



## Joint Replacement School

*Total Hip or Total Knee Replacement: Preparing You for Surgery and Recovery*

# Taking Charge of Your Mobility: A Patient's Step-by-Step Guide to Joint Replacement Surgery and Beyond

As a joint pain sufferer, you're undoubtedly used to making decisions dictated by limitations. The escalating erosion of cartilage and damage to bone surfaces caused by arthritis and other debilitating joint conditions can interfere with just about every aspect of your life — from walking, to exercising, working, enjoying time with family and friends, to getting a full night of sleep.

Now that you've decided on joint replacement surgery to regain quality of life, this guidebook covers what to expect — from pre-op, to day of, to recovery — so that you have the information you need to proceed with confidence.

Any surgery is a big step. Medical professionals expect you to have questions, concerns, hopes and expectations. The information contained within addresses common issues and guidelines for care.

Please read this material carefully as you prepare for surgery. You may find it helpful to check off items completed and jot down questions about things you're not sure of. Make sure to go over pertinent information with your care team as well. The more you know, the better prepared you'll be to take charge of your comfort and mobility again.

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# How Your Joints Work – What’s Normal, What’s Not, and How Joint Replacement Helps

## The Knee

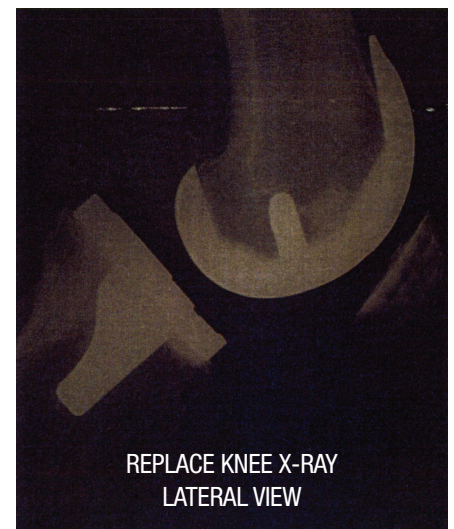
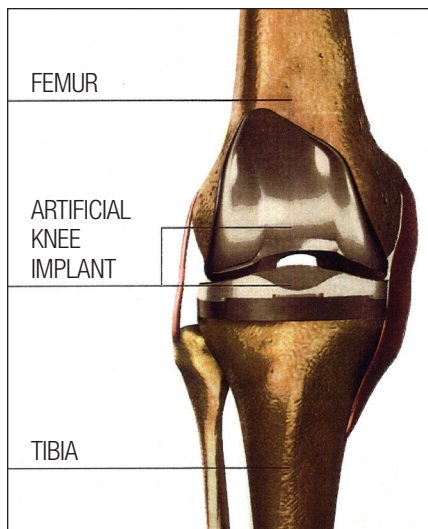
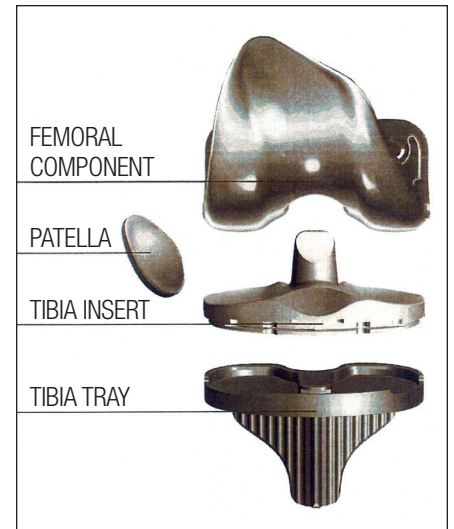
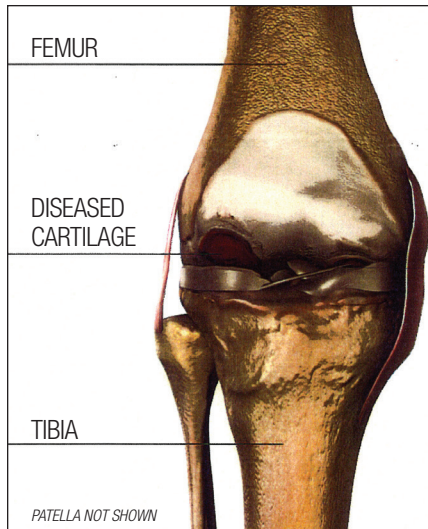
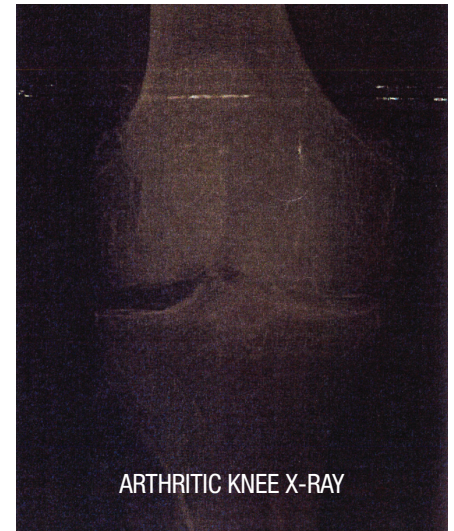
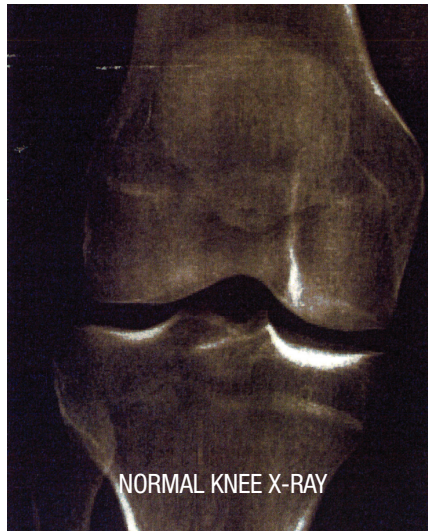
Your knee is like a hinge joint. When you bend your leg to walk or climb stairs, your bones should glide smoothly, with a smooth material called cartilage acting as a cushion in between. The muscles and ligaments surrounding your knee joint give it stability.

When conditions such as arthritis wear down cartilage, the joint space narrows and your bones rub together. This is what causes swelling, pain and joint stiffness when you walk.

