

A photograph of a person walking a dog on a dirt path covered in fallen autumn leaves. The person is wearing a dark jacket, blue jeans, and a light-colored cap. The dog is a medium-sized brown dog. The path is surrounded by dense green and yellow foliage. The scene is brightly lit, suggesting a sunny day.

# A Patient's Guide to Total Joint Replacement

*The heart and science of medicine.*

— THE —  
**University of Vermont**  
HEALTH NETWORK

**Central Vermont Medical Center**

# WELCOME

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We are very pleased that you have chosen us for your joint replacement surgery. We are committed to the highest quality care in the most collaborative, efficient and effective manner. The University of Vermont Health Network - Central Vermont Medical Center has brought providers together in our area to ensure you have an outstanding outcome. We feel strongly that your home is the best place for you to recover after surgery and will work with you to help plan for this. This will enable you to effectively heal and recover just prior to transitioning to outpatient care. We will work together prior to and after surgery to ensure your success. This guide has been developed to provide you with the information and resources that will support you through your joint replacement surgery and recovery. We urge you to read this thoroughly, and bring it with you to your surgery and all your appointments.

Sincerely, Your Hip and Knee Team

*CVMC Orthopedic Surgery, CVMC Rehabilitation Therapies,*

*CVMC Care Management, Bayada Home Health Care,*

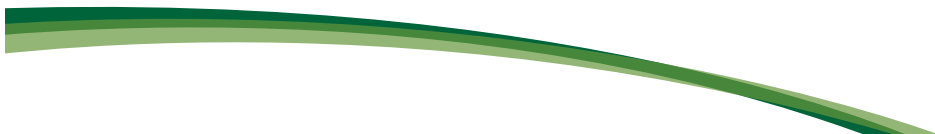
*VNAs of Vermont*



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## PREPARING FOR YOUR SURGERY

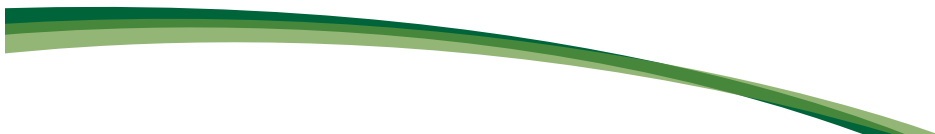
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- Make plans with friends and family to provide transportation and assistance at home for 10-14 days after surgery – your stay in the hospital may only last one to two days.
- Arrange living space to minimize clutter and obstacles in your home environment
- You might be called by an Occupational Therapist to talk about home modifications for safety. Consider living on your first floor: rails on stairs to get into your house; bathroom and bed on the first floor; bathroom grab bars; tub seat and toilet seat riser
- Attend total joint class to learn more about your upcoming surgery:
  - » Confirm you are coming by calling CVMC Care Management at **802-371-4357**
  - » Our classes are offered at CVMC the first Thursday of every month, from 2:00 - 3:00 p.m. in the Board Room.
- Perform pre-surgical strengthening exercises as covered in guide. Your surgeon may recommend Prehab with physical therapy so you are strong before surgery
- Practice using walker or crutches
- Have a thermometer available to use after surgery
- Think about who you would like for home health services and outpatient therapy
- Arrange for financial assistance if needed
- Pre-operative visit with your PCP and other specialist recommended by your surgeon
- Complete required blood work, x-rays and EKG (notify your surgeon's office of any health changes)
- Fill out the advance directive by downloading this form and bring it with you on the day of surgery: [vtethicsnetwork.org/adforms.html](http://vtethicsnetwork.org/adforms.html)
- Talk to your surgeon, before surgery, to establish a plan regarding iron intake and use of blood thinners. Stop taking Aspirin, Motrin, Ibuprofen, Aleve & Naproxen one week before surgery
- You will meet with your surgeon prior to surgery to discuss the details of your surgery
- Follow all instructions (fasting, medications, etc.) given to you by the Same Day Surgery Department

