



AVATAR
Same Day Surgery

**Patient Guide to
Total Hip Replacement**

**THE
KNEE • HIP • SHOULDER
CENTER**

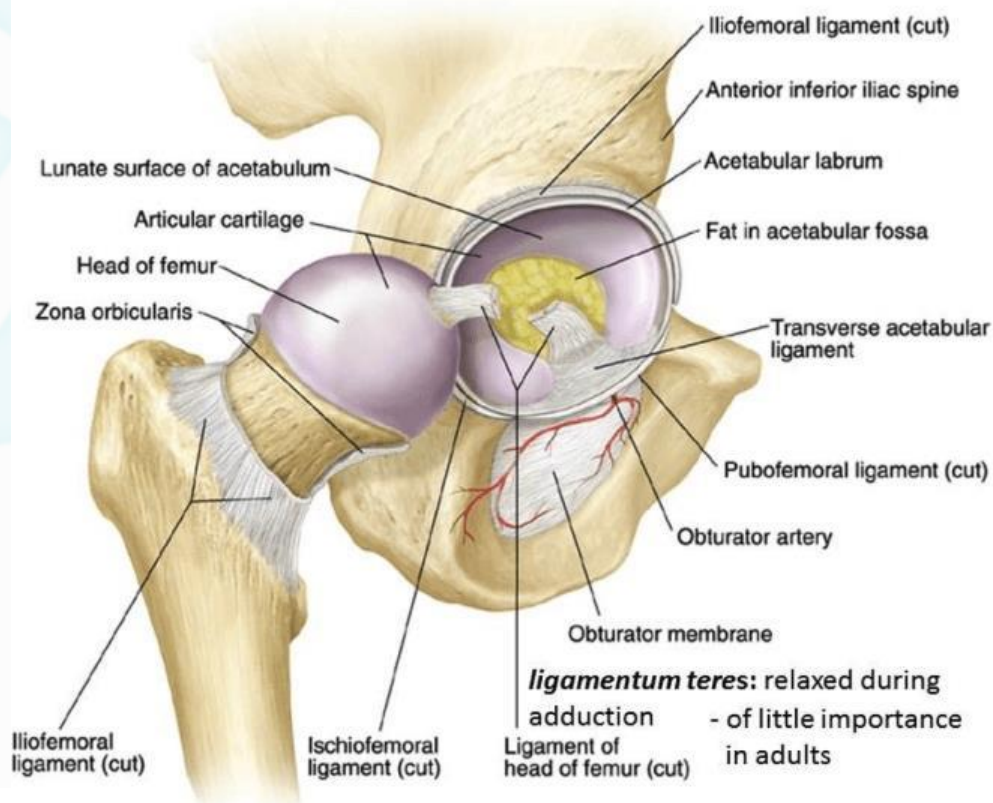
Portsmouth, NH

Welcome

- Thank you for entrusting your care to us for your hip replacement. As a practice that specializes in joint replacement surgery, we have built a comprehensive program called **AVATAR** that is designed facilitate the recovery process and improve outcomes.
- Our team of physicians, physician assistants, nurse practitioners and office staff are all highly dedicated to the AVATAR process and to our patients' end result.
- This manual is your guide to the AVATAR hip replacement program and is meant to help you prepare for surgery and maximize your recovery.
- If you have any questions are require further information, please contact us anytime at:
 - Phone: 603-431-5858
 - Email: avatar@kneehipsho.com

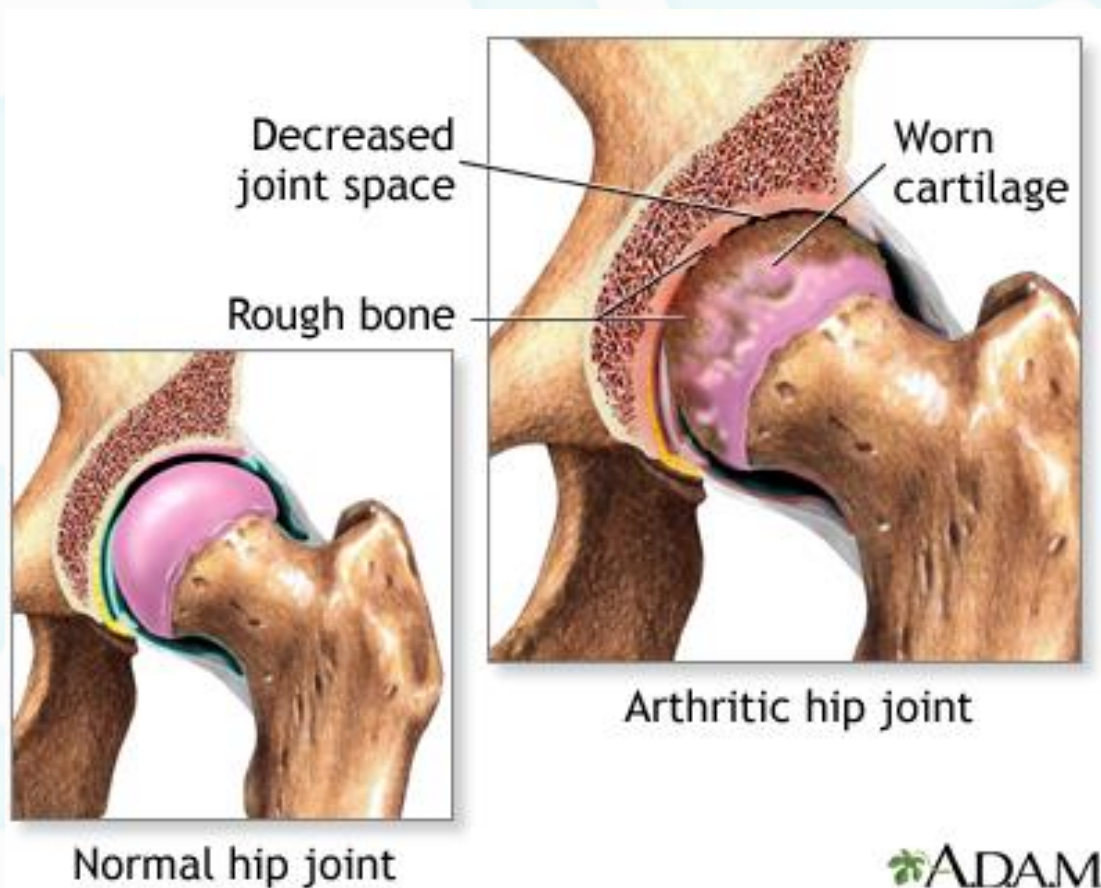
ABOUT HIP ANATOMY?

- The hip is a ball and socket joint.
 - The ball sits on top of the femur bone
 - The socket is part of the pelvis
- Cartilage covers these surfaces to provide a smooth gliding surface
- In addition, there are key tendons and ligaments that move and stabilize the hip during everyday function



HIP ARTHRITIS

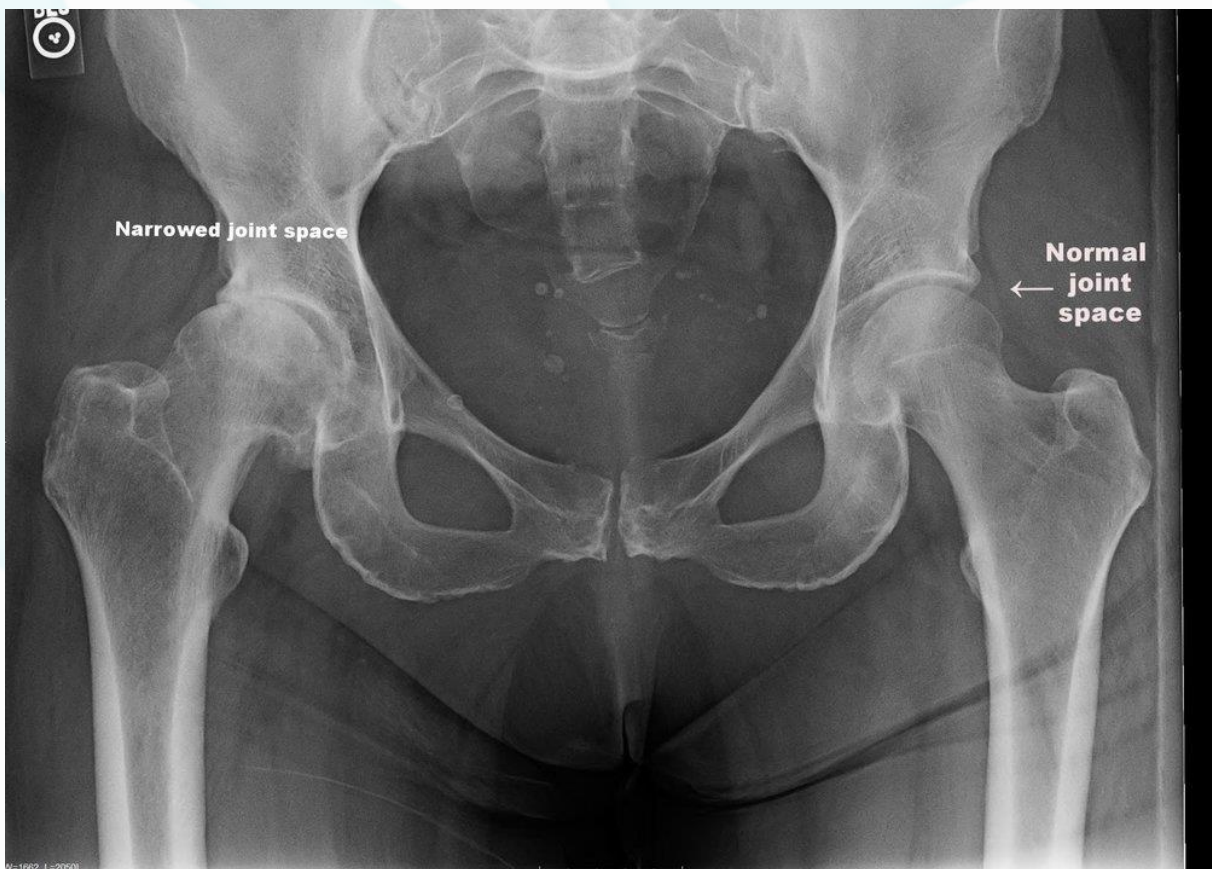
- Hip arthritis occurs when the cartilage that forms the smooth gliding surface of the joint wears away and exposes the underlying bone.



