Total Hip Replacement

Patient Information Packet

**Table of Contents**

**Section I: Overview of Total Hip Replacement Indications**

**Section II: Timeline for Appointments with your Physician and Physical Therapy**

**Section III: Pre-Operative Home Exercises**

**Section IV: Post-Operative Activity Guidelines**

**Section V: Post-Operative Protocols**

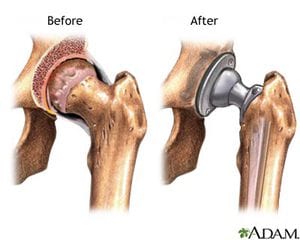
**Section VI: Post-Operative Exercises**

**Section VII: Reference List**

**SECTION I: OVERVIEW OF TOTAL HIP ARTHROPLASTY INDICATIONS**

Total hip replacement (THA) surgery is done to improve hip joint stability, mobility, locomotion and quality of life. It is also considered one of the most successful surgical procedures (1). The most common indication for a total hip replacement is osteoarthritis (OA). Other indications include rheumatoid arthritis (RA), osteonecrosis, specific hip fractures, bone tumors (2).

Total hip replacement is a surgical procedure where the hip joint is replaced with artificial implants. The head of the long thigh bone, the femur, is removed and replaced with an artificial head often made from metal alloys. The cup of the hip joint, called the acetabulum, is also replaced with either metal or plastic implants. In order to perform the surgery the surgeon does make an incision in the skin on the side of the hip, just in front of the hip bone.



The primary goal for many patients who elect to have a total hip replacement is to decrease pain while walking and recreational activities. The decision to return to sports is based on the surgeon’s preferences, the surgical procedure and the patient’s prior functional ability. Most patients will require three to six months of recovery before resuming sports-related activities (2). Low-impact activities such as swimming are preferable compared to high-impact sports such as running (3,4). Modifications to sport and activity modification may reduce the risk of implant failure.

**SECTION II: TIMELINE FOR APPOINTMENTS WITH YOUR PHYSICIAN & PHYSICAL THERAPY**

There will be scheduled appointments before and after surgery with the doctor and with physical therapy. Below is a list of the appointments and what to expect.

* Pre-Operative Appointments: Prior to surgery you will need to meet with the doctor as well as the Surgical Center. During these appointments, the doctor and the Surgical Center will review your medical history and perform a detail physical exam. You will also meet with a physical therapist in order to review pre-operative exercises in order to prepare for surgery.
* Same Day Post-Operative: The same day after surgery you will meet with a physical therapist in the surgical center. At this time, the physical therapist will review post-operative precautions, exercises as well as assess your gait and make sure you are safe with a walker or crutches.
* Following surgery, you will meet with the doctor and physical therapy as determined by your physical therapist and doctor. Please expect to follow up with your doctor at regular intervals to assess your progress and answer any questions. The frequency and duration of physical therapy will be determined between you and your therapist and will be dependent on variables such as health and wellness prior to surgery and post-operative goals.

**SECTION III: PRE-OPERATIVE HOME EXERCISES**



**Ankle Pumps:** Lie on your back with or without your foot elevated. Point your foot alternating between pointing down and up.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Quad Sets:** With or without your foot elevated, tighten the front thigh muscle (quadriceps) by pressing your knee into the table keeping your knee as straight as possible. Hold as tight as possible for 5 seconds before completely relaxing.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Glute Sets:** With or without your foot elevated, tighten your buttocks muscle by pressing your entire leg into the table. Hold as tight as possible for 5 seconds before completely relaxing.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Supine Hip Abduction/Adduction:** Lying on your back, begin with your legs together. Tighten the muscle on the top of your thigh and slide a leg away from the other. Then slide the leg next to the stationary leg. Repeat on the other leg.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Straight Leg Raise:** Lie on your back or propped on your elbows. Bend a leg so that your foot is flat. On the opposite leg, tighten the top leg muscle and lift your leg at least 12 inches keeping your knee as straight as possible.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Calf Raises:** While holding onto a countertop, stand with equal weight on each foot. Push through your toes and lift your heels off of the ground. Slowly lower your heels to the ground.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chair Push-Ups:** Begin seated in a chair with your arms on the armrests. Push down through your hands and arms to lift your hips off of the chair. Slowly lower your hips back down to the chair.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SECTION IV: POST-OPERATIVE ACTIVITY GUIDELINES.**