An artificial knee joint has three components:

- The curved (femoral) portion covers the bottom end of the thighbone
- The flat (tibial) portion covers the top end of the shinbone
- The third, round-shaped portion replaces the kneecap

A total knee replacement is really a cartilage replacement with an artificial surface. When surgically implanted, it creates a new, smooth surface that restores a functioning joint and eliminates pain.



# How Your Joints Work – What’s Normal, What’s Not, and How Joint Replacement Helps

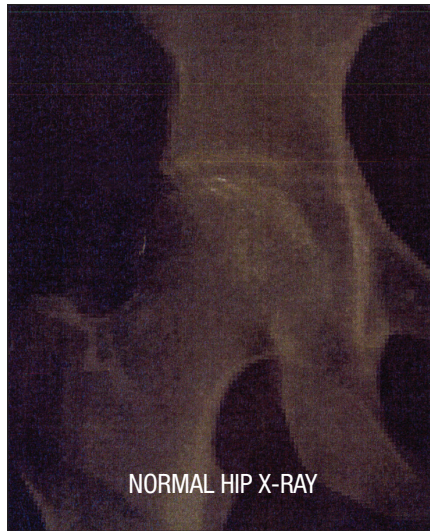
## The Hip

Your hip joint is like a ball and socket formed by the “ball,” or femoral head, at the upper end of your thighbone and a rounded “socket,” or acetabulum, in the pelvis. The ends of the bone are covered with smooth cartilage for frictionless movement.

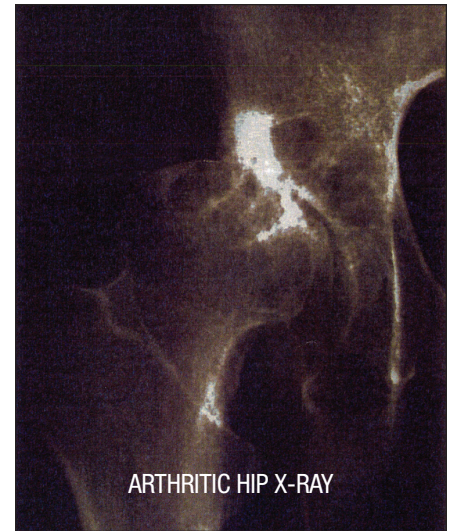
A thin, smooth tissue lining called the synovium surrounds the joint space. It produces fluid that acts as a lubricant to reduce friction and wear in the joint.

When all parts of the joint work together, your hip moves easily without pain. But when your joint becomes diseased or injured, the cartilage can break down and cause escalating pain that severely limits your ability to move and work.

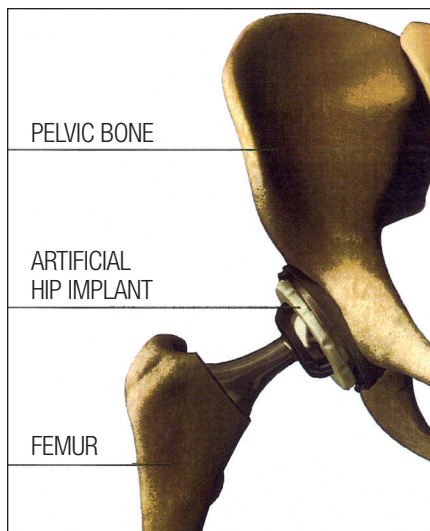
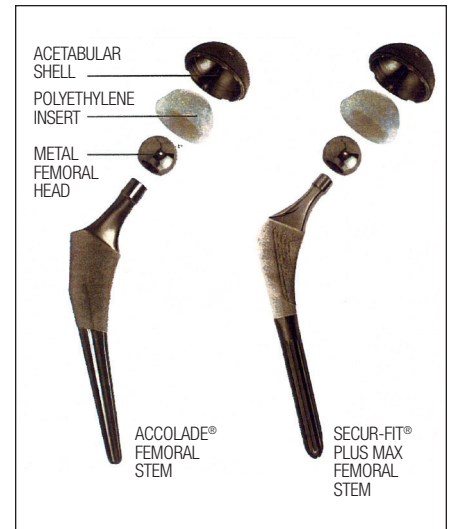
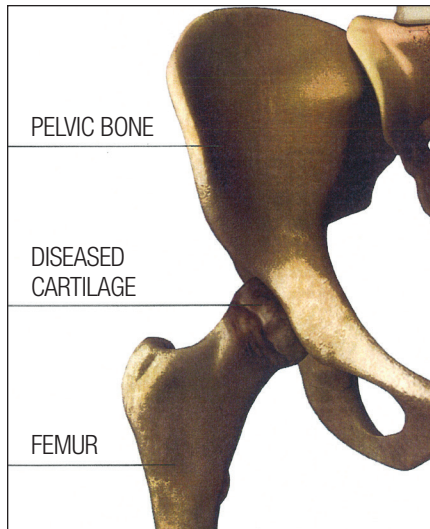
During total hip replacement, your surgeon will remove parts of your damaged hip joint and replace them with an implant designed to function like a normal, healthy hip. Specifically, the surgery involves replacing your femur, or head of your thighbone and your acetabulum (hip socket).



NORMAL HIP X-RAY



ARTHROTIC HIP X-RAY



REPLACED HIP X-RAY

## Preparing for Joint Replacement Surgery

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### The Doctor’s Visit – Questions to Ask, Information to Share

While information about joint replacement treatment may be readily available in print or on-line, only your doctor can answer specific questions about your diagnosis, treatment options and future outlook. The following questions provide a way to discuss your hip or knee pain with your doctor, so that you can make informed decisions about your care:

1. Are there any other pain relief options for me that could work as well as joint replacement?
2. How much will joint replacement relieve my pain?
3. How is the procedure done?
4. Would you recommend minimally invasive surgery (MIS) for me?
5. Will I need a blood transfusion after surgery? If so, how many units and can I donate my own blood?
6. What type of anesthesia is available?
7. Should I take my daily medicines on the day of surgery?
8. How long will my family wait while I am in the operating and recovery rooms?
9. What do you do to manage the pain after surgery?
10. What are the risks or complications?
11. How long will I be in the hospital, and how soon after having the procedure can I get back to normal daily activities?
12. Is hip replacement covered by my health insurance?
13. After the procedure, will I see you or my regular doctor for follow-up care?
14. Which hip product do you think is best for me and why?
15. How much experience have you had with it and what have been the outcomes?
16. Will you perform my surgery from start to finish or work with a team? How many of these procedures have you performed?