## DAY OF SURGERY

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- Shower/bathe, shave & shampoo the night before or the morning of surgery
- Arrive one hour prior to your surgery, wearing loose clothing
  - » Same day surgery will inform you the exact time to arrive
  - » Report to the Registration Desk in the main lobby of Central Vermont Medical Center (pre-registration can be done prior to surgery)
- Leave all jewelry, valuables and medicines (except nebulizers and inhalers) at home
- Things to bring with you:
  - » A complete list of current medications
  - » Toiletries, eye glasses, contact lenses
  - » Night clothes, bathrobe, slippers
  - » Book or magazines
  - » Insurance cards
  - » Means of payment for copay or deductible
  - » A copy of your advance directives/ living will/ health care proxy
  - » Any medical equipment essential to your stay (walker, crutches and/or CPAP)
- Do not eat or drink after midnight the night before your surgery
- Check in with patient registration upon arriving at the hospital
  - » Or pre-register online prior to surgery: [cvmc.org/online-registration](https://cvmc.org/online-registration)
- Up to two family members are welcome to wait in the waiting room while you are in surgery/ recovery



## DURING THE PROCEDURE

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Generally, hip/knee replacement surgery follows this process:

- You will be positioned on the table
- A urinary catheter will be inserted in your bladder
- The anesthesiologist will monitor your vital signs (heart etc.)
- Skin will be cleaned & shaved as needed where the surgery will take place
- The surgeon will make an incision in the hip or knee area and replace the damaged joints

**NEW KNEE JOINT**



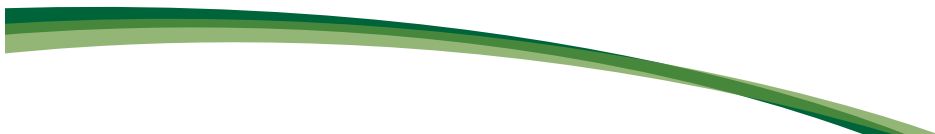
**NEW HIP JOINT**



## RECOMMENDATIONS FOR YOUR NEW TOTAL KNEE REPLACEMENT

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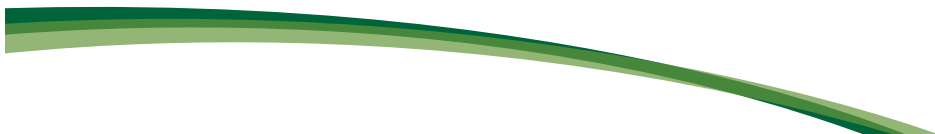
- After surgery, place pillows under your ankles/ calves (not knees) to encourage knee straightening
- It is important to ice and elevate your operated knee for 15-20 minutes per hour throughout the day as needed for pain control and to decrease swelling until instructed otherwise
- Use crutches or walker as advised by your physical therapist
- You may have a Continuous Passive Motion (CPM) Machine
- Most likely you will get up out of bed the night of surgery with assistance
- Sit for short periods initially (30-60 minutes) and increase as tolerated
- Walk 2-3 times daily with assistance of your healthcare professional and increase as tolerated



## RECOMMENDATIONS FOR YOUR NEW TOTAL HIP REPLACEMENT (ANTERIOR APPROACH)

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- Do not step backwards while turning toes outward with surgical leg
- Do not lie on stomach
- When turning in bed, roll towards operated hip
- When walking, do not pivot on your operated leg
- It is important to ice and elevate your operated hip for 15-20 minutes per hour throughout the day as needed for pain control and to decrease swelling until instructed otherwise
- Most likely you will get up out of bed the night of surgery with assistance
- Sit for short periods of times initially (30-60 minutes) and increase as tolerated
- Walk 2-3 times daily with the assistance of your healthcare professional and increase as tolerated