- This results in pain and stiffness
- Arthritis is a progressive process that worsens with time and has no medical cure

ARTHRITIS X-RAYS

- This image shows and normal and arthritic hip
- The arthritic hip shows “Bone on Bone” between the ball and socket and bone spurs building up around the edge of the hip socket



WHAT IS A TOTAL HIP REPLACEMENT?

- Hip replacement resurfaces the worn joint with implants affixed to the bone.
- The implant consists of 4 pieces

Acetabular Implant

Titanium

Bearing Surface

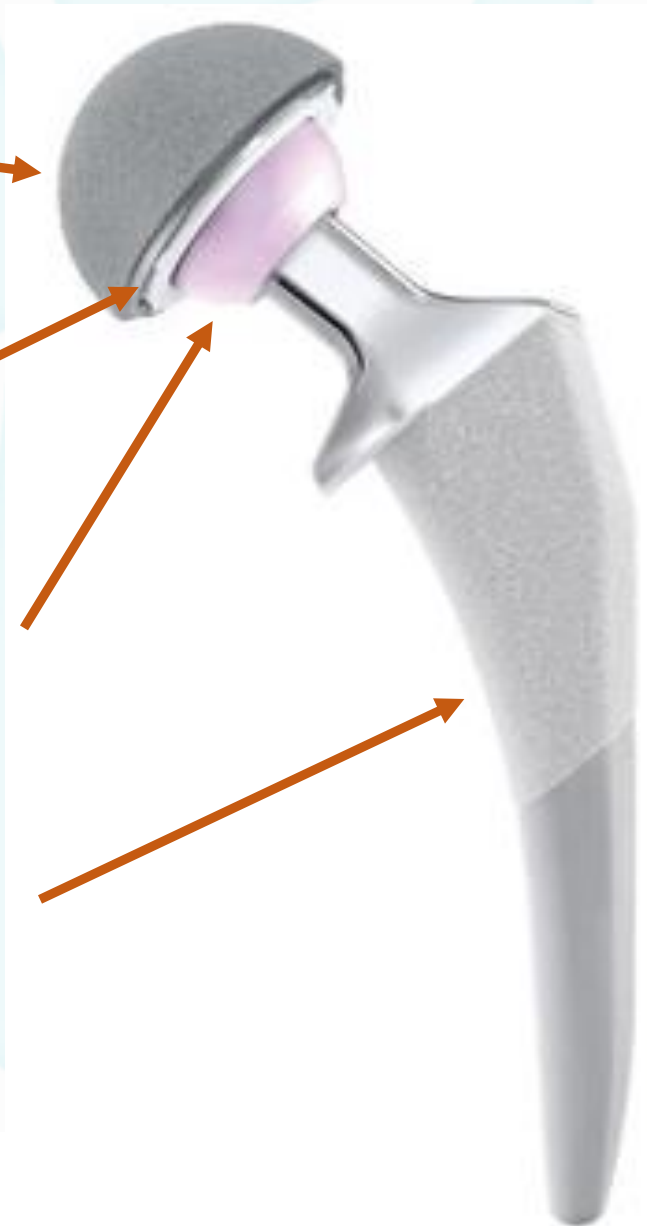
Polyethylene

Femoral Head

Ceramic or Metal

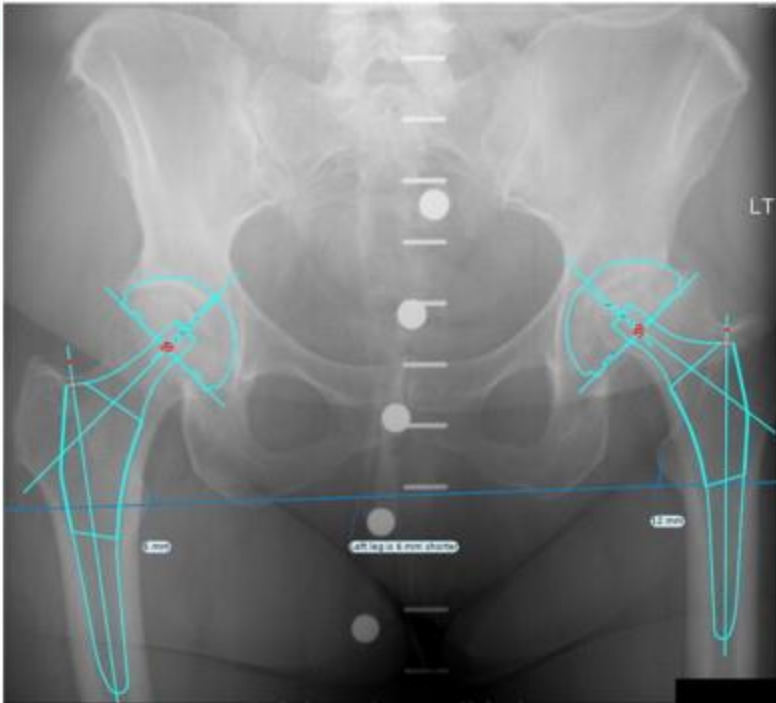
Femoral Stem

Titanium



WHAT IS TOTAL A HIP REPLACEMENT?

- These implants are press fit into the bone after careful preparation to ensure the best fit and alignment
- Your surgeon will choose the implant size and type that is best suited to recreate your anatomy by templating your xrays



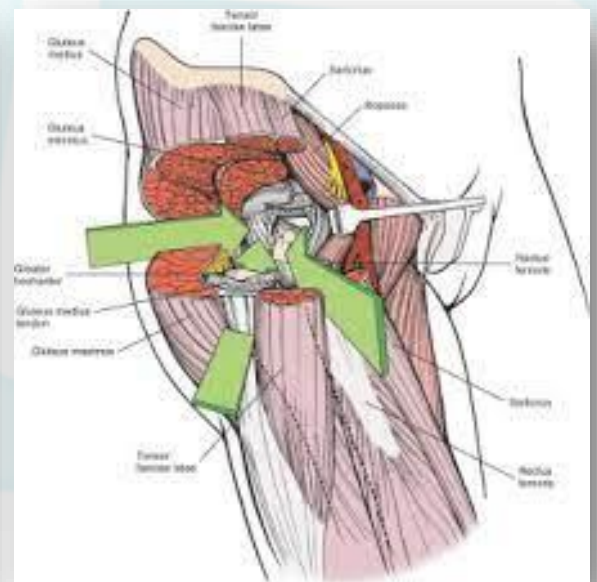
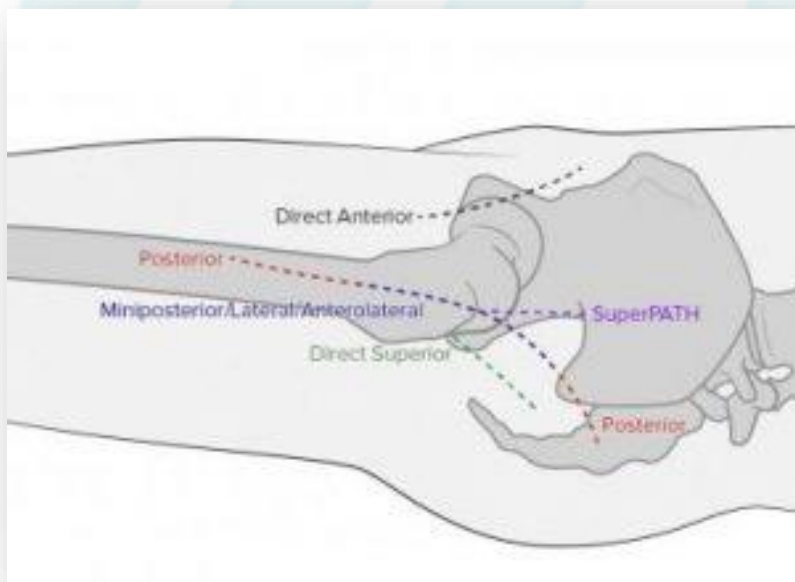
DIFFERENT HIP SYSTEMS

- There are many different hip implant designs available – all with successful track records
- Your surgeon will choose the implant that is best suited to give you a successful result based on your hip anatomy
- All of the implants we use for our AVATAR hips have an excellent long-term track record



SURGICAL APPROACHES TO HIP REPLACEMENT

- There are several different surgical approaches to hip replacement and there has been much debate in the literature regarding whether one approach is better than another.
- The consensus on this topic after years of research is that surgical approach does not impact time to recovery or end result.
- **ALL MODERN APPROACHES ARE TISSUE-SPARING**
- We most commonly use the mini posterior and SuperPATH approaches and use the anterior approach in select cases
- The optimal approach is the one your surgeon chooses for you as there is no compelling scientific evidence that choosing any one specific approach over another will impact outcomes.