As you prepare for surgery, be ready to answer questions about your symptoms, medical history and needs as well:

17. Where is your pain located? Does more than one joint hurt?
18. When did the pain first begin? Do you know what caused it?
19. Are you taking any medication for the pain? (Make a list of both prescription and non-prescription medications.)
20. Are you taking any dietary supplements? (Make a list of vitamins or other “pills” for arthritis, such as chondroitin or glucosamine.)
21. What tests have previously been done to evaluate your hip pain?
22. How physically active are you?
23. What are your expectations post-surgery? How will you accommodate hip replacement within your lifestyle?

Take some time before your appointment to jot down additional questions: \_\_\_\_\_

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## Things To Do In Preparing For Surgery

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### What To Do Before You Check In

Preparing for total joint replacement begins weeks before the actual surgery. In general, you may be told to:

#### Donate blood

While some total joint procedures do not require blood transfusion, you may need blood before or after surgery. You may use donor blood or plan ahead to make an autologous donation of your own. You may also have a family member or friend with the same blood type as you designate a donation specifically for you.

#### Exercise under your doctor's supervision

It's important to be in the best possible overall health to promote the best possible surgical experience. Increasing upper body strength is important to help you maneuver a walker or crutches after surgery.

Strengthening the lower body to increase leg strength before surgery can reduce recovery time.

#### Have a general physical examination

You should be evaluated by your primary care physician to assess overall health and identify any medical conditions that could interfere with surgery or recovery.

#### Have a dental examination

Although infections after joint replacement are not common, an infection can occur if bacteria enter the bloodstream. Therefore, dental procedures such as extractions and periodontal work should be completed before joint replacement surgery.

#### Review medications

Your orthopaedic surgeon can tell you which over-the-counter, prescription medications and herbal supplements should not be taken before surgery.

#### Stop smoking

Breaking the habit is particularly important before major surgery to reduce the risk of post-operative lung problems and improve healing.



#### Lose weight

For patients who are overweight, losing weight helps reduce stress on a new joint.

#### Arrange a pre-operative visit

It's important to meet with healthcare professionals at the hospital before surgery to discuss your personal hospital care plan, including anesthesia, preventing complications, pain control and diet.

Bring a written list of past surgeries and medications and dosages you normally take at home.

#### Get laboratory tests

Your surgeon may prescribe blood tests, urine tests, an EKG or cardiogram, and chest X-ray to confirm you are fit for surgery. These tests should be performed within 14 days of the scheduled surgery in order to be acceptable.

#### Complete forms

You will need to fill out a consent form for your surgeon confirming that you agree to have the operation and that you know the risks involved, as well as hospital forms about your past history, medications, previous operations, insurance and billing information.

#### Prepare meals

You may want to prepare meals in advance and freeze them so they're ready when you return.

#### Confer with physical therapist

The physical therapist will record a baseline of information, including measurements of current pain levels, functional abilities, the presence of swelling, and available movement and strength. You will also practice post-operative exercises using either a walker or crutches.

#### Plan for post-surgery rehabilitative care

Total joint replacement recipients may need help at home for the first few weeks, including assistance bathing, dressing, preparing meals and with transportation. If you can't arrange for someone to help you at home, you may need to stay in a rehabilitation or skilled nursing facility. A medical social worker can assist with arrangements. Home therapy visits should end when you can safely leave the house and outpatient physical therapy should begin.

#### Fast the night before

No eating or drinking after midnight before surgery; however, you may brush your teeth or have a few sips of water if you need to take medicines. Discuss the need to take medications such as insulin, heart or blood pressure pills with your doctor or nurse to make sure you don't miss them.

#### Bathe surgical area with antiseptic solution

Use antiseptic scrub brushes supplied by your health team the night before and morning of to reduce the risk of infection. Tell the nurse if you are allergic to iodine or soap. If possible, shampoo your hair. You must remove all nail polish and make-up. Do not shave your legs within 3-4 days of surgery.



### Getting Your House Ready

Some common things in your home may now be dangerous. To prevent falls, you should remove or watch out for:

- Long phone or electrical cords that lie across the floor
- Loose rugs or carpet
- Furniture you might trip over in stairs and hallways
- Stacks of books, piles of magazines, mail, etc.
- Pets that run in your path
- Water spills on bare floors
- Bare bathroom tile or slippery floors
- Ice or mildew on outdoor steps
- Install a rail along any steps that do not already have a rail

It would also help to:

- Arrange the most frequently used kitchen utensils and food on shelves and counters that can be reached easily.
- Have a chair or stool handy in the kitchen to sit in while preparing and cooking food.
- Leave most frequently used dishes in the dish rack, and most frequently used foods in the most accessible cabinets.
- Have a walker basket or apron with pockets to carry items such as glasses, books, silverware, portable phone etc.
- Arrange for someone to care for or feed your pets.

### Packing Your Bags

Make sure to take these things with you to the hospital:

- Exercise shoes with closed-in heel and non-slip soles
- Knee length robe or cover-up for walking in the halls
- Grooming items such as shampoo, toothpaste, deodorant, etc. are provided by Heywood Hospital
- A list of medications you are currently taking at home, including the name, strength and how often you take each medication
- Papers from the blood bank if you have donated your own blood
- A list of allergies (to food, clothing, medicine, etc.) and how you react to each one
- Any education materials you received in pre-admission classes
- A copy of your Living Will and Health Care Power-of-Attorney, if you have either one. Hospital personnel are required by law to ask for these when you are admitted. They will make a copy for your medical record and return the original.
- A copy of your insurance card
- A walker if you already have one, and a list of other adaptive equipment you may have at home with your name on all equipment you take to the hospital

- Glasses, hearing aid, and any other items you use every day
- Short gowns, pajamas, underwear, socks/stockings and one set of street clothes to wear home
- Leave jewelry, credit cards, keys and check books home. Bring only enough money for items such as a newspaper, magazine, etc.