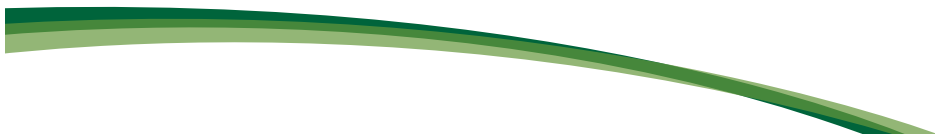




## RECOMMENDATIONS FOR YOUR NEW TOTAL HIP REPLACEMENT (POSTERIOR APPROACH)

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- Do not cross your legs, keep a pillow between your legs when in bed
- Do not sit in too low a chair – keep knees slightly lower than your hips
- Do not lean forward while sitting in a chair – slide operated foot in front of you when getting in and out of a chair
- Do not bend forward to put on pants/socks or for hygiene, use a reacher, sock aid and long handled sponge
- Do not turn in your hip and knee when dressing and bathing
- Have hospital bed in a flat position several times a day to stretch the muscles in front of your hip and thigh
- When turning in bed, roll towards operated hip
- When walking, do not pivot on your operated leg
- It is important to ice and elevate your operated hip for 15-20 minutes per hour throughout the day as needed for pain control and to decrease swelling until instructed otherwise
- Most likely you will get up out of bed the night of surgery with assistance
- Sit for short periods of times initially (30-60 minutes) and increase as tolerated
- Walk 2-3 times daily with the assistance of your healthcare professional and increase as tolerated

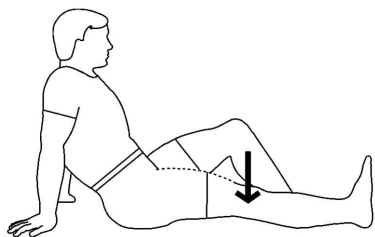


## THErapy AFTER YOUR NEW JOINT REPLACEMENT

It is important to begin moving the new joint soon after surgery. Nurses may help you get out of bed the night of surgery. One of our therapists will meet with you the day after your surgery to plan your exercise program. We will teach you to get in and out of bed, make sure you understand your movement precautions, and be sure you are safe with your walking device. An occupational therapist may also treat you to ensure you can perform daily activities such as dressing. We will continue to work with you while you are in the hospital and help you transition to your home. Care will be provided by a home health physical therapist.

You should perform the exercises below and on the following pages (as able before surgery and as directed by your physical therapist after surgery).

### QUAD SETS

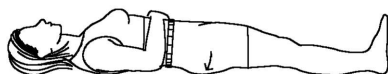


- Sit with leg extended, knee supported with towel roll.
- Tighten quad muscles on front of leg, trying to push back of knee downward.

#### **Special Instructions:**

- Do not hold your breath.
- Perform 1 set of 10 repetitions, three times a day.
- Hold exercise for 10 seconds

### GLUTEAL SETS

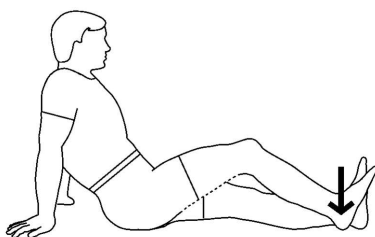


- Lie on back with legs straight.
- Squeeze buttocks together.
- Hold and repeat.

#### **Special Instructions:**

- Perform 1 set of 10 repetitions, three times a day.
- Hold exercise for 10 seconds

### HAMSTRING SETS



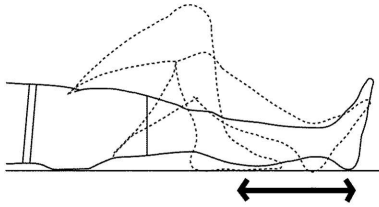
- Sit with leg extended, knee slightly bent.
- Without moving leg, tighten muscles on back of leg, trying to push heel down.

#### **Special Instructions:**

- Perform 1 set of 10 repetitions, three times a day.
- Hold exercise for 10 seconds

# THErapy AFTER YOUR JOINT REPLACEMENT

## HEEL SLIDES

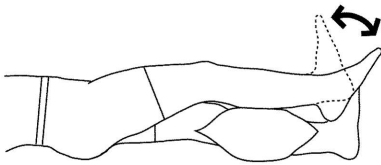


- Lie on back with legs straight.
- Slide heel up to buttocks.
- Return to start position.