WHO SHOULD CONSIDER A HIP REPLACEMENT

The following are general guidelines for when a hip replacement is appropriate

1. The level of pain is moderate to severe and significantly impairs your activity level
2. You find yourself avoiding certain activities that you would otherwise do because of pain
3. You have maximized conservative measures like medications, injections, exercise therapy etc...
4. Your quality of life is sufficiently impaired to warrant the surgery and recovery



EXPECTATIONS AFTER HIP REPLACEMENT

- **Pain Relief**

- The main goal of hip replacement is pain relief and 90+% of patients will achieve good to excellent results when it comes to this measure
- Some patients particularly those with back arthritis may continue to have some discomfort around a hip replacement
- A small percentage of patients continue to have moderate pain after hip replacement despite what appears outwardly to be a successful surgery
- The reasons for this continued pain are not always clear but may be due to implant loosening, scar tissue, infection and bursitis or tendinitis



EXPECTATIONS AFTER HIP REPLACEMENT

- **Range of Motion**

- Arthritic hips are generally very stiff in rotational range of motion and surgery will greatly improve this
- Range of motion can be affected by other issues such as lumbar spine arthritis, body habitus and severity of the preoperative arthritis

Possible hip movements

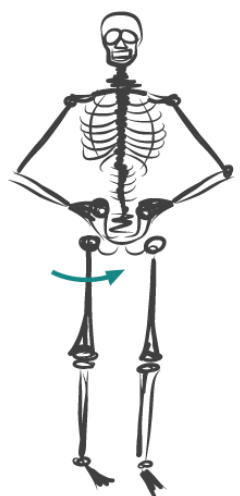
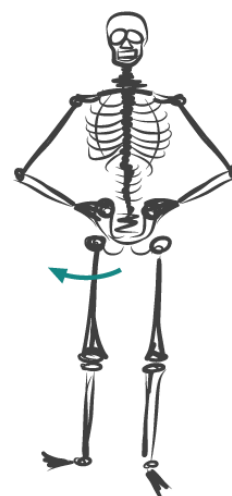
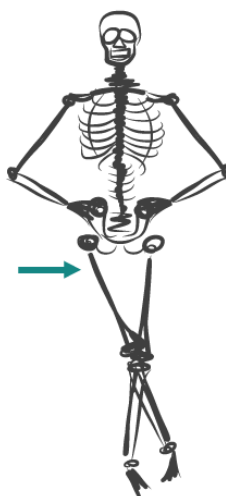
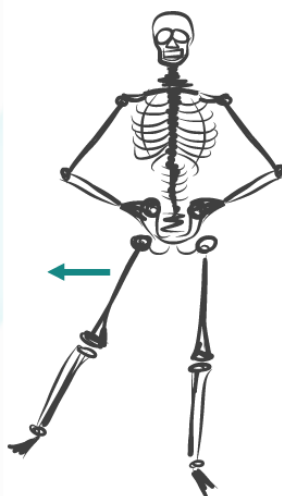
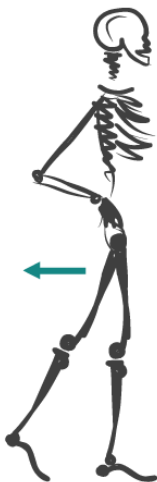
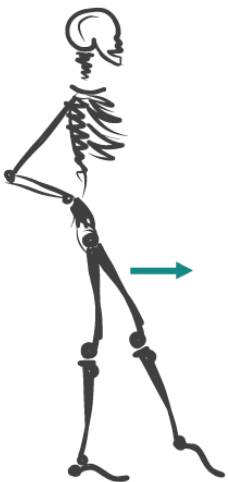
FLEXION

EXTENSION

ABDUCTION

ADDUCTION

EXTERNAL / INTERNAL ROTATION



SequenceWiz.com

EXPECTATIONS AFTER HIP REPLACEMENT

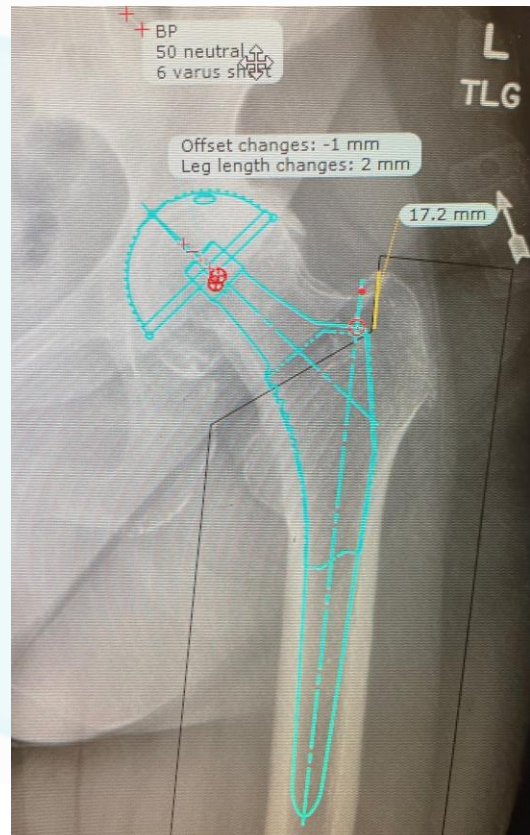
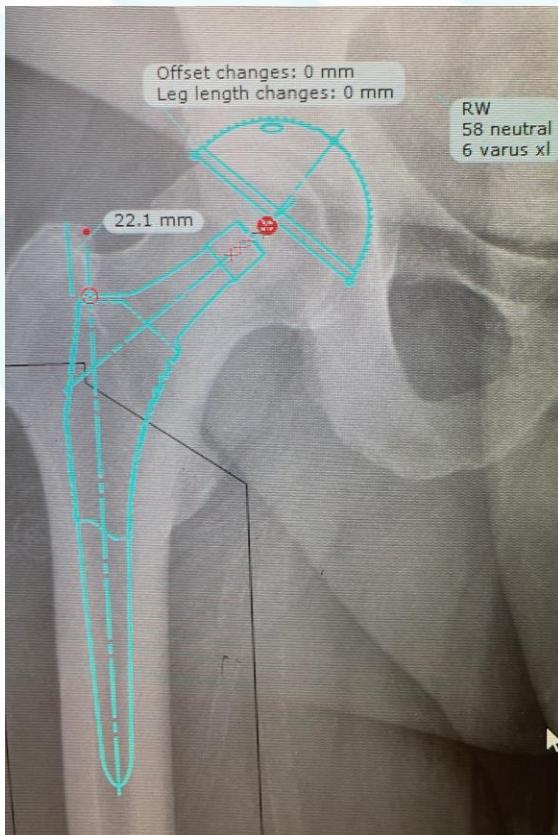
- **Return of Function**

- Hip replacements are very durable and generally permit patients to return to a high level of recreational activity
- Biking, hiking, racquet sports, skiing and other sports are permitted provided patients achieve the necessary level of strength and range to permit this
- Repetitive impact activities such as distance running are generally discouraged due to risk of premature wear
- Hip replacement sets the stage for patients to return to desired activities by performing rehabilitation necessary for each activity



LEG LENGTH

- One of the goals of hip replacement is to restore true leg length (not apparent leg length)
- This is done by digitally templating each patient's case prior to surgery to determine which implants will best restore anatomy and stability
- Leg length can be adjusted during the surgery using different hips stems and head lengths.



PATIENT ACTIVATION

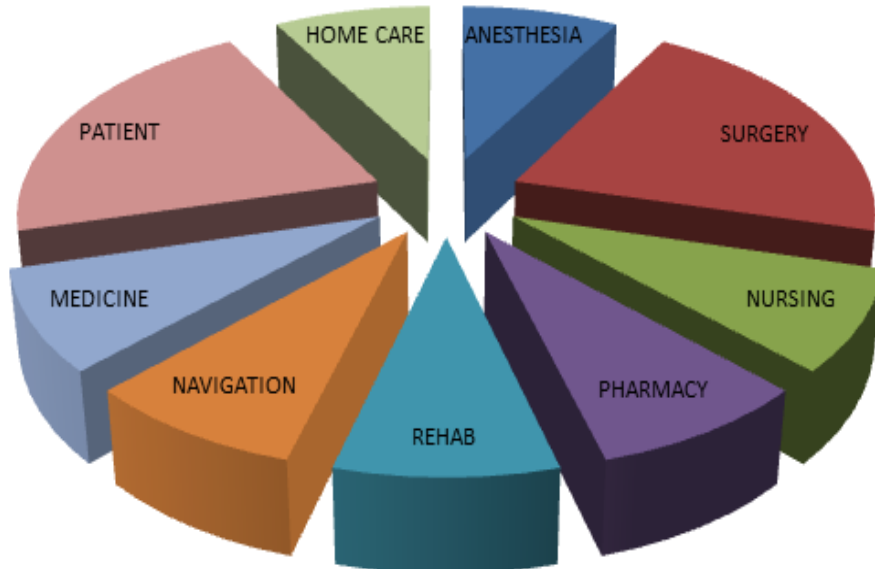
- When patients get actively involved in their preparation and rehabilitation, the chances of a successful outcome are greater
- There is no surgical technique or technology that can compensate for a lack of motivation to succeed
- The decision to undergo joint replacement must include a commitment to actively participate in the outcome of surgery
- Joint replacement simply sets the stage for what patients can achieve through persistent dedication to the rehabilitation and recovery process