### Hip Safety Precautions

Once you have a new hip, you will need to follow some safety rules. This will help you heal faster and keep your new hip from dislocating. One of these rules is to always sit with your knees lower than your hips. So before surgery, check around your house to see if you need to adapt anything by sitting:

- On the side of your bed
- In your favorite chair
- On the sofa
- On the toilet
- In the seat of your car

If your knees are not lower than your hips in any of those situations, you will need to change the height by making accommodations such as propping up with pillows or buying a raised toilet seat.

## The Day of Surgery – What to Expect Throughout

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### Pre-Op

1. Arrive at the hospital at the appointed time.
2. Complete the admission process.
3. Have final pre-surgery assessment of vital signs and general health.
4. Remove all personal belongings – dentures, hearing aids, hairpins, wigs, jewelry, glasses, contact lenses, nail polish, all underwear – and leave them with your family or friends during surgery. You will be dressed in a hospital gown and nothing else.
5. There will be several checks to make sure the correct joint is being replaced: your surgeon will review your X-ray and mark the area to be operated on; nursing staff will check the consent form you signed to make sure it agrees with the procedure on the operating room list.
6. Final meeting with anesthesiologist and operating room nurse.
7. Start IV (intravenous) catheter for administration of fluids and antibiotics.
8. Transportation to the operating room.

### In Surgery

Many people will be with you in the operating room during your one to three-hour surgery, including:

- Orthopaedic surgeon(s) – your doctor(s) who will perform surgery.
- Anesthesiologist or nurse anesthetist – the doctor or nurse who gives you anesthesia.
- Scrub nurse – the nurse who hands the doctors the tools they need during surgery.
- Circulating nurse – a nurse who brings things to the surgical team.
- First Assist – Physician Assistant (PA), Nurse Practitioner (NP) or Registered Nurse First Assistant (RNFA) to assist surgeon during procedure.

Your surgeon and the anesthesiologist or nurse anesthetist will help you choose the

best anesthesia for your situation. No matter what type of anesthesia you have, be assured you will not feel the surgery. Options include:

- General Anesthesia – You are put to sleep. Minor complications such as nausea and vomiting are common, but can usually be controlled and settled within 1-2 days.
- Epidural – You are numbed from the waist down with medicine injected into your back. (This is also used for women giving birth.)
- Spinal – Much like the epidural, you are numbed from the waist down with medicine injected into your back.

You may have any of the following inserted:

- An Intravenous Tube (IV) – This is placed in your arm and used to replace fluids lost during surgery, administer pain medicine, or deliver antibiotics and other medications.
- A Catheter Tube – This may be placed in your bladder to help your healthcare delivery team keep up with your fluid intake and output. It is most often removed the day after surgery.
- A Drain Tube – This may be inserted in your bandage site to help reduce blood and fluid buildup at the incision.
- Elastic stockings- This will be put on your legs to help the blood flow. You may also have compression foot pumps wrapped around your feet and connected to a machine that blows them up with air to promote blood flow and decrease the possibility of blood clots.

### Immediately After

After surgery you will spend at least an hour in the recovery room. While there, your blood pressure and heart rate will be monitored closely until you are stabilized. You will have a mask over your face for oxygen.

You will find a large dressing has been applied to the surgical area to maintain cleanliness and absorb any fluid. If you had

a hip replacement, you may also notice a V-shaped wedge pillow (abduction pillow) between your legs. This keeps your new hip in the best position while you are in bed.

Knee replacement recipients may use a continuous passive motion (CPM) machine to continuously bend and straighten the knee quadriceps (thigh muscles). This machine, propped under your leg in bed, helps keep your knee from becoming stiff after surgery.

### Back in Your Room

Once your condition is stabilized post-surgery, you will be transported to your own hospital room where you will continue to have your vital signs and surgical dressing monitored. Once you've settled in, several members of your care team may drop in to orient you to your hospital routine.

### Pain Management

Some patients experience back discomfort after surgery. This is caused by soreness of the surgical area and the prolonged lack of movement before, during and after surgery. Periodic change of position helps relieve discomfort and prevents skin breakdown.

You will be able to have medicine for pain so you can move around without much discomfort. Make sure to talk with your doctor before surgery about your pain management options. You may receive pain medicine through your IV, through the epidural or in shots or pills.

### Breathing

Right after surgery, the health team will remind you often to take deep breaths and coughs. It is very important to do this at least every 2 hours. Deep breathing can help prevent pneumonia or other problems that can slow down your recovery and lengthen your hospital stay.

Your doctor may want you to use a device called an incentive spirometer, which helps you breathe in and out correctly. Using it regularly can help keep your lungs clear.



## The Day of Surgery – What to Expect Throughout

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### Your Diet

Immediately after surgery, you can have a diet of clear liquids or soft foods as tolerated. If constipation becomes a problem, try:

- Eating 5-7 servings of fresh fruit and vegetables daily
- Eating a hot breakfast with a hot beverage daily
- Increasing fiber in your diet with whole grain cereals and breads
- Drinking at least 6-8 8oz. glasses of water daily
- Increasing physical activity as much as you can tolerate

### Positioning

If you are a hip patient, you will have a foam wedge positioned between your legs or a knee immobilizer to help maintain your hip precautions.

If you are a knee patient, your physician may order a leg splint called an immobilizer to keep you from bending your knee. It should be worn when you are out of bed or as directed by your surgeon.

A staff member will help you turn and change your position in bed. Make sure you avoid twisting your leg when turning in bed. When turning in bed you should have a pillow between your legs. Avoid resting with a pillow under your knee.

### Exercising

You will be evaluated by a physical therapist, who will go over exercises and precautions for avoiding dangerous movements. You may be surprised at how soon after surgery joint replacement patients are encouraged to get up and start moving – usually the day after surgery. The more quickly you start moving again, the sooner you will be able to regain independence. Mild exercises of ankle pumping and gluteal sets are usually recommended as soon as you are awake from surgery and able to perform them.

### As You Recover

In the days following surgery, your orthopaedic surgeon, nurses and physical therapists will closely monitor your condition and progress.

You'll spend a great deal of time exercising your new joint and continuing deep breathing exercises to prevent lung congestion. Gradually, your pain medication will be reduced, the IV will be removed, your diet will progress to solids and you will become increasingly mobile.

Physical therapy for knee patients will address range of motion. Gentle movement, such as the CPM machine, will be used to help you bend and straighten the knee. Your leg may be elevated to help drain extra fluid.