### **Special Instructions:**

- Perform 1 set of 10 repetitions, three times a day.

## ELEVATED ANKLE PUMPS

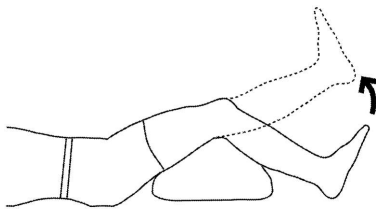


- Lie on back with foot elevated up on a pillow.
- Move foot up and down, pumping the ankle.

### **Special Instructions:**

- Perform 1 set of 20 repetitions, three times a day.

## SHORT ARC QUADS

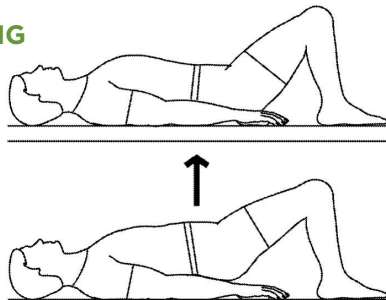


- Lie on back, with involved leg bent to 45 degrees, supported with a pillow, as shown.
- Straighten leg at knee.
- Return to start position.

### **Special Instructions:**

- Perform 3 sets of 10 repetitions, three times a day.

## BRIDGING

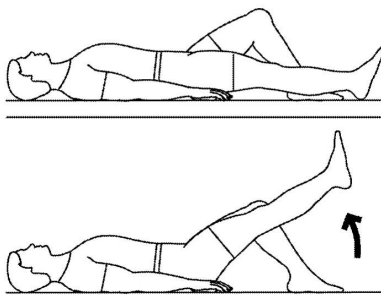


- Lie on back with knees bent.
- Lift buttocks off floor.
- Return to start position.

### **Special Instructions:**

- Maintain neutral spine.
- Perform 3 sets of 5 repetitions, twice a day.

## STRAIGHT LEG RAISE



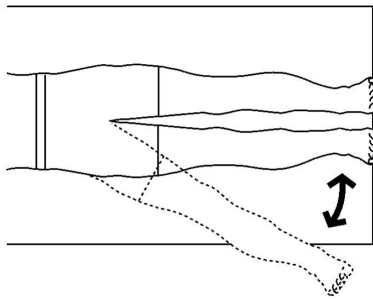
- Lie on back with uninjured knee bent as shown.
- Raise straight leg to thigh level of bent leg.
- Return to starting position.

### **Special Instructions:**

- Perform 3 sets of 5 repetitions, twice a day.

# THErapy AFTER YOUR JOINT REPLACEMENT

## HIP EXTENSIONS

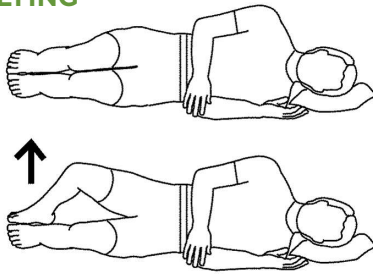


- Lie on back on firm surface, legs together.
- Move leg out to side, keeping knee straight.
- Return to start position.

### **Special Instructions:**

- Use a pillow case to reduce friction.
- Perform 3 sets of 5 repetitions, twice a day.

## HIP SIDELYING

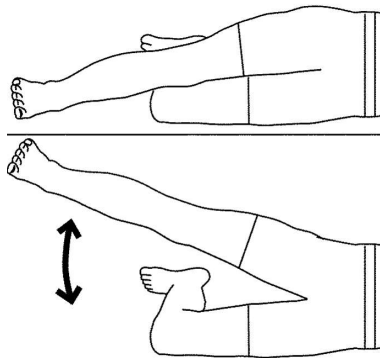


- Lie on side with knees bent, feet together.
- Lift top knee upward.
- Lower and repeat.
- Repeat exercise on other side.

### **Special Instructions:**

- Perform 3 sets of 10 repetitions, twice a day.
- Rest 1 minute between sets.

