OF THE FOLLOWING CAN BE A SYMPTOM AND IF NOTICED, YOU SHOULD CALL YOUR PRIMARY CARE PHYSICIAN\* IMMEDIATELY.

---

Swelling in the calf or thigh area

---

Pain in the calf area or behind the knee

---

Increased pain with standing or walking

---

Warmth/redness/tenderness in the affected area

---

Possible low-grade fever

---

DVT also can occur without any of the above symptoms

**Pulmonary embolism (PE)**

The most common and serious complication of DVT is a pulmonary embolism (PE). A PE occurs when a blood clot breaks free from a vein wall and travels to the lung where it blocks an artery. A PE is life threatening and needs immediate medical attention.

**SIGNS AND SYMPTOMS OF A PE INCLUDE:**


---

Sudden onset of chest pain

---

Sudden unexplained cough or coughing up blood

---

Shortness of breath

---

Lightheadedness, dizziness or cold sweats

---

Feelings of restlessness, anxiety or rapid heartbeat

---

Sense of impending doom

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# Leaving the Hospital



# Leaving the hospital

## Discharged

Once your physicians\* and orthopaedic care team determine you are ready to be discharged from the hospital, you will embark on your next level of rehabilitation. You may be discharged to your home or to a rehabilitation facility, depending upon how you've progressed with your therapy in the hospital. Most people will continue to receive physical therapy for a couple of weeks in their home or as an outpatient.

This is an excellent time for the people who wanted to visit you in the hospital to visit you at home. It gives your caregiver/coach a break and allows you quality time with family and friends.

We strongly recommend you have someone stay with you for at least one week after your discharge to help ensure a safer recovery.

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### Notes:

# Safety Precautions





# Safety precautions

Your orthopaedic care team will teach you safety precautions. Your incision site and body needs time to heal and adjust to the new joint. Your surgeon\* will instruct you on when you can resume normal activities.

Before leaving the hospital, you will practice walking, transferring from your bed and a chair and dressing yourself. If your home has stairs, you also will practice climbing stairs.

Follow your physician's instructions for your individual condition. The following safety precaution instructions are general guidelines.

## TRANSFERS IN AND OUT OF BED (ILLUSTRATION A)

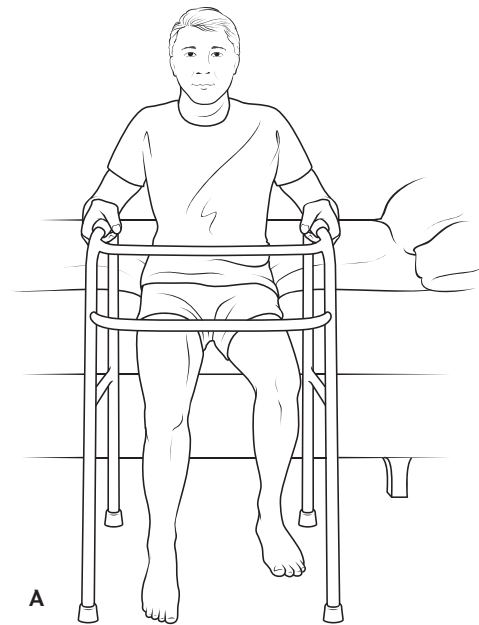
Back up to the bed until you feel the back of your knees touching it. Place your operated leg out in front of you. Reach for the bed with one arm and keep other arm on walker. Slowly lower yourself onto the bed.

Scoot back onto the bed as much as possible.

Lift one leg at a time onto the bed until both legs are supported. Continue to move legs to the center of the bed.

Recline back.

To get out of bed, reverse the steps.



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### Transfers in and out of a chair

#### INTO A CHAIR:

---

Back up to the chair until you feel the back of your knees touching it.

---

Place your operated leg out in front of you. If using crutches, move both crutches to one arm.

---

Reach for the armrests and slowly lower yourself onto the chair. Continue to keep the operated leg straight.

---

Scoot to the back of the chair.

#### OUT OF A CHAIR:

---

Scoot forward to the edge of the chair so both feet are on the floor.

---

Place your operated leg out in front of you and keep it there.

---

Bend your knee and hip on the non-operated leg and try to keep most of your weight on this leg.

---

Using your hands on the armrests, push yourself with your arms and non-operated leg to stand. Do not use walker to pull yourself up; that may cause the walker to tip and could result in a fall. If using crutches, move crutches to one arm and push to stand with one arm on crutches and one arm on armrest.

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## Transfers in and out of a car

### CAR TRANSFERS (ILLUSTRATIONS B AND C):

Have the driver open the passenger-side front door for you and make sure the front seat is as far back as possible. You also can have the backrest reclined to maximize your space.