* Please change position at least once every hour. Position changes and movement will help prevent your hip from becoming stiff. It will also promote circulation which will reduce the risk of blood clots.
* Following the first three days after surgery, it is recommended to ice your hip after performing exercises with your physical therapist or at home. Icing after activity will help reduce swelling and discomfort.
* Unless specified by your doctor, you are able to weight bear as tolerated (WBAT) immediately after surgery. For the first week after surgery you will need a walker or crutches to walk.
* You will receive proper gait training by a physical therapist immediately before and after surgery. The goal is to advance to a cane by three to four weeks after surgery.
* Elevate your legs to decrease swelling in your hip and leg for 15 minutes. Perform this three times per day. If swelling increases or is accompanied by increased pain, please call your doctor.
* TED compression stockings are to be worn on both legs for 2 weeks following surgery. The stockings help to reduce swelling and reduce the risk for a blood clot to form.
* You will be instructed in a home exercise program by your physical therapist. For best results, please do your home exercises at least three times a day.
* Driving
* Going Up and Down Stairs
* Community mobility.

**SECTION V: POST-OPERATIVE PROTOCOLS**

* 1. **Weeks**

Goals: Safe and independent use of walker. Independent with knowledge and maintenance of hip precautions. Daily performance of home exercise program. All exercises to be repeated 25x, 2-3 x/day.

**Exercises:**

1. Quad sets - Tighten knee muscles of outstretched leg by pushing the back of the knee into the bed, hold 5 seconds.

2. Gluteal sets - Squeeze buttocks together, hold 5 seconds.

3. Adductor sets- Squeeze inner thighs together by pushing knees and feet together, hold for 5 seconds.

4. Abductor sets- Squeeze outer thighs by pushing feet and knees apart without moving, hold for 5 seconds.

5. Heel slides - Lying on your back, bend knee sliding heel toward buttocks, reverse to straighten leg.

6. Hip abduction and adduction – Lie on back, slide straight leg out to side and back in.

7. Short-arc quadriceps - Put 6-inch towel roll under knee. Straighten lower leg until knee is fully straight and hold for 3 seconds.

8. Long-arc quadriceps - Seated, knees bent to 90 degrees, straighten lower leg until knee is fully extended. Hold for 3 seconds.

9. Scar tissue mobilization - When the wound is completely healed you should begin to mobilize the scar itself and surrounding tissue. Apply light to medium pressure along the sides of the scar for 2-3 minutes. Next, apply light to-medium pressure perpendicular to the scar, crossing over the scar tissue for 2-3 minutes.