## HIP LIFTS

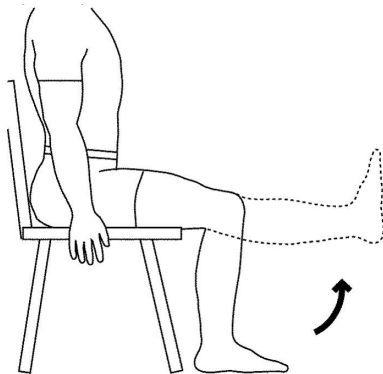


- Lie on uninjured side, with lower knee bent for stability.
- Keep knee straight on involved leg, lifting leg upward.
- Return to start position and repeat.

### **Special Instructions:**

- Do not roll trunk forward or backward
- Perform 3 sets of 5 repetitions, twice a day.

## KNEE EXTENSIONS



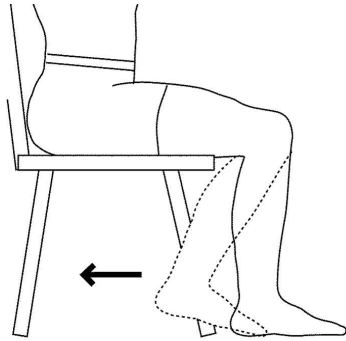
- Sit, with involved leg bent to 90 degrees, as shown.
- Straighten leg at knee. (Use other leg to assist if needed)
- Return to start position.

### **Special Instructions:**

- Perform 1 set of 10 repetitions, twice a day.
- Hold exercise for 10 seconds.

# THErapy AFTER YOUR JOINT REPLACEMENT

## SEATED KNEE FLEXION

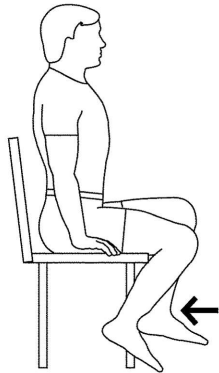


- Sit in chair, moving heel of the involved leg under chair, through full range, as shown.
- Return to start position.

### **Special Instructions:**

- Perform 3 sets of 10 repetitions, twice a day.

## ASSISTED SEATED KNEE FLEXION

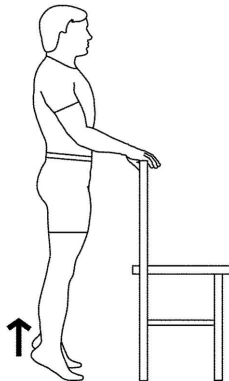


- Sit in chair.
- Move heel of involved leg under chair.
- Place other leg in front and push back.
- Hold stretch, relax, and repeat.

### **Special Instructions:**

- Perform 1 set of 10 repetitions, twice a day.
- Hold exercise for 10 seconds.

## HEEL RAISES

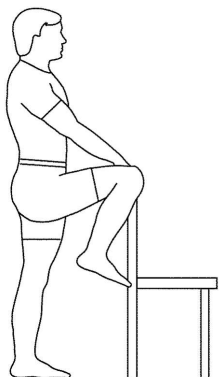


- Stand, using chair for balance.
- Raise up on toes, through full range.
- Return to start position and repeat.

### **Special Instructions:**

- Perform 3 sets of 10 repetitions, twice a day.

## STANDING MARCHES



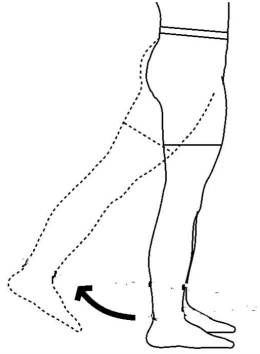
- Stand with and on table or chair for support.
- Lift leg up high as possible, bending knee.
- Lower leg.
- Repeat with other leg.

### **Special Instructions:**

- Perform 3 sets of 10 repetitions, twice a day.