Your physical therapist will also go over exercises to help improve knee mobility and to start exercising the thigh and hip muscles. Ankle movements help pump swelling out of the leg and prevent the possibility of a blood clot. When you are stabilized, your physical therapist will help you up for a short outing using your walker.

Hip patients begin physical therapy the day after surgery, with your physical therapist helping you move from your hospital bed to a chair. By the second day, you'll begin walking longer distances using your walker. Most patients are safe to put comfortable weight down when standing or walking. However, you may be instructed to limit the weight you bear on your foot when you are up and walking.

Hip patients will also do exercises to tone and strengthen the thigh and hip muscles, as well as ankle and knee movements to pump swelling out of the leg. Whether you are sent directly home or to a facility for rehabilitation will depend on your physical therapist's assessment of your abilities and your insurance company. Some patients can go directly home if it is deemed safe by their surgeon and physical therapists. The case manager will make your arrangements for further home therapy.

If you live alone or are in an environment at home where your safety is a question because you have not achieved your discharge goals, you may be recommended for placement in a rehabilitation center. These facilities are usually available to a patient for a temporary stay, with emphasis on returning the patient home in a short period after aggressively addressing any problems with patient independence. If you live alone or are not progressing rapidly enough in therapy sessions and it is unlikely you will be able to do so in a rehab setting, a sub-acute facility may be recommended for a longer period of recuperation. Insurance coverage for these post hospital stays vary according to condition and plan and will need to be discussed by the patient, the case manager and the insurance company as warranted.

Before you are discharged home, you should be able to safely get in and out of bed, walk up to 100 feet with crutches or walker, go up and down stairs safely, access the bathroom and consistently remember to use hip precautions to prevent dislocation before going home. These tasks should be able to be completed independently or with minimal assistance.

### Before You Leave the Hospital

Before you leave the hospital, you will learn how to:

- Get in and out of bed by yourself
- Walk down the hall with your walker or crutches
- Get in and out of a chair
- Manage steps at home
- Get in and out of your car
- You will learn more about self care, nutrition and general home skills, once you are in a rehabilitation center.



When you leave the hospital, your family will need to bring extra pillows for you to sit on in the car. It will be most comfortable to sit in the front seat. Your physical therapist will show you how best to get in and out.

All of the tubes will be out. All that should remain is a bandage on your wound site. If you have been instructed to use an abduction wedge you will still need to use this at night when you are sleeping.

You'll need to continue taking medications as prescribed by your doctor. You may be sent home with prescriptions for preventing blood clots, some of which require monitoring through blood draws two times per week. Make sure to take pain medication 30 minutes before exercises — it's easier to prevent pain than to chase it later.

Your surgeon may recommend taking a multi-vitamin with iron daily for a month. You may also be advised to take 1-2 enteric-coated aspirin daily for 6 weeks and non-steroid anti-inflammatory medication for pain and swelling unless you are on blood thinners such as Coumadin or Lovenox. Check with your doctor about special precautions while on these blood-thinning medications.

### **Hip Precautions**

After hip replacement, you will need to observe some important safety rules to help prevent dislocation. Here are some of the most frequently advised precautions. Review them with your surgeon and discuss how many months you will need to follow these, or any other safety rules prescribed after surgery:

- Don't bend your hip past 90°
- Don't cross your legs; keep knees apart when sitting and in bed
- Don't twist your leg in or out
- Don't lean forward while sitting in a chair
- Sit in a chair with arm rests if possible
- Don't sit more than 60 minutes at a time; get up and walk frequently
- Don't sit on a toilet or chair that is lower than the back of your knees
- Do use pillows between your legs at night to keep your hips properly aligned

## The Day of Surgery – What to Expect Throughout

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### Special Equipment

Ask your occupational therapist about special equipment to help you do routine things for yourself without placing your hip in danger of dislocation. These tools include:

- Dressing sticks – to help you put on and take off your pants or underwear
- Long shoe horns – to help you put on your shoes
- Elastic shoe laces – to make your laced shoes into slip-ons
- Grabber – to help you pick up things without bending over, reach items from high and low shelves, get clothes in and out of front loading washers/dryers and for self-care.
- Long-handled sponge – to help reach without stretching inappropriately
- Raised commode seat – to put your knees in proper position below hips
- Bathtub benches and handrails – to improve bathroom safety
- Handheld shower – for washing while seated
- Long-handled feather duster – for dusting low and high items

### Knee Precautions

- Never rest with a pillow under your knee – you may lose the ability to straighten your knee.
- Don't twist or pivot on your operated knee

### Weight Bearing Precautions

- Carefully follow instructions from your doctor about how much weight you can put on your operated leg:
- No weight bearing – no foot contact with ground
- Touch down weight bearing – touch foot to ground for balance only
- Partial weight bearing – usually one-fourth to one-half body weight
- Weight bearing as tolerated – as much as comfortable
- Continue to use your walker or crutches after surgery as advised by your doctor or physical therapist

### Incision Care

Keep your incision clean and dry and check it daily. Call your doctor if you notice any of these symptoms:

- Fever over 100°
- Drainage from incision
- Redness around incision
- Increased swelling around incision
- Incision hot to touch
- Chest pain
- Chest congestion
- Problems with breathing
- Calf pain or swelling in your legs

Don't shower or sit in a bathtub until your surgeon approves this activity. Your staples or stitches will be removed about 10-14 days after surgery. Your incision will heal, and the swelling and bruising will get better over the next few weeks.

### Exercise

When you get home, keep up the exercise program you learned in the hospital.

You may see your therapist for several in-home treatments. This is to ensure you are safe in and about the home and getting in and out of a car. Your therapist will make recommendations about your safety, review your exercise program and continue working with you on ADL (activities of daily living). They will also review range of motion for knees and hip precautions for avoiding dislocation.

Expect to regain strength and endurance as you begin to take on more of your normal daily routine. Home therapy visits should end when you can safely leave the house and outpatient physical therapy should begin.

The following pages provide some examples of common exercises that are usually recommended in a home exercise program. However, your orthopaedic surgeon and physical therapist will outline a specific plan that you should follow. You can refer to the following pages to assist you in performing your recommended exercises.

## Life After Joint Replacement – Regaining Mobility Safely, Slowly, Securely

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### At First

Most people experience reduction in joint pain and improvement in their quality of life following joint replacement surgery. While joint replacement surgery may allow you to resume many daily activities, don't push your implant to do more than you could before your problem developed.