Back up to the car using your walker until the backs of your knees touch the edge of the car.

Place your operated leg out in front of you and keep it straight throughout the transfer.

Place one hand on the walker and other hand on the frame of the vehicle.

Slowly lower yourself onto the edge of the seat.

Scoot as far back as possible on the seat.

Turn towards the dashboard (making sure not to bend torso/head forward) as you bring one leg into the car at a time.

Reposition seat to allow for proper seat belt function and comfort.

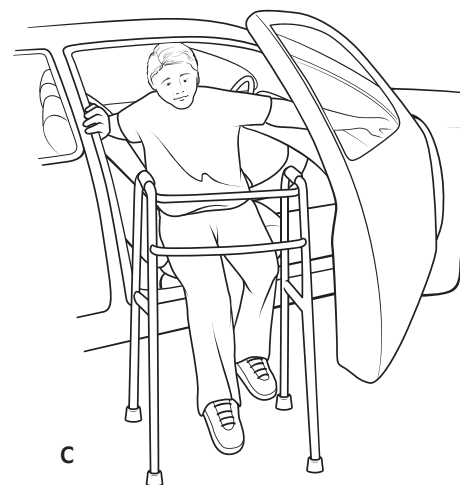
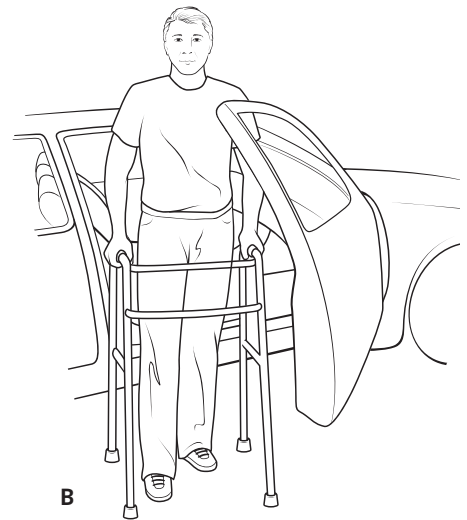
Have driver close the door for you.

To get out of car, reverse the steps.

### RECOMMENDATIONS:

Use a plastic trash bag on car seats for easier scooting and sliding.

Do not drive until your surgeon\* gives you permission.



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## Stairs

### GOING UP STAIRS (ILLUSTRATION D):

Use crutches or cane in one hand and with the other hand hold onto the railing. Support your weight evenly and lift non-operated leg onto the step.

Bring your operated leg up onto step and then bring up cane or crutches.

If no railing, use crutches in both arms.

### GOING DOWN STAIRS (ILLUSTRATION E):

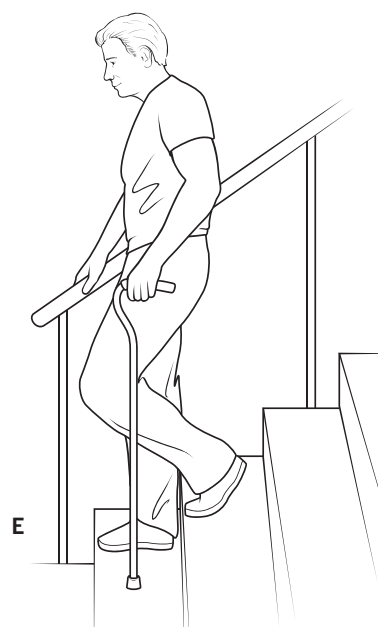
Use crutches or cane in one hand and, with the other hand, hold onto the railing.

Lower crutches or cane onto step below.

Support your weight evenly and bring down operated leg.

Lower non-operated leg.

If no railing, use crutches in both arms.



## Dressing and Undressing

### SLACKS AND UNDERWEAR:

Sit on the side of the bed or in an armchair. Your occupational therapist will determine if you need adaptive/assistive devices to dress and undress.

To put on underwear and slacks, use reacher and secure the waist of the underwear or slacks with the hook. Lower clothing to the floor with the reacher and slip slack leg over your operated leg first (illustration F). Then do the same for your non-operated leg.

Do not lean or bend forward to reach your slacks or underwear. (Perform this process first with underwear and then repeat with slacks before standing).

Pull both the underwear and slacks up over your knees. Stand with walker in front of you, and pull up both the slacks and underwear.

When undressing, take the slacks and underwear off your non-operated leg first, reversing step #3 above. Use reacher to push off slacks and underwear.



F

### SOCKS:

If your occupational therapist ordered a sock aid, place your sock over the end of the aid, opposite from the pulls. While holding the pulls, lower the sock and aid to the floor. Place your foot into the sock and pull it toward you until the sock is on your foot and the aid is free (illustration G).