OWN YOUR OUTCOME

AVATAR

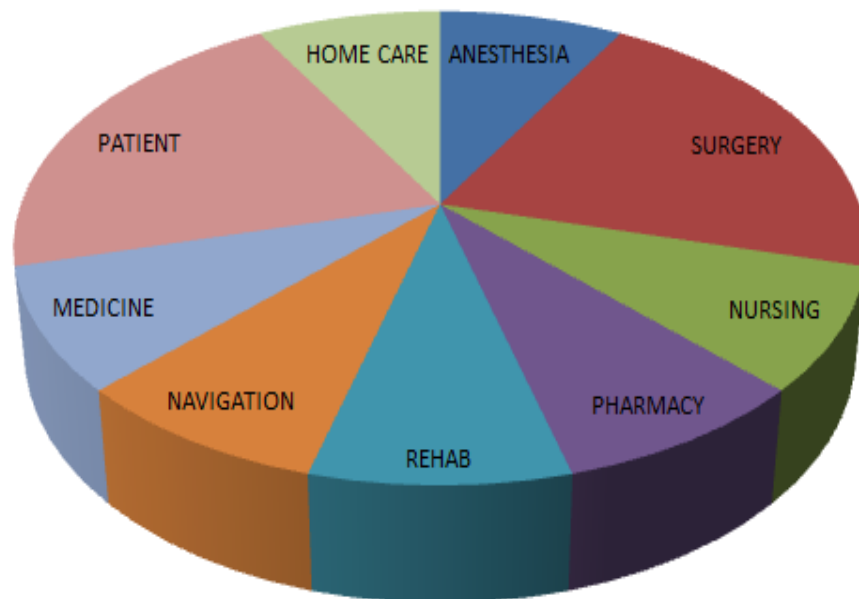
Align Vital Assets To Accelerate Recovery

- Joint replacement surgery is a complex process that involves many aspects of care.
- Surgery is only one asset in this process.
- While a properly performed surgery is important to outcomes, all other assets must also be aligned
- AVATAR is a new approach that uses the best technology and surgical technique, selects the best professionals (surgical team, anesthetist, physical therapist), and ensures the best pain control



NAVIGATION

- AVATAR is about customizing each of these assets to a patient's individual needs and putting together a pathway that leads to better quality care and higher patient satisfaction
- Our goal is to help navigate each patient through the entire process and let nothing fall through the cracks
- We have a track record of over 2000 patients who have done better with personalized, customized total joint experience



SAME DAY SURGERY

- With the AVATAR program, an overnight stay in the hospital is no longer necessary for a majority of patients.
- **HOW?**
 - Pain is the major factor limiting rehabilitation after joint replacement. With the use of multimodal pain management, long-acting local anesthetics and medication to limit blood loss, a majority of patients can be dressed, walking, doing stairs and heading home within a few hours after surgery
 - An individualized postoperative medication schedule will be developed for each patients using an opioid sparing protocol called multimodal analgesia.
- **WHO?**
 - Motivated patients who do not have any major health problems that require inpatient monitoring are eligible for same day surgery.
 - After surgery patients must demonstrate that they are sufficiently recovered to be functional and safe at home
 - Patients are discharged home by an experienced physical therapist, nursing staff and surgical team.
 - A total joint coach/support person must be available to drive the patient home and spend the first 1-2 nights after surgery
- **WHY?**
 - Hospitals are loud, impersonal and uncomfortable.
 - When patients recovery at home they can be in better control of their postoperative care, enjoy better sleep, better food and normal creature comforts which make recovery more pleasant and restful.

BENEFITS OF SAME DAY SURGERY

- Multiple studies have now demonstrated it is as safe or sometimes even safer to go directly home after joint replacement than to spend 1-3 nights in the hospital
- The following are benefits that our patients have reported
 - Comfort of your own bed leading to better sleep
 - Comfort of your own home leading to less stress
 - Full availability of your coach
 - Home cooked food
 - Better ability to control your pain in real time
 - Better ability to self-manage any medical issues such as diabetes
 - Lower risk of infection
 - Better ability to mobilize since there will not be lines and monitors hooked up to you
 - Less noise and few people coming in and out

MY AVATAR

- *AVATAR Definition*: the embodiment of a concept or philosophy in a person
- The goal of hip replacement is to restore you to the activities you love and have missed because of arthritis.
- My AVATAR is who you want to be when your arthritis pain is gone.
- Achieving your AVATAR takes a commitment on your part to regain strength and function after surgery. This is not automatic.
- Hip replacement simply sets the stage for you to achieve the goals you have for yourself
- Define your AVATAR before surgery so you can set goals for your new knee

COACH

- It is important to have someone who can help you through the entire care episode of joint replacement from preoperative preparation through recovery.
- Your Coach can be a spouse, family member or friend who can assist you, provide a second set of ears, ask relevant questions and motivate you to succeed
- Recruit this person in advance and engage them as part of your care team so they can be part of your success story
- For many people, the process of undergoing joint replacement can be overwhelming and having a critical support person can have a tremendous positive impact

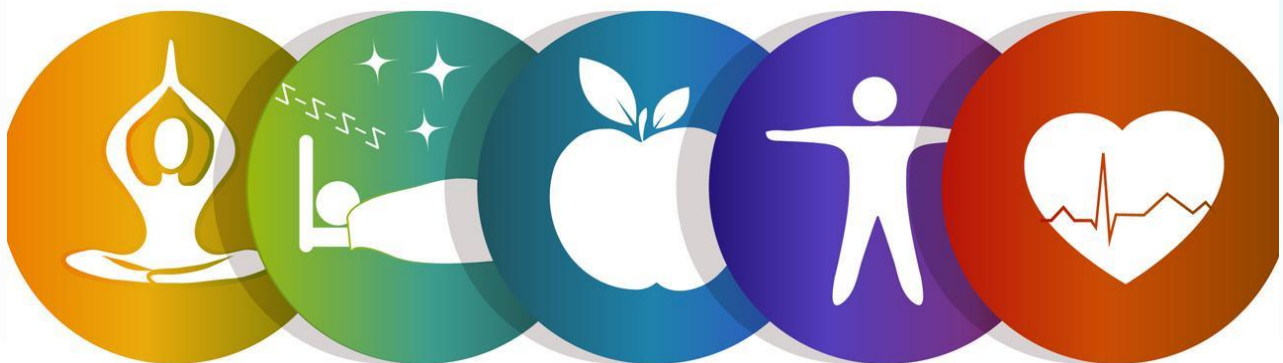


PREOPERATIVE PREPARATION

- Getting yourself ready for surgery can improve the process of recovery and the final outcome
- This includes the following:
 1. General health and wellness
 2. Nutrition
 3. Weight control
 4. Prehab exercises
 5. Home preparation
 6. Medical Equipment

GENERAL HEALTH AND WELLNESS

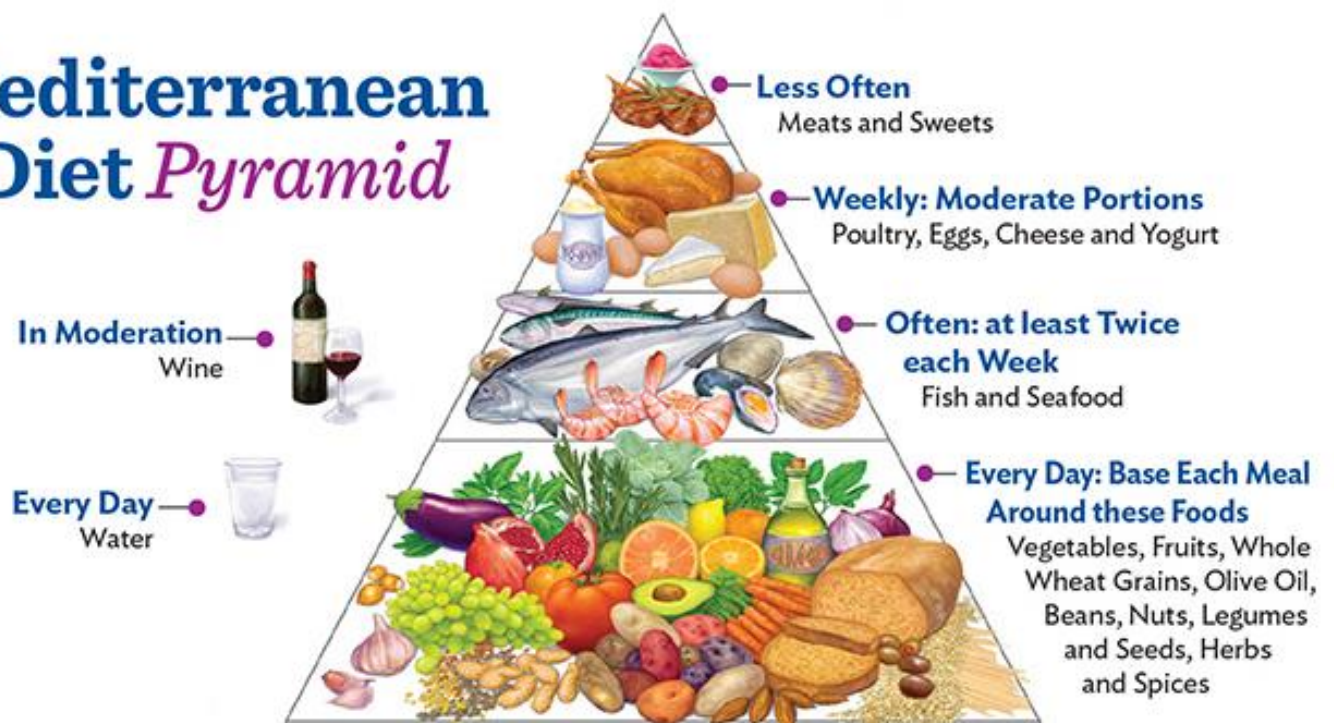
- Improving your general health before surgery can lower the risk of complications
- Any chronic health conditions should be well-controlled.
- Patients with Diabetes should have a Hemoglobin A1c of 7.5 or less
- Regular exercise to improve cardiovascular health and overall strength has a proven benefit
- Patients who smoke should aim to cease or significantly reduce nicotine use 6 weeks prior to surgery
- Alcohol consumption should be minimized in the weeks prior to surgery