# THErapy AFTER YOUR JOINT REPLACEMENT

## STANDING HIP EXTENSION

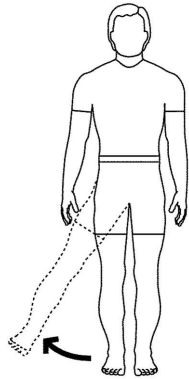


- Stand, hold onto table or wall for balance.
- Extend leg backward, keeping knee straight.
- Return to start position.

### **Special Instructions:**

- Perform 3 sets of 10 repetitions, twice a day.

## STANDING HIP ABDUCTION

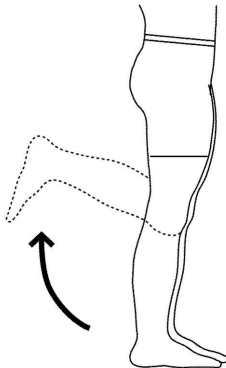


- Stand holding onto counter if needed.
- Keep knee straight, moving involved leg outward.
- Return to start position.

### **Special Instructions:**

- Keep trunk upright.
- Perform 3 sets of 10 repetitions, twice a day.

## STANDING KNEE FLEXION

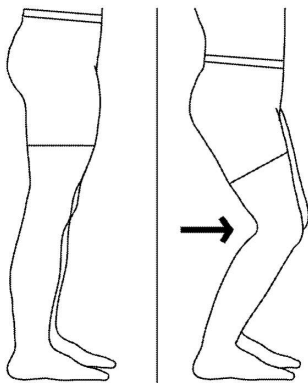


- Stand, bend involved leg toward hip through full range.
- Return to start position.
- Do not bend leg at hips.

### **Special Instructions:**

- Perform 3 sets of 10 repetitions, twice a day.

## STANDING PARTIAL SQUATS



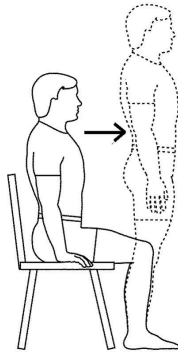
- Stand on both legs.
- Use wall or secure object to maintain balance if needed.
- Bend knees to 45 degrees.
- Return to start position.

### **Special Instructions:**

- Perform 3 sets of 10 repetitions, twice a day.

# THErapy AFTER YOUR JOINT REPLACEMENT

## CHAIR SQUATS

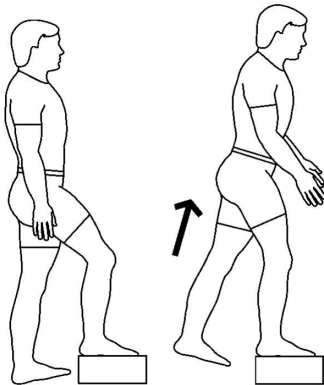


- Begin in sitting position.
- Keep head facing forward.
- Slowly stand.
- Sit and repeat.

### **Special Instructions:**

- Perform 3 sets of 5 repetitions, twice a day.
- Rest 1 minute between sets.

## STEP-UPS

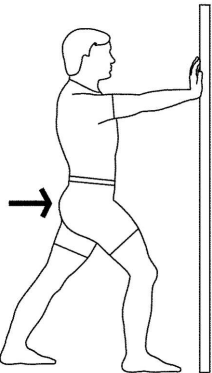


- Stand with involved leg on step.
- Shift weight over knee.
- Step up slowly.
- Step back down leading with involved leg.
- Repeat.

### **Special Instructions:**

- Perform 5 sets of 5 repetitions, twice a day.

## CALF STRETCH

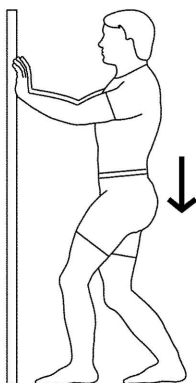


- Stand facing wall, hands on wall.
- Step forward with foot of uninvolved leg, leaning hips toward wall.
- Keep rear leg straight with heel on floor.

### **Special Instructions:**

- Perform 1 set of 3 repetitions, twice a day.
- Hold exercise for 20 seconds.