To take socks or stockings off, use the end of the long handled shoe horn or the post on the reacher and push the sock down the calf, over the heel by hooking the back of the heel and then off the foot (illustration H)



G

### SHOES:

If you are unable to bend over to put on your shoes, it is advisable to wear slip-on shoes or use elastic shoelaces.

Use the long-handled shoehorn to put on or take off your shoes. Do not use opposite foot to take off shoe.

Position your shoe for your operated leg in front of the foot or to the outside of the foot only.

Hint: It may be easier to put shoe on operated leg when standing.



H

## Toileting

### TOILET TRANSFER (ILLUSTRATIONS I AND J):

Use a toilet, bedside commode or other equipment recommended by your occupational therapist.

Back up to the toilet until you feel the back of your knees touching it. Reach for the armrests or sink and slowly lower yourself onto the toilet, keeping your operated leg out in front.

Bend your knee and hip on the non-operated side as you lower yourself onto the seat, putting most of your weight on the unaffected (non-surgical) side. Remember to keep your operated leg straight out. You may want to place a pillow behind you and lean back (slightly).

Reverse the procedure for getting up, using one hand on the armrest or sink to push up and one hand on the walker. Make sure you have your balance before grabbing the walker.

**I****J**

## Bathing and Showering

### IF YOUR HOME THERAPIST RECOMMENDS TUB TRANSFER USING A CHAIR OR TRANSFER BENCH:

If your tub is not wide enough for a shower chair, a tub transfer bench is recommended.

Back up to the tub until you feel the back of your knees touching the tub or transfer bench.

Reach back for the armrests and slowly lower yourself onto the transfer bench, keeping your operated leg out in front.

Sit down on the edge of the bench, continuing to keep operated leg straight out.

Scoot straight back as far as possible on chair or transfer bench.

Lift legs over the lip of the tub one leg at a time. Turn to face the faucet.

To transfer out of the tub, reverse the procedure. Lift legs out of the tub one at a time, scoot forward and then, using one hand on the armrest and one on the walker, push yourself to stand.

### WALK-IN SHOWER TRANSFER:

Back up to the shower using your assistive device (illustration K).

Bend your knee and hip on the non-operated side as you lower yourself onto the shower chair seat, putting most of your weight on the unaffected (non-surgical) side (illustration L).

Lift legs over lip of shower stall and turn to face shower head (illustration M).

To transfer out of the shower, reverse the procedure. Turn toward your walker and lift legs over the shower stall one at a time. Grab the walker and placing your weight on your non-operated leg, raise yourself until standing.

Shower only after your surgeon\* gives you permission (typically after your staples are removed).

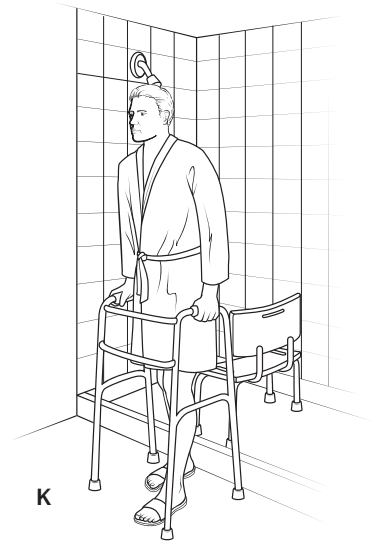
### RECOMMENDATIONS:

Shower only after your surgeon\* gives you permission (typically after staples are removed).

Always have a family member present for safety.

Use a hand-held shower hose.

Use long-handled bath sponge.



K



L



M

### Home precautions

To reduce the risk of falls or injury in your home following surgery, it is important for you to make it as safe as possible. This is fairly simple to do and can actually be done before your surgery. Most of the suggested modifications require no extra equipment or expense.

#### THE FOLLOWING ARE HOME PRECAUTIONS YOU SHOULD FOLLOW:

---

Check hallways, stairs or traffic areas of your home for potential tripping hazards such as loose carpeting or throw rugs. Remove any clutter on the stairs.

---

Check the location of extension cords or phone cords to make sure they are not in a pathway.

---

Remove furniture that may cause a fall such as a rocking chair, glider, coffee table or ottoman.

---

The bathroom is the most accident-prone room in your home. Use non-slip strips on the bottom of the tub or shower.

---

Remove all throw rugs around the house and in the bathroom.

---

Install grab bars by the toilet and in the shower or tub area. Soap dishes, towel bars or doorknobs are not acceptable substitutes for grab bars. Your home care therapist will make recommendations for any other items you might need in the bathroom during the first visit following your discharge.