**1-2 Weeks**

**Goals:**  Utilize cane as soon as able and safe. Maintain general hip precautions.

**Exercises:**

1. Stationary bike (when approved by MD).

2. Prone hip extension.

3. Mini-squats.

4. Bridges.

5. Straight leg raise (flexion and abduction).

6. Hip rotation strength within pain limits, cautious with external rotation.

7. Calf raises.

8. Standing hip abduction.

9. Standing hip extension as tolerated and cautious.

10. Marching.

11. Upper extremity strengthening: Any functional upper extremity movements that relate to patient, ADLs, work or sport.

12. Core strengthening: Supine.

**2-4 Weeks**

**Goals:** Ambulation without device. Ascend and descend stairs in a step-over-step fashion.

**Exercises:**

1. Single-leg balance, knee straight to knee bent. Eyes open to eyes closed.

2. Small range forward lunges.

3. Contra kicks weight bearing on nonsurgical leg, cautious with extension.

4. Contra kicks weight bearing on surgical leg.

5. Single-leg heel raises.

6. Step-up progression from 2-inch step to 8-inch.

7. Step-down/eccentric lowering from step; 2-inch to 8-inch progression.

8. Increase core strengthening: Lateral walk-outs.

9. Upper extremity progression for return-to-sports/recreational activities as cleared by the doctor.

**SECTION VI: POST-OPERATIVE EXERCISES WEEKS 0-1**



**Ankle Pumps:** Lie on your back with or without your foot elevated. Point your foot alternating between pointing down and up.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Quad Sets:** With or without your foot elevated, tighten the front thigh muscle (quadriceps) by pressing your knee into the table keeping your knee as straight as possible. Hold as tight as possible for 5 seconds before completely relaxing.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



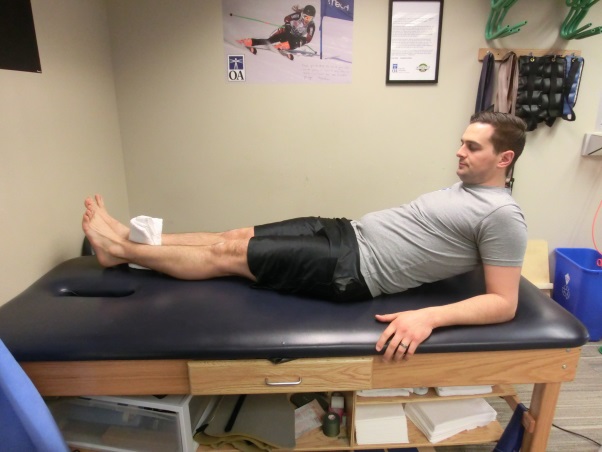
**Glute Sets:** With or without your foot elevated, tighten your buttocks muscle by pressing your entire leg into the table. Hold as tight as possible for 5 seconds before completely relaxing.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Abdominal Sets:** With or without your leg elevated, tighten your belly muscles by pressing the small of your back into the table and lifting your head up slightly. Hold for 5 seconds and lower back down. Be sure to breathe.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Hip Adduction Sets:** Place a small, rolled towel between your ankles or knees. Gently squeeze the towel. Hold for 5 seconds before relaxing.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Hip Abduction Sets:** Wrap a soft towel around your knees or ankles. Gently press the towel apart. Hold for 5 seconds before relaxing.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Heel Slides:** Lie on your back or propped on your elbows. Keeping your foot on the table, slide your surgical leg towards you as far as you are able to pain free. Slowly return to the starting positions.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Prone Press Up:** Lie on your stomach. Tighten your buttocks muscles and press up onto your elbows. Hold for 15 seconds. Slowly return to lying on your stomach.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Short-Arc Quad:** Begin by lying on your back with a pillow or bolster placed under the knee of your surgical leg. Tighten the top thigh muscle and straighten your knee. Hold for 5 seconds before returning to the starting position.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Long-Arc Quads:** Sitting in a chair, tighten the muscle in the front of your thigh and straighten your knee as much as possible. Hold for 5 seconds before returning to the starting position.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Straight Leg Raise:** Lie on your back or propped on your elbows. Bend a leg so that your foot is flat. On the opposite leg, tighten the top leg muscle and lift your leg at least 12 inches keeping your knee as straight as possible.

Sets:\_\_\_\_\_\_ Repetitions:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**REFERENCE LIST**

1. American Academy of Orthopeadic Surgeons. Total hip arthroplasty. http://orthoinfo.aaos.org/topic.cfm?topic=A0037. Accessed January 15th, 2018.
2. PTNow. Total Hip Arthroplasty (THA). http://www.ptnow.org/clinical-summaries-detail/total-hip-arthroplasty-THA. Accessed January 5th, 2018.
3. Klein, GR, Levine BR, Hozack WJ, et al. Return to athletic activity after total hip arthroplasty. *J Arthroplasty*. 2007;22:171-175
4. Swanson EA, Schmalzried TP, Dorey FJ. Activity recommendations after total hip and knee arthroplasty. *J Arthroplasty.* 2009;24:120-126