NUTRITION

- Improving your nutrition prior to surgery can strengthen your immune system and boost your healing capacity
- It can also improve your bone quality and help strengthen your muscles before and after surgery
- Poor nutrition has been linked to a higher risk of infection
- Consider vitamin and mineral supplementation in the weeks prior to surgery
 - Multivitamin
 - Vitamin D: 2000IU daily
 - Vitamin C: 1000mg daily
 - Zinc 50 mg daily

Mediterranean Diet Pyramid



NUTRITION TIPS

- Eat at least 5 servings of fruits and vegetables every day. Try to consume a variety of colors of produce for additional health benefits. Each color contains different vitamins and minerals.
- Eat more whole grains and legumes (beans and lentils).
 - » Whole grains include brown and wild rice, whole grain noodles, corn, quinoa, oats, and popcorn.
- Try meatless alternatives. In place of meat you can get your protein from eating eggs, fish, poultry, beans, peas, soy-based foods (like tofu or soy milk), nuts/nut butter, and low-fat or fat-free dairy products.
- Keep your sodium intake to less than 2300 milligrams per day.
 - » Avoid adding salt to your food when cooking. Opt for a salt free seasoning or fresh herbs and spices.
 - » Eat freshly prepared meals at home. Processed foods and restaurant foods contain more salt.
 - » When shopping, choose the products with lower sodium content.
- Limit your daily sugar intake. Sugar can be found in honey, syrups, jelly, fruit juice, soda, candy, pastries. Read nutrition labels carefully to avoid products with high sugar content.
- Avoid foods with saturate and trans fats. Foods with unsaturated fats are a better option.
 - » Unsaturated fat is found in fish, avocado, nuts, and oils (sunflower, canola, and olive oil)
 - » Saturated fat is found in fatty meat, butter, ice cream, palm and coconut oil, cream, cheese, and lard.
 - » Trans fats are found in many processed foods, margarines, fried foods, fast food items, pies, cookies, and other dessert. Check nutrition labels.
 - » Boil, steam, or bake food instead of frying.



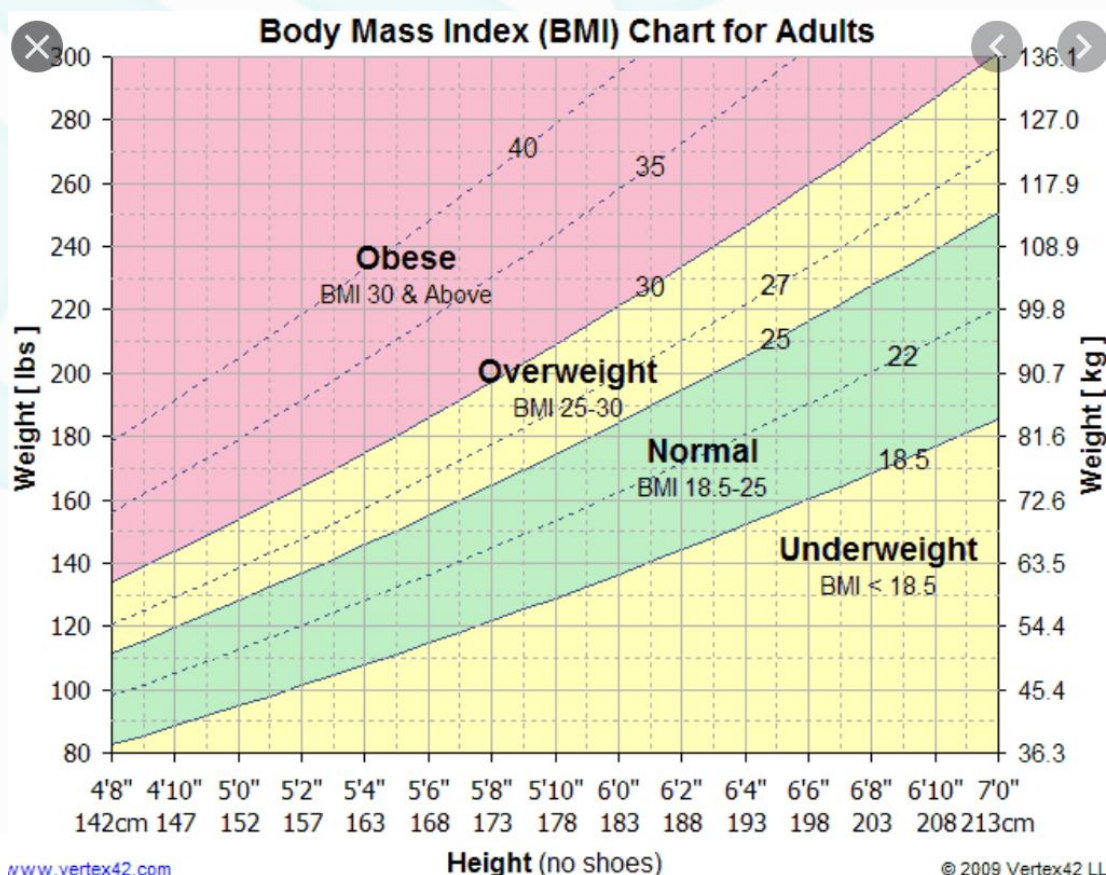
<https://shop.mend.me/products/mend-joint-replacement>

PROTEIN SUPPLEMENTATION

- Protein is key for healing and protein supplementation before and after surgery has several benefits
 - Reduced infection risk
 - Less muscle atrophy before surgery
 - Faster recovery or strength after surgery
- MEND is a supplement designed for joint replacement preparation and recovery and we recommend our patients purchase this and start it 4-6 weeks prior to surgery and continue for 6-12 weeks after surgery

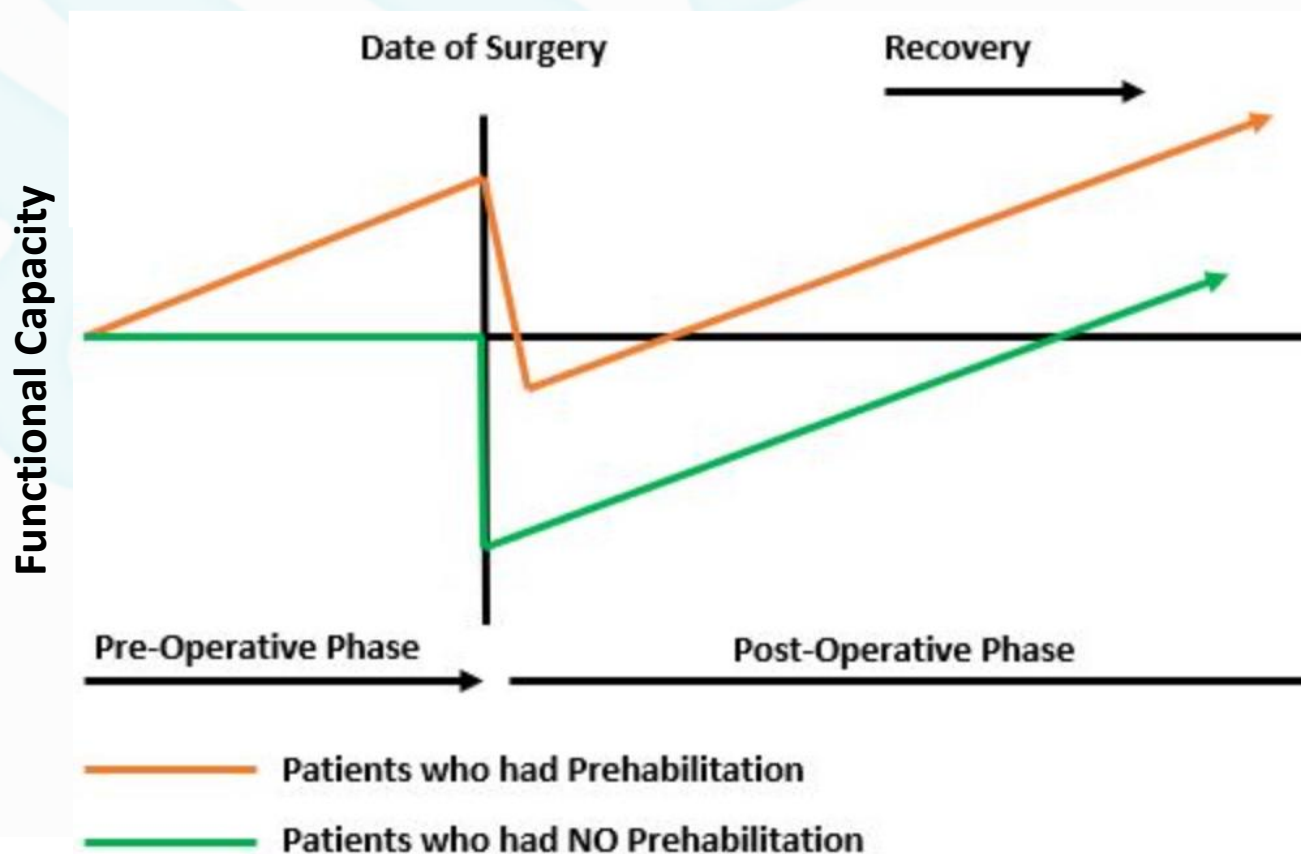
WEIGHT CONTROL

- Studies show that Body Mass Index (BMI) above 40 can raise the risk of infection and other complications
- Efforts to lose weight prior to surgery can improve outcomes and lower risks
- Weight loss can be difficult in the setting of arthritis pain due to difficulty with exercise
- Bariatric surgery (also known as weight loss surgery) is an option that can be explored prior to joint replacement
- Low-glycemic index diets that reduce carbohydrate intake can also be effective