---

Place frequently used kitchen items in easily accessible places such as on the countertop or tables at or just below waist level, or just at shoulder height.

---

Do not use a “reacher” for overhead items.

---

If possible, have your bed accessible from both sides.

---

Do not use furniture that has casters.

---

Place portable phones in rooms where you will spend most of your time and in your bedroom.

---

Use nightlights in heavily traveled hallways and in bathrooms.

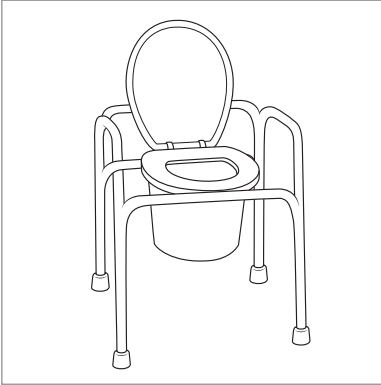
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If you need help getting your home ready or if you're unsure what needs to be done and you don't want to wait until the home therapist visits after your surgery, CNS Home Health and Hospice will provide a pre-assessment for a fee. This is not required and Medicare does not cover the cost. A CNS therapist will make recommendations and provide a list of various service providers who can make the modifications if you can't.



## Adaptive equipment

3 in 1 commode



Raised toilet seat



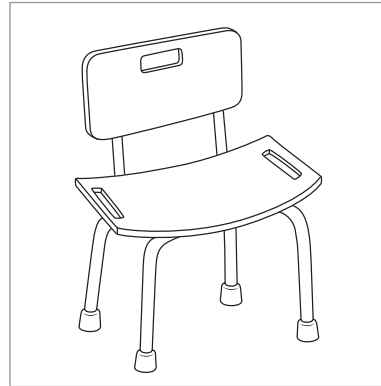
Raised toilet seat with arm and clamp



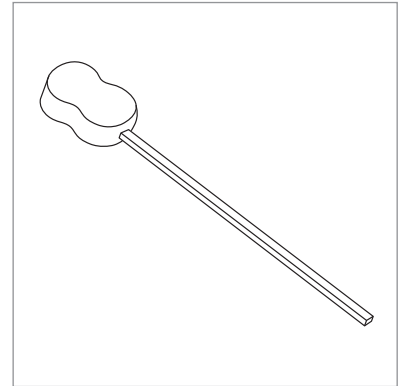
Toilet safety frame



Shower chair



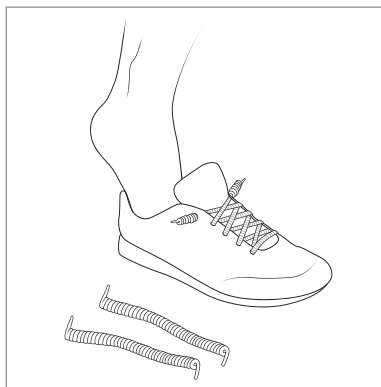
Bathing sponge



Elastic laces



Spiro elastic laces



Notes:

# Outpatient Physical Therapy



# Outpatient physical therapy

Physical therapy is the most important part of your joint recovery. Your surgeon\* can implant a new joint, but it is your job to do the required physical therapy exercises to ensure your joint returns to an optimum functioning level. That's why we recommend you work with a physical therapist specially trained in orthopaedics and joint replacement.

The physical therapist will instruct you on the correct exercises, as well as how and when to increase your exercise time and repetitions to move your recovery along at a safe and beneficial pace.

Immediately following your surgery, an inpatient physical therapist will work with you to get you up and walking—in most cases the same day of your surgery. This therapist is part of your orthopaedic care team and will work with you twice a day until you are discharged. At that point, your therapy can continue at your home with another member of the orthopaedic care team—a CNS Home Health and Hospice physical therapist.

## Cadence Health outpatient physical therapy

You will continue physical therapy at home until your therapist and surgeon\* decide you can progress safely to outpatient physical therapy. At this point, you have an important decision to make on where to continue your physical therapy and rehabilitation. We suggest you continue with yet another member of our orthopaedic care team—a Cadence Health outpatient physical therapist.

At Cadence Health, our licensed physical therapists will work together and communicate with your physician\* during your rehabilitation process. They also will develop a program to meet your individual needs and goals. Your therapy sessions are on a one-to-one basis with your therapist and can be with the same therapist during your entire outpatient treatment. This helps to ensure continuity and the ability to measure and accurately report your progress to your physician\*. Plus your medical records are accessible 24/7 to both your physician\* and therapist.