Give yourself at least six weeks following surgery to heal and recover from muscle stiffness, swelling and other discomfort. Some people continue to experience discomfort for 6-12 weeks following their joint replacement.

During visits to the physical therapist's office, your therapist may use heat, ice or electrical stimulation to reduce any remaining swelling or pain. You should continue to use your walker or crutches as instructed.

Your physical therapist may use hands-on stretches for improving range of motion. Strength exercises address key muscle groups, including the buttock, hip, thigh and calf muscles. You can work on endurance through stationary biking, lap swimming and using an upper body ergometer (upper cycle).

When you are safe putting full weight through the leg, several types of balance exercises can help you further stabilize and control the hip or knee. Finally, you will work with a group of exercises to simulate day-to-day activities, such as going up and down steps, squatting, rising up on your toes, bending down and walking on uneven terrain. You may be given specific exercises to simulate your particular work or hobby demands.

By six weeks, you may be able to return to many normal activities such as driving, bicycling and golf. When you see your surgeon for follow-up two to six weeks after surgery, he or she can advise you on both short and long-term goals.

As a rule, all joint replacement recipients should heed the following limitations during the first weeks after surgery:

- Expect to use a cane or walker for several weeks
- No kneeling, bending or jumping for the first month
- Don't drive until ok with your doctor (usually 4-6 weeks)
- No alcohol with pain medication
- Don't smoke – it slows healing
- You may hear some clicking in your knee as it heals; it's normal
- Avoid sexual activity until after six-week check-up
- Continue wearing elastic stockings until your return appointment

In general, physical activities should:

- Not cause pain during activity or later
- Not jar the joint, such as when running or jumping
- Not place the joint in extreme ranges of motion
- Be pleasurable

Additional tips for living with your new joint:

- Ask for help – while your goal is to eventually do things for yourself, don't take unnecessary risks by trying to do too much too soon.
- Recuperation takes approximately 6-12 weeks – you may feel weak during this time. Use ice for swelling and discomfort. Ice your knee for 15-20 minutes after each exercise period to reduce pain.
- Keep your appointments with your doctor – it's important to monitor healing and function on a regular basis. You may need to check in with your doctor 2-3 times during the first two years, and at intervals of two to three years thereafter. During those visits, your surgeon will take X-rays and monitor wear.

- Under optimal conditions, your artificial joint may last for many active years. You should always consult your orthopaedic surgeon if you begin to have pain in your artificial joint or if you suspect something is not working correctly.
- Watch for infection – your new joint is a foreign substance to your body. Germs from other infections can move to your new joint and cause infection. Call your family doctor immediately if you have any signs of infection, e.g., skin infection, urinary tract infection, abscessed teeth, etc. Early treatment is crucial.
- Alert your dentist or family physician – tell them about your joint replacement before any dental work or procedure, such as a cardiac catheter, bladder exam, or surgery. You may always need to take antibiotics first to prevent infection.
- Your new joint may set off metal detectors in airports and other secured buildings. Your doctor can give you an identification card to carry in your wallet.

### Long Term

Most patients have less pain and better mobility after joint replacement surgery. Your physical therapist will work with you to help keep your new joint healthy for as long as possible. This may mean adjusting your activity choices to avoid putting too much strain on your joint. You may need to consider alternate work activities to avoid the heavy demands of lifting, crawling and climbing.

More extreme sports that require running, jumping, quick stopping or starting and cutting are discouraged. More low impact exercises such as cycling, swimming, golfing, bowling and level walking are ideal.

## Potential Risks – What to Know Before, During and After Surgery

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The complication rate following joint replacement surgery is very low. Serious complications, such as joint infection, occur in less than 2% of patients. Most of these can be avoided or treated when addressed early on. What to watch for:

### **Anesthesia complications**

A very small number of patients have problems with anesthesia. These problems can be reactions to the drugs used, problems related to other medical complications, and problems due to the anesthesia. Be sure to discuss the risks and concerns with your anesthesiologist.

### **Infection**

This may occur in the hospital, after you return home or years later. While many steps are taken to minimize the risk of infection, it can't be avoided altogether.

In the hospital, you will receive antibiotics for 24-48 hours during and after surgery to help prevent infection. The operating room is a filtered, clean air environment, and the limb is washed, prepared with antiseptic solution and covered with sterilized drapes.

Your surgeon and surgical assistants wear masks, sterilized gowns and two pairs each of sterilized gloves that are frequently changed. Some operating rooms have special air conditioning and filters. Your surgical team may also wear special space-suit like gowns.

For years to come, you will need to tell doctors about your joint replacement and take antibiotics before undergoing even minor procedures to reduce the chance of infection in another part of your body spreading to the artificial joint. If an infection does occur, your surgeon will have a protocol to manage it.

### **Blood clots**

These may result from several factors, including decreased mobility following surgery, which slows the movement of the blood. Symptoms include a red, swollen leg, especially in the calf area, and shortness of breath.

You can prevent blood clots with:

- Blood thinning medications (anticoagulants)
- Elastic support stockings to improve blood circulation
- Plastic boots that inflate to promote blood flow in the legs
- Elevating the feet and legs to keep blood from pooling
- Moving toes and legs immediately after surgery
- Walking within 24-36 hours of surgery, and then hourly

### **Pneumonia**

This is always a risk following major surgery. You will be assigned a series of deep breathing exercises to keep your lungs clear.

### **Dislocations and instability**

Your own hip is held in place with very strong ligaments and will only come out of joint (dislocate) with major violence such as in a car accident.

An artificial hip is held in place by your own muscles. Stability also depends on the position in which the hip is placed by you and your surgeon.

Although uncommon (less than two per 100 hips),<sup>2, 3, 4</sup> hip dislocation generally occurs with extremes in motion.<sup>5</sup> This is most likely to occur within the first 6-12 weeks after the surgery. Therefore, you must take precautions while sleeping, washing, bending and toileting. As time goes on, the risks are reduced; however, some precautions remain.

If your hip comes out of joint it must be put back into place. This usually requires a very brief general anesthetic while the leg is firmly pulled until the artificial hip drops back into place. You may be able to avoid further problems by avoiding at risk positions.

### **Hematoma**

A brownish red fluid may drain out of your hip incision around two weeks after surgery.