## SOLEUS CALF STRETCH



- Stand, one leg in front of the other.
- Face wall, hands on wall for support.
- Slowly bend knees, keeping heels on floor, as shown, until stretch is felt.
- Repeat with other leg in front.

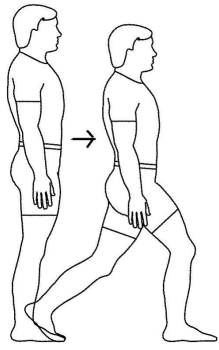
### **Special Instructions:**

- Perform 1 set of 3 repetitions, twice a day.
- Hold exercise for 20 seconds.

## THERAPY AFTER YOUR JOINT REPLACEMENT

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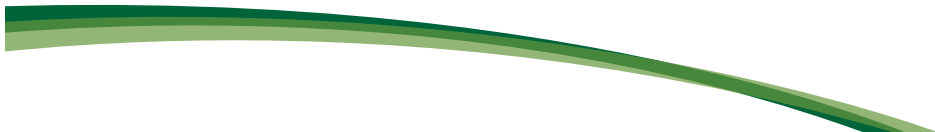
### LUNGE



- Stand.
- Step forward as shown, keeping trunk vertical.
- Push back to start position.
- Repeat.

**Special Instructions:**

- Perform 1 set of 10 repetitions, twice a day.





## AFTER SURGERY/HOME CARE

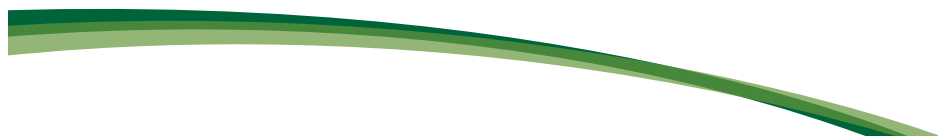
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- You will choose a home health agency to contact you with a plan to visit the day after your discharge
- You will have an appointment date and time for follow up with your surgeon (usually four weeks after surgery)
- You will be told and should know your movement and weight bearing precautions
- You most likely will be taking a blood thinner to prevent leg clots for 2-4 weeks after surgery
- Your hospital nurse and your home care provider will review the following in more detail:
  - » Signs and Symptoms of infection include: warmth, redness, drainage of the wound & a temperature greater than 101.4.
  - » Narcotics and Bowel Function: narcotics can slow bowel function and most people return to their normal bowel function within a week.
  - » Showering – see instructions provided when you leave the hospital to determine when you can shower
  - » Swelling management as instructed by your home health professional
- Prevention of total joint infection – see next page

The home health agency will work with you on a smooth transition to an out-patient therapist. This usually happens 2-4 weeks after surgery.

You are ready to transition to out-patient therapy when:

1. You are able to safely enter and exit your home
2. Your surgical wound is healing well
3. You are able to safely walk and move from one place to another such as chairs/bed in your home
4. You are able to get in and out of a car safely
5. You have reliable transportation
6. You are medically stable



## ANTIBIOTIC USE AFTER TOTAL JOINT REPLACEMENT

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Patients with major joint implants may require certain precautions to prevent infections of the implant. Since we cannot avoid all episodes of bacteria in the bloodstream, efforts are made to identify these episodes and use prophylactic antibiotics.

### **We currently recommend antibiotics for “high risk” patients:**

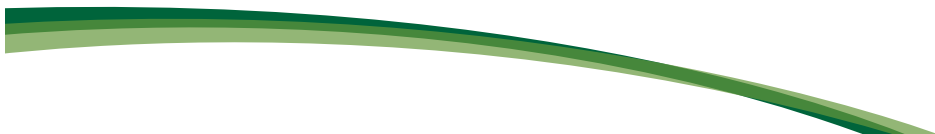
- Anyone who is within 2 years of joint replacement
- Life-long in patients who may have one of the following conditions:
  - » Rheumatoid arthritis
  - » Lupus
  - » Insulin-dependent diabetes
  - » Previous joint infections
  - » Hemophilia
  - » Immunosuppressed from medications such as steroids or because of certain illnesses