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#### WHEN DECIDING UPON WHERE YOU WILL GO FOR OUTPATIENT THERAPY, YOU SHOULD CONSIDER THE FOLLOWING:

---

Is the person performing therapy a licensed therapist or only a trainer/instructor?

---

Will you have therapy with the same individual throughout your rehabilitation?

---

How will this person communicate your progress to your surgeon\*?

---

Does this person have access to your medical records?

---

What type of accreditation does this outpatient facility have? How long has it been treating patients? What is the most common type of treatment performed at this facility? How much experience do they have with joint replacements? How many joint replacement patients have they treated?

---

Do they have people to park your car or assist you in bad weather?

---

Do they have evening and weekend appointment times?

---

Is this facility in your insurance “network”?

#### Pain management during physical therapy

It is important to have adequate pain management to reach your optimal functioning level, but still be able to exercise. If you haven’t had any pain medication within three hours of your scheduled physical therapy session, we suggest you take some at least 30 minutes before you begin exercising. With time you should be able to decrease the amount of pain medication required. Make sure you talk to your therapist about your pain level and the need for medications if it doesn’t decrease after several weeks.

# Exercises

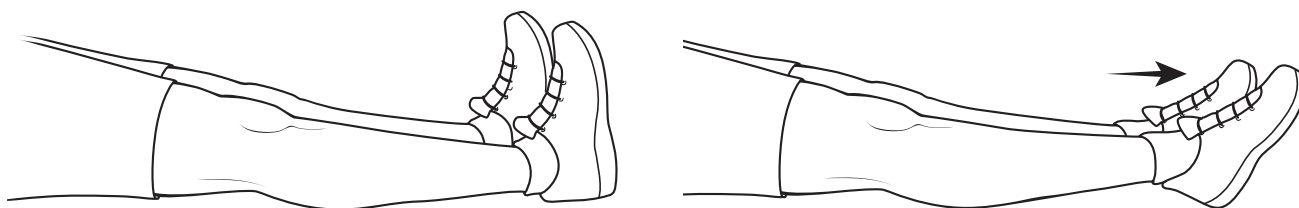
Exercise is very important following your knee replacement surgery.

The exercises on the next few pages are recommended before and after surgery. Your physical therapist also may give you additional exercises not listed in this book. Do only those exercises approved by your physical therapist.

Begin with ten repetitions of each exercise at least two times a day. As you get stronger, you can increase the number of repetitions and duration. Remember, the exercises should be done on a firm surface and don't hold your breath. It also is important to have adequate pain management to reach your optimal functional level. Therefore, we recommend you take your pain medication 30 minutes before your therapy session if you haven't had any in the past three hours.

### ANKLE PUMPS

---



With your legs straight, gently flex and extend your ankles moving through full range of motion. Repeat ten times for each leg.

### QUAD SET

---

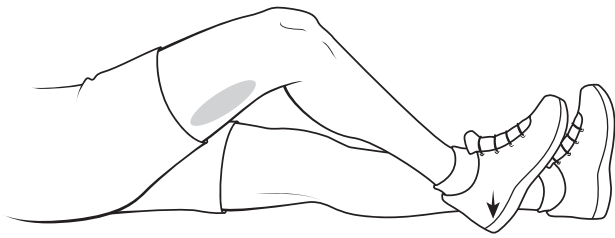


With your legs straight, tighten the TOP of your thigh to make the knee as straight as possible. Hold the contraction and count to five. Relax. Don't forget to breathe. Repeat ten times for each leg.



### HAMSTRING SET

---



Lie on your back with your operated leg slightly bent; push your heel into the bed. Hold for a count of five. Relax. Repeat ten times.

### GLUTEAL SET

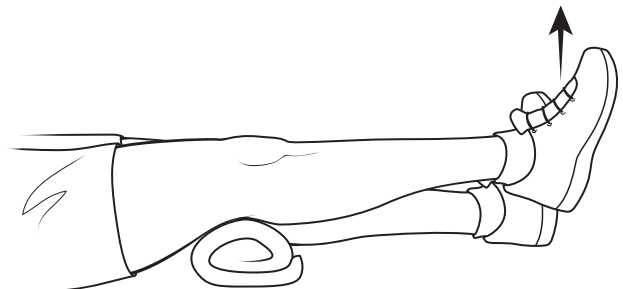
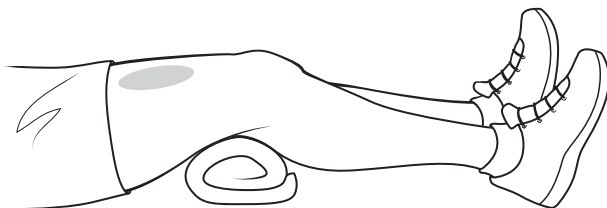
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With your legs straight squeeze your buttocks together and count to five. Relax. Repeat ten times.