This is a common occurrence and you should not be alarmed by this drainage. Clean the incision with hydrogen peroxide, replace the dressing and notify your doctor.

### **Nerve and vessel injury**

The sciatic nerve, located adjacent to the hip, is vulnerable to injury and on rare occasions may cause weakness or loss of feeling about the foot.

### **Leg length alteration**

In general, leg length is maintained within 10mm of ideal. On some occasions, particularly when there is a hip deformity, significant leg length differences may arise and surgeons must compromise between leg length alteration and stability of the hip joint. You may not notice a minor leg length alteration of 5 mm or less. A simple heel raise may balance an alteration of 10mm or more.

### **Stiffness**

In some cases, the ability to bend the knee does not return to normal after knee replacement surgery. To be able to use the leg effectively to rise from a chair, the knee must bend at least to 90 degrees. A desirable range of motion is greater than 110 degrees.

The most important factor in determining range of motion after surgery is whether the ligaments and soft tissues were balanced during surgery. The surgeon tries to get the knee in the best alignment so there is equal tension on all the ligaments and soft tissues.

Sometimes extra scar tissue develops after surgery that can lead to an increasingly stiff knee. If this occurs, speak to your surgeon about resolving this issue.

### **Loosening**

The major reason artificial joints eventually fail continues to be a process of loosening where the metal or cement meets the bone. Great advances have been made to extend the life of an artificial joint, with many patients reporting excellent function for many years. If the pain of a loose joint becomes unbearable, another operation may be required to revise it.

## Frequently Asked Questions about Joint Replacement

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### What is total joint replacement?

When a joint has worn to the point it no longer does its job, an artificial joint, or prosthesis, made of metal, ceramics and plastics can take its place. Total joint replacement surgery recreates the normal function of the joint – relieving discomfort and significantly increasing activity and mobility.

### Why do hips and knees need replacement?

The hip joint is a “ball and socket” in which the upper end of the thighbone rotates inside a rounded area of the pelvis. The knee is a “hinge” that joins the shin to the thigh. Both joints are lined with cartilage, a layer of smooth, tough tissue that cushions the bones where they touch each other. With age and stress, the cartilage wears away and the bones rub against each other, causing friction, swelling, stiffness, pain and sometimes deformity.

When this happens, hip or knee replacement may relieve pain and restore mobility and quality of life.

### Is joint replacement surgery safe?

Joint replacement is a safe and common procedure. Annually, nearly 150,000 people have hips and nearly 250,000 have knees replaced with positive results. Any surgical procedure involves risk. Hospital staff will review these with you and explain how your post-surgical program can reduce risk and aid in more rapid recovery.

### What kinds of tests will I need before surgery?

All patients are required to have routine blood work and urinalysis at least 14 days before surgery. You must also have a physical examination within 30 days of the surgical date. Patients over 50, and those with cardiac or respiratory history, must also have an EKG and chest X-ray within days of surgery. Most pre-admission testing

can be performed either by your personal physician or at the hospital where the procedure will be performed.

### Will I need to donate blood before surgery?

Some surgeries require you to donate blood if possible. This can be done any time within 35 days of surgery. If you can't donate your own blood, a designated donor may donate blood on your behalf. You may also receive blood from the hospital Blood Bank if necessary. The Blood Bank follows universal guidelines in screening blood and blood products to ensure safety.

### Are there any medications I need to take before surgery?

You should take an iron supplement, particularly if you will be donating blood.

### Are there any medications I need to stop taking before surgery?

You can take most medications up until the day of surgery. Don't take anti-inflammatory medications containing aspirin, which can act as blood thinners, within two weeks of surgery unless instructed otherwise by your physician.

### What should I bring to the hospital?

Bring your personal toiletries and shaving gear, comfortable, loose fitting clothing, slip-on non-skid shoes or slippers with closed backs, a list of current medications including dosages and any paperwork the hospital has requested. If you have a walker, cane or crutches, have someone bring them at discharge so the physical therapist can check them for size and stability. Do not bring radios, televisions or large amounts of cash.

### Who will perform the surgery?

Your orthopaedic surgeon will perform the surgery. If an assistant helps, they may bill you separately.

### When should I arrive at the hospital for surgery?

You should arrive two hours before surgery time to go through admissions, change into hospital clothing, meet the anesthesiologist and nursing personnel and address any questions about the procedure.

Do not eat or drink after midnight on the day of your surgery. You may be allowed to take pre-approved medication with the least amount of water necessary. Report any medication taken, along with dosage, to your admitting nurse.

### Can my family stay with me?

Your family may stay with you until you are taken to the operating room.

### Do I need to be “put to sleep” for this surgery?

You may have a general anesthetic, which most people call being “put to sleep.” Some patients prefer a spinal or epidural anesthetic, which numbs your legs without requiring you to sleep. You can discuss options with your anesthesiologist.

### Will the operation hurt?

Most patients experience discomfort in the days and weeks following joint-replacement. However, after years of living with joint pain, for most it is a welcome relief. As with any surgery, individual patient results and experiences vary. Make sure to talk with your doctor before surgery about your pain management options. You may receive pain medicine through your IV, through the epidural or in shots or pills.

### How long will the surgery take?

Depending upon the difficulty of your case, surgery can take anywhere from one to three hours, with an additional two to three hours in the recovery room.

## Frequently Asked Questions about Joint Replacement

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### Will the surgeon see my family immediately after surgery?

Whenever possible, the surgeon or one of his assisting surgeons will meet with family members immediately after surgery. If for any reason this is not possible, you may contact the doctor's office to arrange a time to discuss how the surgery went.

### What will my hospital stay be like?

You will most likely be "groggy" at first from the medications you receive in surgery. You will be transported from the recovery room to your hospital room once your surgeon and medical team deem it safe for you to be transferred.

Once you are fully awake, you will be able to drink and eat as tolerated. Your vital signs, urinary output and any drainage will be monitored closely by nurses on the orthopaedic surgery floor.

Pain medicine may be monitored closely. Make sure to talk with your doctor before surgery about your pain management options. You may receive pain medicine through your IV, through the epidural or in shots or pills. It may also be administered intravenously by "pain pump" for the first 24 hours, which allows you to control your own pain level up to a predetermined dosage.

Starting on day one post-operatively you will work one to two times a day with therapy, who will go over exercises and help you adapt daily activities to your post-operative limitations.