PREHABILITATION EXERCISES

- Exercises to strengthen the leg muscles prior to surgery can jump-start the recovery process
- This can be done either with a home exercise program or as part of a structured therapy program
- Regular performance of these exercises will get you in the mode of exercising after surgery and familiarize you with what to do



HOME PREPARATION

- **Get your house ready prior to surgery so you can return to a comfortable and safe environment**
- ✓ Carry your cell phone with you at all times in the event of a problem
- ✓ Set up a recovery area with easy access to the kitchen, bathroom, remote control, electronics charging, etc..
- ✓ Move furniture to make clear paths for navigation providing room for use of a walker
- ✓ Remove throw rugs, loose electric cords or any other hazard that might produce a fall risk
- ✓ Put nightlights in areas like the bathroom to make navigation easier at night
- ✓ Stock up on groceries and other essential items like toiletries and any medications you will need
- ✓ Move essential items from low cabinets to waist height to reduce the need to crouch
- ✓ Set up your exercise area
- ✓ Prepare and freeze meals prior to surgery
- ✓ Make your ice packs
- ✓ Pay your bills in advance

MEDICAL EQUIPMENT

- Most patients will start on a walker and progress to a cane within the first days to weeks after hip replacement.
- These devices should be purchased in advance at a pharmacy or online.
- Some patients may consider putting grab bars in their tub or shower to assist in balance.
- A shower chair or tub bench may also be helpful for patients with balance issues
- A raised toilet seat can also be helpful particularly for taller patients who may have a low toilet



- **Please remember to bring your walker on the day of surgery**

MEDICAL CLEARANCE

- You will need to get clearance from your medical doctor for surgery.
- If you see a cardiologist regularly for a heart condition or have a prior history of heart disease, cardiology clearance may be required as well.
- Routine lab work is also required including a nasal swab to screen for staph bacteria in the nose.
- Other testing such as additional lab work or an EKG may be required depending on age or other medical conditions.
- If there are any concerns about your health history that may impact surgery, we may arrange a consultation with the anesthesiologist as well.



MEDICAL CLEARANCE

- **Our surgical schedulers can help to arrange medical clearance and any testing in the weeks prior to surgery**
- If you have any health conditions that are not stable or well controlled at the time of scheduling, your surgery may need to be delayed until your health can be optimized
- This can include
 - Poorly controlled diabetes
 - Unstable heart disease
 - Moderate to severe kidney or liver disease
 - Vascular disease involving the surgical leg
 - Any ongoing infection elsewhere in the body



PREOPERATIVE APPOINTMENT

- You will have an appointment with us about 1 week prior to surgery to:
 - ✓ Review your medical clearance
 - ✓ Review your current medications
 - ✓ Review your lab work
 - ✓ Review preoperative instructions
 - ✓ Discuss pain management strategies
 - ✓ Answer any questions
 - ✓ Review risks and benefits of surgery
 - ✓ Sign consent for surgery
- **Be sure to bring an up-to-date list of your most current medications and dosing to this visit**



PAIN MANAGEMENT

- We cannot make surgery pain free, but our goal is to make the pain tolerable so that you can engage in the exercises necessary to gain motion and strength
- We will customize a strategy for you based on
 - other medications you may be taking
 - a history of prior medication intolerance or allergy
 - any medical conditions that may preclude certain medications
- **If you are treated for chronic pain by a pain management specialist, a clear plan needs to be developed prior to surgery regarding**
 - **who will manage the postoperative period and for how long**
 - **what medications are suggested in addition to baseline pain management**
- See our [*Perioperative Pain Management Guide*](#) for more details

MEDICATIONS TO PURCHASE PRIOR TO SURGERY

- We recommend purchasing the following before surgery so that you have everything set up in advance. These can all be purchased over the counter.
 - Tylenol ES 500mg
 - Enteric-coated Aspirin 325mg
 - Prilosec 20mg (unless you take another antacid like Protonix)
 - Anti-inflammatory medication of choice
 - Iburprofen 200mg
 - Naprosyn/Aleve 220mg
 - Miralax bottle
 - Colace 100mg

PREOPERATIVE BATHING INSTRUCTIONS

- You will be provided with a bottle of **Hibiclens** antibacterial soap at your preoperative visit
- Start washing with this 3 days prior to surgery in the following manner
 1. Wash your hair and face first with regular shampoo and soap and rinse thoroughly
 2. Move away from the water stream
 3. Apply Hibiclens over your body excluding your face and wait 3 minutes
 4. Rinse thoroughly and do not use regular soap afterwards
 5. Use a clean towel to dry off
 6. Do not apply lotions or creams after use
- **You may shower the morning of surgery**



PREOPERATIVE MEDICATION INSTRUCTIONS

- Start Tylenol ES 2 pills every 8 hours 3 days prior to your surgery.
- **Do not take this the morning of your surgery. The last dose should be the night before**



- You will be given instructions on your other regular medications at the time of your preoperative visit
- If you take any blood thinners such as Coumadin, Eliquis or Xarelto, you will also be given specific instructions on when to take your last dose prior to surgery

PREOPERATIVE DIET INSTRUCTIONS

- **14 DAYS PRIOR TO SURGERY**

- Stop herbal supplements to include Echinacea, Ginseng, Ginkgo, Garlic, Valerian, St John's Wort, Ephedra, Saw Palmetto, Vitamin E

- **8 DAYS PRIOR TO SURGERY**

- Stop any anti-inflammatory medications such as Ibuprofen, Motrin, Advil, Naproxen, Aleve,
- If you take low-dose Aspirin daily, you may continue this

- **DAY BEFORE SURGERY**

- Hydrate well with electrolyte fluid such as Powerade Zero
- **Do not eat any solid food after midnight**

DAY BEFORE SURGERY

LOW FIBER/LOW RESIDUE DIET

- The Low Fiber/Low Residue diet reduces the amount of waste that moves through your gastrointestinal system.
- This is helpful in preparing for surgery and reducing symptoms such as nausea and bloating
- General Rules
 - Avoid any food made with seeds, nuts or raw or dried fruits
 - Avoid whole-grain breads and cereals
 - Avoid legumes (beans, peas and lentils)
 - Do not eat raw fruits or vegetables and remove skins before cooking
 - Avoid tough fibrous meats with gristle
 - Limit milk and milk products
 - Limit foods high in fat

DAY BEFORE SURGERY

LOW FIBER/LOW RESIDUE DIET

Recommended Foods

- **Meat and Other Protein** Ground or tender well-cooked lean meats, poultry, fish, eggs and soy without added fat
- **Grains** Enriched white bread and rolls, white rice, pasta, plain crackers, cream of wheat, Rice Krispies
- **Fruits** Fruit juice without pulp, canned or cooked fruits without skins or seeds, ripe bananas, seedless watermelon and other soft melons, peeled apples
- **Vegetables** Most well-cooked or canned vegetables without seeds and skin, potatoes without skin, tomato sauce, pureed spinach, green beans, carrots, iceberg lettuce
- **Fats, snacks, sweets and condiments** Vegetable oil, butter, margarine, ketchup, mayonnaise, plain cookies and cakes, jello, honey, syrup

DAY OF SURGERY

You can drink clear liquids up to 3 hours before your surgery

Do not eat any solid food on the day of your surgery

Allowed

- Water
- Apple or Cranberry Juice
- Gatorade or Powerade
- Black coffee or tea
- Clear broth
- Ginger ale
- Seltzer
- Jello



Not Allowed

- Milk or dairy products (including in your coffee or tea)
- Citrus juices
- Prune juice
- Any juice with pulp
- Anything not listed in the allowed list

DAY OF SURGERY

- You will receive a call the day before surgery in the late afternoon alerting you what time to report to the hospital
- If your surgery is on a Monday, you will receive the call in the Friday before
- Remember to stop any clear liquids 3 hours prior to the scheduled surgery time
- **What to bring**
 - ✓ Clothes that are easy to don and doff
 - ✓ Closed-toe, slip on shoes
 - ✓ A legal photo identification card
 - ✓ Up-to-date insurance card
 - ✓ Cell phone
 - ✓ Book or other form of entertainment
- **What not to bring**
 - ✓ Valuables such as rings, jewelry, watches. Remove these and leave them at home
 - ✓ Medications

PREOPERATIVE PREPARATION

- First you will check in and register
 - At Portsmouth Hospital, this is inside the main entrance to the left
 - At Stratham Ambulatory Surgery Center or Atlantic Coast Surgical Suites this is in the main waiting area inside the main entrance
- You will then be escorted back to the preoperative holding area where your belongings will be stored, and you will be assigned a room or a bay and change into a gown
- The Same-Day Surgery (SDS) will complete your admission process by reviewing your medications, allergies, surgical preparation, recent health issues and the planned procedure and postoperative course
- An IV will be started for hydration
- The nursing staff will then wash down the surgical site with special anti-septic wipes to help reduce the risk of infection



PREOPERATIVE PREPARATION

- You will be given several medications for “preventive analgesia”
- The anesthesia team will meet with you to discuss their plan and obtain anesthesia consent
- The majority of patients undergoing hip replacement will receive a spinal anesthetic with intravenous sedation
 - The level of sedation allows you to sleep comfortably through the procedure
 - You will awaken quickly after the surgery is concluded
- Your surgeon will see you in the same-day surgery unit to confirm the site of surgery and mark that site.
- Members of the OR staff will recheck and reconfirm the planned procedure and consent and then escort you back to the operating room



SURGICAL TEAM

- In addition to your Drs. King and Parsons, there will be a team of experts taking care of you in the operating room
 - Anesthesia provider
 - Physician-assistant (Kathy Leavitt and Stacey Riley)
 - Operating room nurse
 - Surgical technician (aka scrub nurse)
 - Second assistant
- Each member of the team has a dedicated role to ensure your safety
- You will be continuously monitored during the surgery
- Your safety is our #1 Priority