### SHORT ARC QUAD

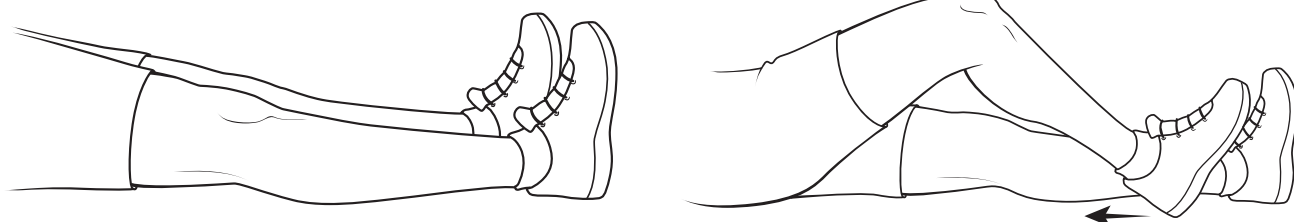
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With a rolled up towel or pillow under your knee tighten your thigh to lift your heel off the bed and straighten your knee. Hold for a count of five. Don't forget to breathe. Slowly lower your leg. Repeat ten times for each leg.

## HEEL SLIDES

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Lie on your back with your legs straight. Bend your knee by sliding your heel toward your buttocks as far as possible. Hold and count to five. Slide your heel and leg back to a straight position. Relax. Repeat ten times for each leg.

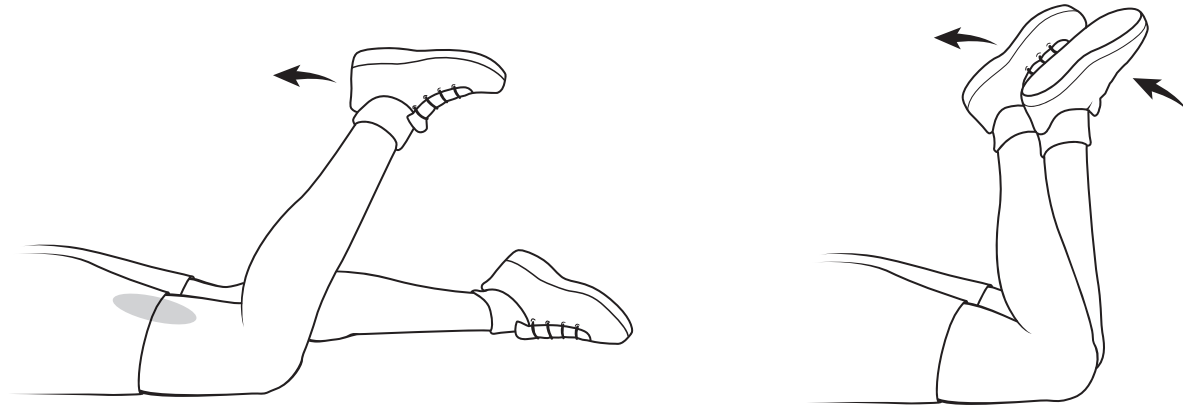
## STRAIGHT LEG RAISE

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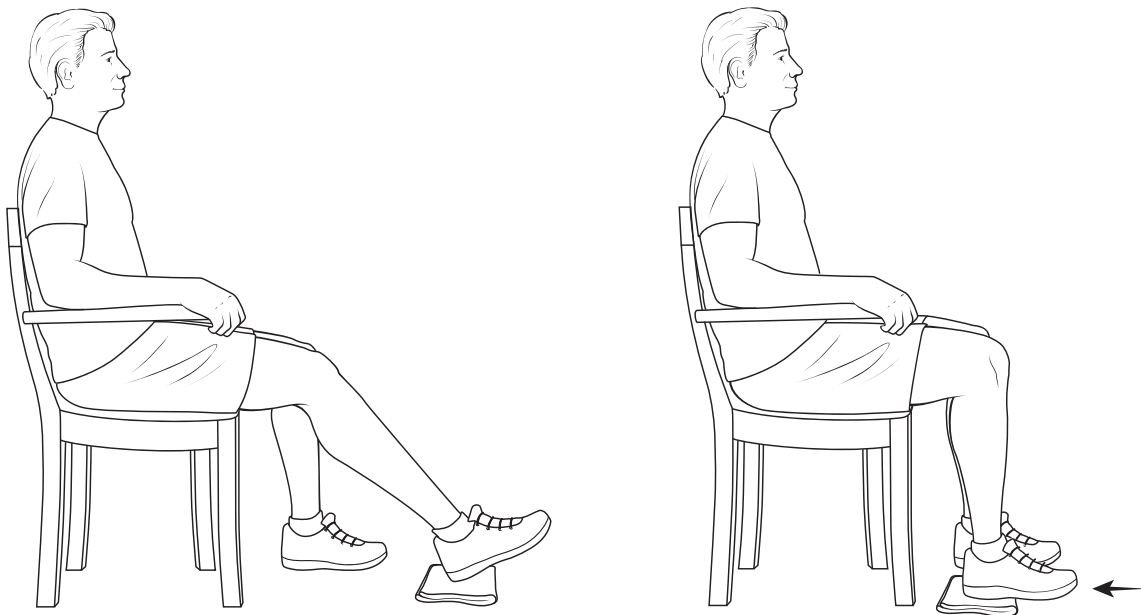
Lie on your back. Tighten muscles on front of your thigh, then slowly lift your leg 6 to 8 inches while keeping your knee straight. Then, slowly lower your leg. Repeat ten times for each leg.