### **We use these antibiotics when these “high risk” patients are having “high risk” procedures:**

- Dental extractions
- Periodontal (gum) procedures
- Dental implants
- Root Canals
- Prophylactic cleaning when bleeding is anticipated
- Cystoscopy (look in the bladder)
- Surgical drainage of skin infections

### **We use the following antibiotic regime:**

- Cephalexin (Keflex), Cephadrine or Amoxicillin 2 Grams by mouth (orally) 1 hour before the procedure.
- If severe allergy to penicillin use Clindamycin 600mg 1 hour before the procedure
- If you cannot take pills, use Cefazolin 1gram or Ampicillin 2 grams intramuscularly or intravenously 1 hour before the procedure.



## LOCAL AGENCIES AND RESOURCES

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**University of Vermont Health Network - Central Vermont Medical Center**  
Care Management Department - 802-371-4357

### LOCAL HOME HEALTH AGENCIES

**Central Vermont Home Health and Hospice** - 802-223-1878

**Bayada Home Health Care** - 802-655-7111

**Lamoille Home Health and Hospice** - 603-298-6417

**Visiting Nurse and Hospice for VT and NH** - 802-888-4651

**Visiting Nurse Association of Chittenden and Grand Isle** - 802-658-1900

### LOCAL SKILLED NURSING AND REHABILITATION FACILITIES

**Woodridge Rehabilitation and Nursing** - Sheri Speirs - 802-371-4712

**Berlin Health and Rehabilitation Center** - Erin Berry - 802-229-0308

**Rowan Court Health & Rehabilitation Center** - Debi Arleth - 802-476-4166

**Mayo Healthcare** - Warren Hathaway - 802-485-3161

### LOCAL REHABILITATION SERVICES FACILITIES

**UVM Health Network - Central Vermont Medical Center**

Physical Therapy • Occupational Therapy • Speech Language Therapy  
Locations in Barre, Berlin, Montpelier, Northfield, Waterbury and Waitsfield  
802-371-4242

**Choice Physical Therapy**

Berlin - 802-223-4200

**The Rehab Gym**

Barre - 802-479-4000

**Concentra**

Berlin - 802-223-7499

### MEDICAL EQUIPMENT COMPANIES AND RESOURCES

**Keene Medical**

81 River Street #104, Montpelier, VT - 802-223-0665

**The Medical Store**

Suite 1, 1284 US 302, Barre, VT - 802-476-3135

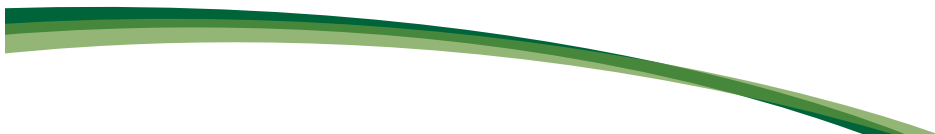
**Wayward Wheels** (to loan used equipment free of charge -  
please call in advance)

1 Sunnyside Terrace, Montpelier, VT - 802-229-0093

## CHECKLIST: ARE YOU READY FOR YOUR NEW TOTAL JOINT?

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- I have read “A Patient’s Guide to Total Joint Replacement
- I spoke to an Occupational Therapist on the phone about going home after the surgery as recommended
- I have scheduled my Total Joint Replacement Class
- I attended the Total Joint Replacement class
- I am attending Prehab classes (as recommended)
- My home is ready – clutter removed and I can safely enter with sturdy handrails etc.
- I have my medicine list up to date and I will bring it with me to the hospital
- I have pre-registered prior to my surgery date
- My Advance Directive is filled out and I will bring it to the hospital with me
- I have family members who will be available to help the day of surgery and when I am home
- I have chosen a home health agency
- I have thought about who will be providing my outpatient physical therapy
- I know where to get the medical equipment that was recommended such as toilet seat riser, shower seat, reacher and sock aid



**UVM Health Network - Central Vermont Medical Center**

**Orthopedic Center**

1311 Barre-Montpelier Road, Suite 400  
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