RECOVERY ROOM

- When the surgery is complete you will be transferred to the Post Anesthesia Care Unit (PACU)
- Here a specialized PACU nurse will continue to monitor you and care for you as you wake up from anesthesia or sedation.
- If you have any discomfort, they can begin to administer medications for this
- A typical stay in PACU lasts about 1 hour but occasionally this may be shorter or longer depending on circumstances



SAME-DAY SURGERY RECOVERY

- If you are planning to go home the same day, you will be transferred back to the same-day surgery area after the PACU
- Here you will continue recover and the following criteria will be evaluated and completed to ensure your safe discharge
 - Your discomfort needs to be well-managed and tolerable
 - You need to have stable vitals signs
 - You need to be able to urinate
 - You need to be able to hold down food and liquid
- Physical and occupational therapy will also work with you and educate you to ensure your safe mobility and ability to manage basic activities of daily living
- This will include stair climbing



DISCHARGE

- Once you have met criteria, you and your caregiver can transition from the facility to home
- You will be wheeled to the car in a wheelchair or in some cases walk there with a walker
- Therapy will assist you in getting in your vehicle and educate you on the best way to enter and exit it.
- Make sure you pump your foot up and down on the way home to keep blood flowing through your leg
- You will be given instructions on continuing the multimodal pain management regimen according to the provided schedule
- Rest and relax, particularly for the first night and make sure to stay well hydrated



VNA SERVICES

- We will arrange a visiting nurse/therapist for the first 1-2 weeks after surgery
- This person will check your vital signs and assess your surgical site.
- They will also work on home exercises, swelling control
- This provider can communicate any concerns to your care team



PAIN MANAGEMENT

- Your care team will go over a tailored pain management program with you at your preoperative visit
- This will take into account any allergies, intolerances or potential medication interactions
- Staying ahead of the pain is paramount to achieving your rehabilitation goals and our multimodal program is designed to be taken on a schedule
- Further details about pain management after surgery are included in our separate online guide which patients should review.

WOUND MANAGEMENT

- Your incision will be closed with absorbable stitches and covered with steristrips or a mesh with skin glue.
- There will be a dressing over the incision that can stay on for several days if dry
- We do not use staples or any other type of suture than needs to be removed.



WOUND MANAGEMENT

- The dressing over the incision will stay in place for 5-7 days after which the incision can stay open
- Do not submerge your knee underwater until cleared by your care team at the 3-week visit.
- The steri strips or mesh will slowly begin to peel up from the skin
- Cut the peeled portion with cuticle scissors
- It may take 3-4 weeks for all of the steri strips or mesh to come off

PREVENTING BLOOD CLOTS

- Blood clots are rare after joint replacement but can happen to anyone
- Risk factors for blood clots include a prior or significant family history of blood clots or pulmonary embolism, a bleeding disorder that increases risk of clotting such as Factor 5 Leiden, and prolonged immobilization
- Blood clots in the leg are dangerous because they can travel to the lungs and cause a pulmonary embolism
- Symptoms include increased calf and thigh pain and swelling, throbbing and increased warmth
- Note that some leg swelling is normal after joint replacement and may vary from patient to patient. If you have any concerns contact our office.

PREVENTING BLOOD CLOTS

- All patients are placed on some form of blood thinner for 30 days after surgery.
- For most people we use Aspirin 325mg twice a day
- For people with a history of stomach ulcer disease or kidney insufficiency we may use Aspirin 81mg twice a day
- Patients already taking blood thinners (such as Eliquis, Xarelto, Plavix or Coumadin) are restarted on their regular medication the day after surgery
- The following steps can lower the risk of blood clots
 - Elevation to reduce swelling
 - Regular exercise and mobilization
 - Ankle pump exercises

PREVENTING INFECTION

- Infections after hip replacement are rare but serious
- Keep your incision covered with a dressing for at least 5-7 days after surgery
- Avoid submersing the incision under water for at least 3 weeks
- Monitor your incision for any drainage and alert our office immediately if this occurs
- Keep soiled clothing away from your incision
- Keep you hands clean at all times during dressing changes.

HIP PRECAUTIONS

- Hip replacements can dislocate early after surgery if the joint is positioned in certain ways
- Hip precautions refer to a series of positions to avoid for the first 8 weeks after surgery
- These positions may pertain to activities like rising from a low seated position
- The type of precautions depend on the surgical approach as anterior and posterior approaches have different precautions
- The therapist will review the precautions with you

POSTERIOR HIP PRECAUTIONS



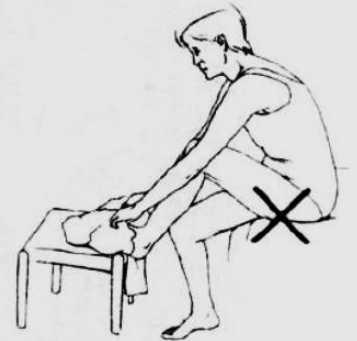
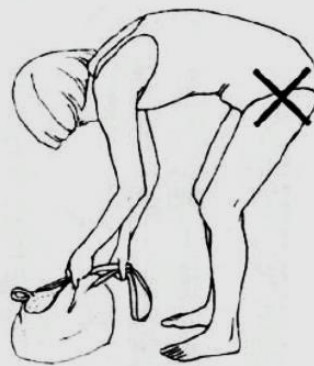
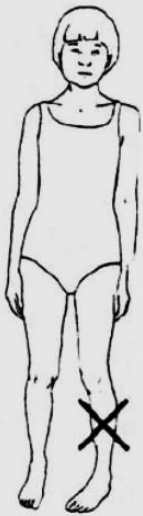
Don't bend your hip
more than 90 degrees.



Don't cross your operated
leg over your other leg.



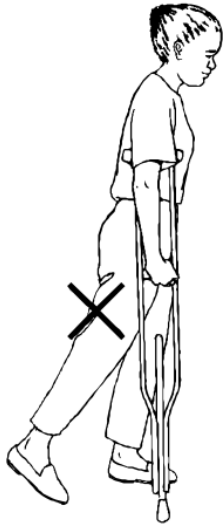
Don't turn your operated
leg inward (pigeon-toed).



ANTERIOR HIP PRECAUTIONS

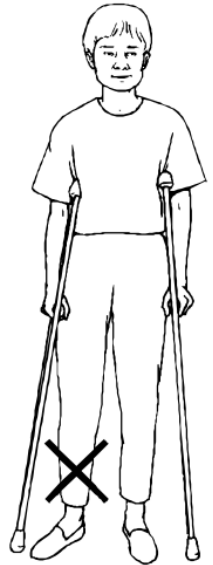
Anterior Hip Precautions: No Leg Extension

Do not bring leg backward while standing or lying. Keep thigh in line with back of trunk and buttocks.



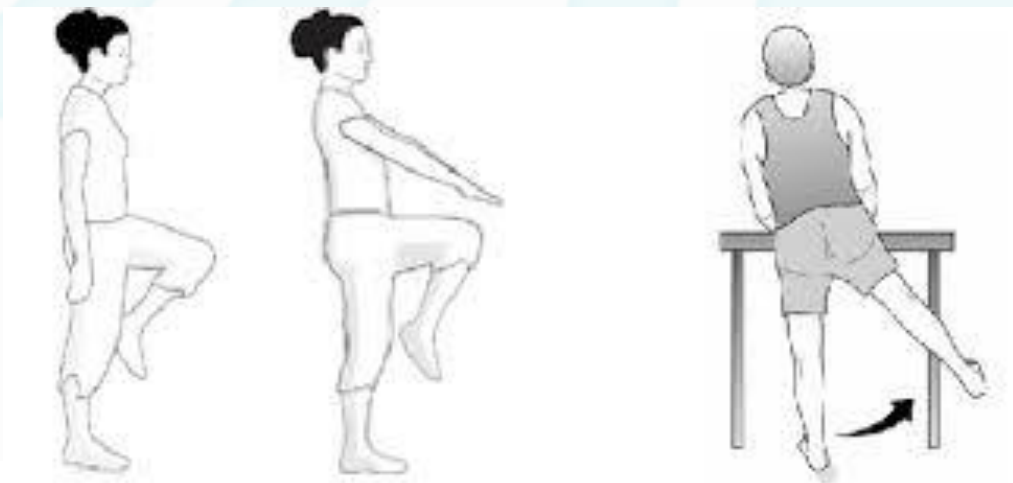
Anterior Hip Precautions: No External Rotation

Do not turn affected leg outward. Keep foot pointed forward. This also applies when lying in bed. May use towel roll or pillow to keep leg from rolling outward.