### PRONE KNEE FLEXION



Lie on your stomach. Slowly bend your operated knee as far as you can toward your buttocks. Then with your other leg, gently press the operated leg to try and bend it more. Hold for five seconds. Repeat ten times.

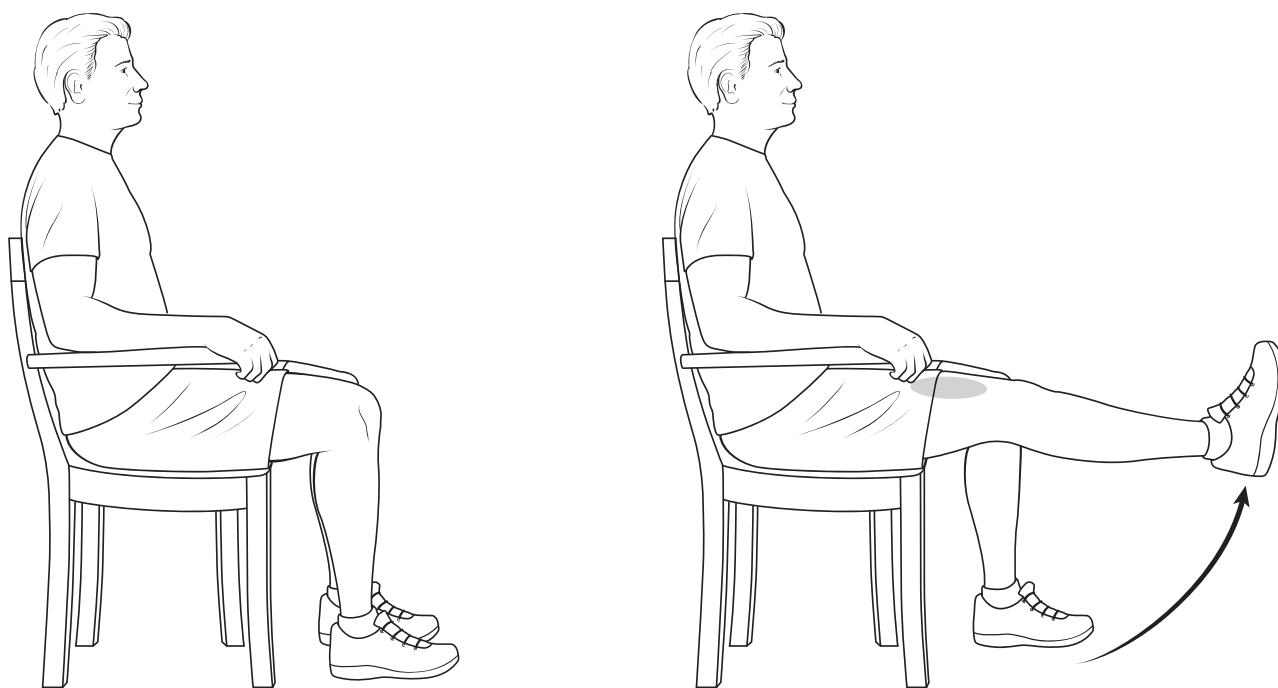
### SITTING HEEL SLIDE



Sit in a chair with one leg extended and that foot resting on a piece of wax paper or aluminum foil on a carpeted surface or a towel on a smooth surface. Press down on your extended heel and slide it toward the chair keeping your heel flat and on the floor. With your heel still on the wax paper or foil, extend your leg pushing your foot away from the chair. Make sure to keep your heel on the floor. Repeat the forward and back movements ten times for each leg.