### How long will I be in the hospital?

Most patients are hospitalized about four days, including the day of surgery. This may be extended to include treatment at a rehabilitation center or sub-acute facility. Contact your health insurance provider to find out what, exactly, is covered and to obtain these provisions in writing.

### Do I need someone to stay full-time with me when I go home?

It is best for someone to be with you the first 24-72 hours after discharge. If you live alone and a friend or relative offers to stay with you, take them up on the offer! If you can't arrange a full-time helper, perhaps a friend or neighbor can call daily to check on your progress. Home care can also be arranged through your case manager.

### When can I go up and down stairs?

Many patients can climb stairs before leaving the hospital.

### Will I need pain medicine after I'm discharged?

Most patients do benefit from a short-term course of pain medication. Expect to take some kind of pain medication for several weeks after discharge – especially at night or before therapy sessions. You can call your doctor's office for prescription renewals.

### How long will I need to use my walker or crutches?

Your orthopaedic surgeon will work with your physical therapist to develop your specific ambulation plan. Generally, patients use a walker or crutches for the first six weeks after surgery. Then, they can graduate to a cane for about six weeks before walking on their own.

### When can I go outside?

You may go outside at any time. Start with short trips at first – therapy, church – and increase the number and length of outside activities, as you feel more comfortable.

### When can I drive?

Most patients must wait for six weeks before driving. However, some physicians may allow the patients to drive earlier if they feel the patients can do so safely. The type of surgery, side of surgery (left leg vs. right leg), and the patient's overall general condition

will play a part in that decision. If you wish to drive earlier than the six-week routine prescribed, you should discuss this with your surgeon and obtain his/her approval. Consult with your surgeon for further details.

### When can I return to work?

Most patients wait until at least six weeks post-surgery to return to work. Some may return earlier if they can do so safely. You should discuss your own situation with your surgeon during a follow-up visit.

### How often will I need to see my surgeon?

You will need to schedule your first post-operative visit 2-3 weeks after discharge. The frequency of additional visits will depend on your progress. Many patients are seen at six weeks, 12 weeks and then yearly.

### When can I resume sports activities?

You may be able to try swimming, distance walking, hiking, bicycle riding, golfing and other low impact sports activities after a few weeks of rehabilitation and recovery. Discuss your activity level and abilities with your surgeon.

### When will I be able to have sexual intercourse after surgery?

In most cases, you may resume sexual activity when you feel comfortable enough to do so. Make sure to heed any position restrictions recommended by your caregivers. In general, most patients resume normal sexual activities within 4-6 weeks after surgery.

### Will I notice anything different about my knee?

You may have a small area of numbness on the outside of the scar for a year or more. Kneeling may be uncomfortable for a year or so, and you may notice clicking when you move your knee.

## Resources

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### Orthopedic Surgeons

Michael Azzoni, MD	(978) 632-0383
Andrew Markwith, MD	(978) 632-0800
Peter Brassard, MD	(978) 632-0800

### Heywood Hospital

Main Number	(978) 632-3420
Pre-Admission Testing	(978) 630-5727
Physical and Occupational Therapy	(978) 630-6354
Case Management	(978) 630-5000

### Inpatient Rehab

Center for Skilled Nursing and Rehabilitation at Athol Hospital	(978) 249-1181
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### Outpatient Rehab

Heywood Rehab Center	(978) 630-6900
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### Home Health Agencies

HealthAlliance Home Health & Hospice	(978) 728-0621
Gardner VNA, Inc.	(978) 632-1230
Home Health & Community Services (Keene, NH)	(800) 541-4145
Nashoba Nursing Services & Hospice (Shirley)	(800) 698-3307
Souhegan Home & Hospice Care (Milford, NH)	(603) 673-3460
VNA Care Network (Worcester)	(800) 521-5539

### Home Care

Montachusett Home Care Corp.	(978) 537-7411 or (800)734-7312
Montachusett Home Care	(978) 632-3444
Franklin County Home Care Corp.	(413) 773-5555
Elder Services of Worcester Area, Inc.	(508) 756-1545

### Durable Medical Equipment

Apple Home Care (Sterling)	(978) 422-0000
Apria Healthcare (Webster)	(800) 922-8293
Diversified Medical Equipment Services	(978) 537-8707
Lakeview Medical (Auburn)	(888) 410-4363
Lincare (Townsend)	(800) 333-7430
New England Surgical (Fall River)	(800) 336-1300
Surgi-Care (Waltham)	(800) 797-8744

### Infusion Therapy

Apria Healthcare (Webster)	(800) 922-8293
CORAM (Hopkinton)	(800) 422-7312
Critical Care Systems (Shrewsbury)	(877) 363-3665
Infusion Solutions, Inc. (Bedford, NH)	(800) 660-6264
NE Home Therapies (Southborough)	(800) 966-2487
Gentiva Health Services	(508) 872-0063

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5. Rapuri, V.R., Klein, G.R., Hozack, W.J., "Postsurgical Management of Total Hip Arthroplasty – Wound Care, Precautions, and Rehabilitation," *Women's Health in Primary Care*, Volume 7, No. 1, Jan.- Feb. 2004.





## The Center for Skilled Nursing and Rehabilitation at Athol Hospital: Quality Rehabilitation Services, Convenient Hospital Care

After surgery, a stroke or extended illness, additional skilled nursing and rehabilitation can offer the post-acute care, support and recovery time that makes the difference for your continued quality of life, activity and independence when you return home. At the Center for Skilled Nursing and Rehabilitation at Athol Hospital, we offer patients a full array of nursing and rehabilitative care, along with immediate access to vital hospital services not available at off-site facilities.

Quality skilled nursing and rehab care with the confidence of a hospital setting is just moments from home, at the Center for Skilled Nursing and Rehabilitation at Athol Hospital.

### Services include:

- 24/7 Access to Hospital Services including emergency services, skilled nurses, physicians, and respiratory therapy
- Recovery from stroke, orthopedic surgery or extended illness
- Physical, occupational, and speech therapy
- Convenient access to laboratory services, radiology services, including X-rays, CT-scans and MRIs
- On-site consultations with specialists in cardiology, orthopedics, oncology and surgery
- Wound care services and IV medication administration

*For more information call 978-249-1181 or visit [www.atholhospital.org](http://www.atholhospital.org)*