HOME EXERCISE

- Daily exercise is critical after hip replacement activate the muscles around the joint
- The therapists will arrange a program of home exercises that patients should do at least daily with some exercises performed more frequently
- There is a balancing act between working hard and overdoing it
- Listen to your body and do not try to push through excessive pain



OUTPATIENT PHYSICAL THERAPY

- Outpatient therapy usually starts 1-2 weeks after surgery
- Depending on which hip you had replaced and how your recovery is proceeding, you should expect to arrange transportation for the first few weeks
- Consult with your care team about where you plan to attend outpatient therapy as our office does recommend certain practices who are most familiar with our protocols and goals
- Most patient will attend outpatient PT for 6-12 weeks after surgery to maximize range and strength



MAINTENANCE EXERCISES

- Since you will only be attending outpatient therapy 2-3 days per week, it is essential that you perform daily exercises on the other days
- Full recovery from hip replacement can take up to a year as the healing process matures and patients continue to make gains in function
- We highly recommend that our patients continue a maintenance exercise program that continues beyond the end of formal physical therapy
- Hip replacement gives patients the platform to achieve their physical goals in returning to activities, but each individual must achieve those goals through persistence and effort

RETURN TO ACTIVITY

- It is important to allow sufficient healing before returning to strenuous activity
- In general, you should wait 8-12 weeks before engaging in strenuous exercise to avoid injury to the soft tissues around the hip
- The early focus should be on swelling control, range of motion and muscle activation
- Walking and biking are good early, low-stress exercises
- Hiking, skiing, racket sports or anything that requires significant joint loading, impact or agility all require that patients are well-healed and rehabilitated. Check with your care team about return to such activities

POTENTIAL COMPLICATIONS

Infection

- Infections can occur in 0.5-1% of patients after hip replacement and typically occur either in the first 8 weeks after surgery or years later.
- Risk factors for infection include: morbid obesity, poorly-controlled diabetes, conditions or medications that suppress the immune system, poor nutrition and smoking, liver and kidney disease
- Signs of infection include increased pain, swelling, redness, fevers and wound drainage
- Wound drainage is also a leading cause of infection and should be addressed immediately by alerting your care team
- Infections usually require surgical debridement and treatment with intravenous antibiotics

POTENTIAL COMPLICATIONS

Blood Loss

- Major blood loss is not common after knee replacement and the risk of needing a blood transfusion is less than 4%
- Some blood loss is expected and may lead to some fatigue in the first weeks after surgery which is normal
- Your body will build back its nature blood stores in time
- Damage to major blood vessels at the time of surgery is extremely rare

POTENTIAL COMPLICATIONS

Nerve Damage

- Damage to major motor nerves around the hip is very uncommon
- Patients undergoing surgery through a direct anterior approach may have temporary thigh numbness in about 1/3 of cases and about 1/6 of these may be permanent to some degree

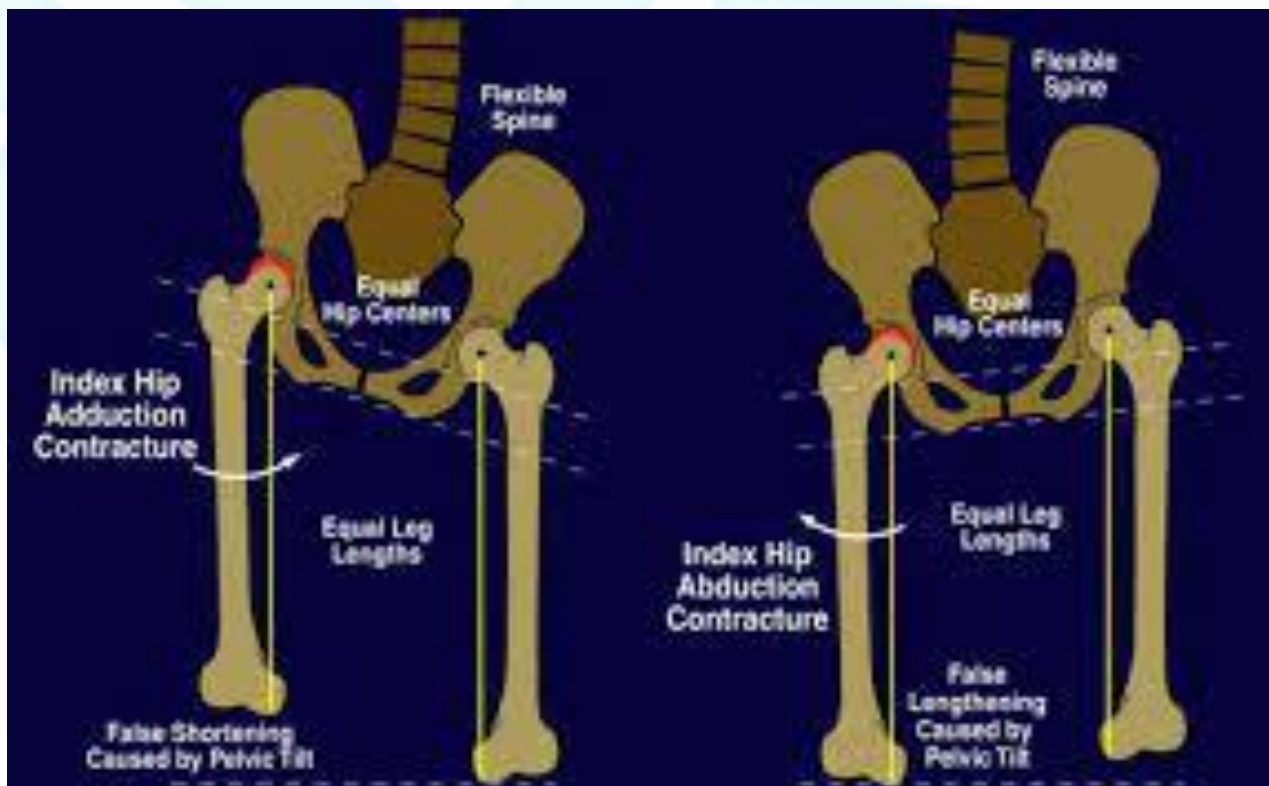
POTENTIAL COMPLICATIONS

Medical Complications

- Surgery is a stress to the body and patient with medical problems such as heart, lung or kidney disease may experience medical complications from surgery
- Optimization of these medical problems before surgery is critical as is customization of the care process to prevent complications
- Make sure your care team is aware of any medical history that may affect your risk and recovery

LEG LENGTH

- Many people with hip arthritis have a leg length discrepancy.
- This can either be a **true discrepancy** from cartilage wear and bone erosion or an **apparent discrepancy** from soft tissue contractures around the joint or scoliosis of the spine
- This image shows how tight muscles around the hip joint can tilt the pelvis and result in the appearance of a leg length discrepancy



LEG LENGTH AND STABILITY

- Another key goal of surgery is a stable hip that does not dislocate
- This requires optimal soft tissue tensioning and implant orientation
- Occasionally to achieve this goal, it is necessary to lengthen a patient's leg slightly
- If the leg was shorter before surgery, this sometimes just returns the leg to its normal length
- Small amounts of lengthening are typically well tolerated and often not noticed by patients
- Larger amounts of lengthening may be noticeable and can be treated with a heel lift in the opposite shoe
- When a hip replacement corrects an apparent leg length discrepancy, the operated leg may feel longer even though it is not.
- We encourage patients to wait at least 4-6 months after surgery to let their spine and pelvis adjust as this often corrects the perception of an initial leg length inequality

FREQUENTLY ASKED QUESTIONS

- **How long should I keep a dressing on my hip?:** we recommend keeping a dressing over the incision for at least a week after which the incision can be left uncovered provided it is dry. The steristrips or mesh will stay on for a few weeks.
- **When can I shower?:** You can shower 48 hours after surgery
- **When can I submerge my hip underwater?:** We generally advise patients to wait at least 3 weeks for this provided the wound is completely dry with no drainage.

FREQUENTLY ASKED QUESTIONS

- **Is it normal to feel tired or depressed after surgery?:** The stress of surgery and recovery as well as the energy devoted to healing can lead to fatigue and depression for a few weeks after surgery. Sleep disturbance is also common. These are normal occurrences that typically get better after 4-6 weeks.
- **Is it normal to get constipated after surgery?:** Constipation is very common after surgery and is due to a number of factors. High fiber foods and stool softeners can help prevent this. If this persists beyond 5-7 days you may require a suppository or enema.

FREQUENTLY ASKED QUESTIONS

- **My leg and ankle are swollen. Is this normal?:** Swelling in the surgical leg is common and may persist for few weeks until normal mobility and activity ensue. Elevation and compression socks can be helpful in treating this
- **How long will my hip be swollen?:** Swelling and bruising around the incision is also common and may last for a few weeks after surgery. Regular icing is helpful to reduce this.

FREQUENTLY ASKED QUESTIONS

- **Will I set off the metal detector at the airport?:** Most security systems at airports are surface scanner and not metal detectors. Your knee will not set off a surface scanner but it will set off a metal detector. If you alert security of your replacement, they will generally just do a light pat down.
- **Are there any forbidden activities after hip replacement?:** Once fully healed, hip replacements are very durable and permit most activities. Repetitive high impact such as distance running may risk earlier wear and is generally discouraged. Shorter running as in racquet sports is fine. Other activities such as skiing, hiking, biking, golfing is permitted.

FREQUENTLY ASKED QUESTIONS

- **How long do I have to maintain hip precautions?**
Hip precautions should be maintained for about 8 weeks after surgery to ensure sufficient soft tissue healing around the joint to minimize the risk of dislocation. Typically as patients mobility improves over this course of time, patients gradually forget precautions naturally.
- **How long does recovery take?:** Recovery time may be different for everyone depending on the severity of the arthritis, preoperative range of motion and many other factors such as genetic healing response. In general, it takes 12-18 months to reach maximum recovery, but patients may achieve 75% of this in the first 3 months.

FREQUENTLY ASKED QUESTIONS

- **What happens if my hip dislocates?** You will know if you new hip dislocates as you will not be able to walk and will experience severe pain. This requires relocation under sedation in the emergency department. If you experience this unlikely event, call 911.
- **How are dislocations treated?**
 - The first dislocation is treated with strict resumption of hip precautions
 - The second dislocation is treated with a special brace that restricts motion of the hip to avoid positions where this can occur
 - The third dislocation requires revision surgery to either reposition the implants or change the soft tissue tension

THANK YOU

- Thank you for entrusting your care to our practice
- We take great care to ensure the best possible outcomes for our patients
- Our AVATAR program has been refined over years of experience with 3 main goals
 - **Less Pain**
 - **Better Function**
 - **Faster Recovery**
- For any specific questions, please reach out to us at avatar@kneehipsho.com