SITTING KNEE EXTENSION

---



Sit in a chair with your feet on the floor. Slowly, extend one knee as straight as possible tightening the top of your thigh. Hold for a count of five and then slowly lower your leg. Repeat ten times for each leg.

### STANDING HEEL RAISES

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Hold the back of a chair or a counter for balance. Slowly, raise both heels off the floor so you are standing only on your toes. Repeat ten times.

### STANDING HIP EXTENSION

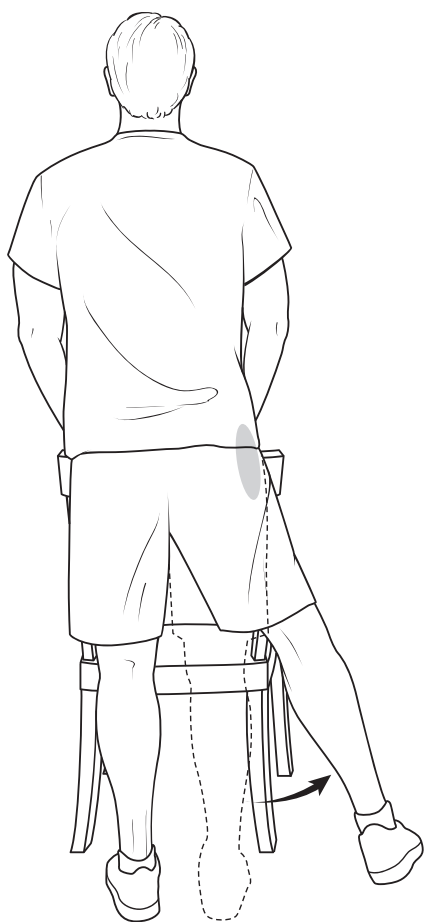
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Hold the back of a chair or a counter for balance. Slowly, extend one leg behind you keeping your knee straight. Then, slowly lower the leg to a standing position. Repeat ten times for each leg.

### STANDING HIP ABDUCTION

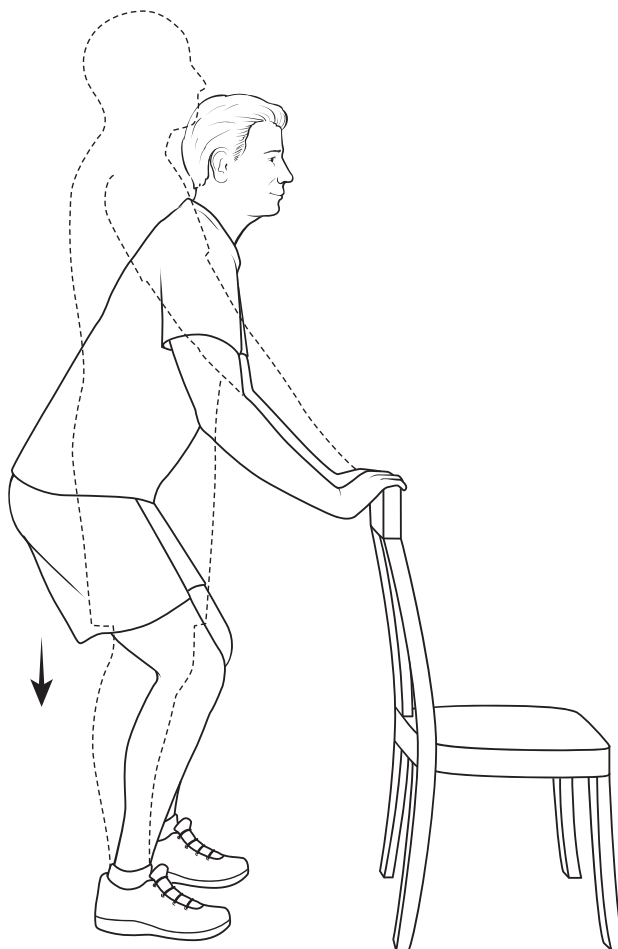
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Holding the back of a chair or counter for balance, slowly raise one leg out to the side keeping your leg straight. Then, slowly return the leg to a standing position. Repeat ten times for each leg.

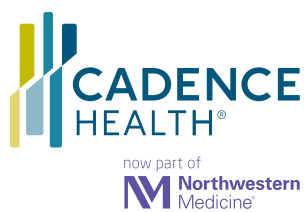
### MINI SQUAT

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Holding the back of a chair or counter for balance, stand with your feet flat on the floor and shoulder width apart. Slowly, bend both knees to a comfortable range and then slowly straighten both legs to a standing position. Repeat ten times.





Delnor Hospital  
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