

## Total Hip Replacement Rehabilitation Protocol

In a total hip replacement (also called total hip arthroplasty), the damaged bone and cartilage is removed and replaced with prosthetic components.

The damaged femoral head is removed and replaced with a metal stem that is placed into the hollow centre of the femur. The femoral stem may be either cemented or "press fit" into the bone.

A metal or ceramic ball is placed on the upper part of the stem. This ball replaces the damaged femoral head that was removed.

The damaged cartilage surface of the socket (acetabulum) is removed and replaced with a metal socket. Screws or cement are sometimes used to hold the socket in place.

A plastic, ceramic, or metal spacer is inserted between the new ball and the socket to allow for a smooth gliding surface.



### Surgery Techniques

#### A. Posterior Approach

- Patient is positioned and padded in the lateral decubitus position

- The ITB and gluteal fascia overlying the gluteus maximus (GMM) are incised. The GMM is then split longitudinally along the axis of its muscle fibres
- The short external rotators and piriformis muscle are tenotomised
- This approach gives great access to the acetabulum and femur, and preserves the hip abductors

#### B. Lateral Approach

- The patient is positioned and padded in the lateral decubitus position
- The ITB is incised, centered over the femur, with care taken to not inadvertently cut the gluteus medius muscle. The fascia lata is incised to the proximal extent of the skin incision. The abductors may be moved up by osteotomy of the GT and reattaching it afterwards. They may also be split at their tendinous portion and sutured afterwards
- Gluteus medius and gluteus minimus weakness after this procedure is common

#### C. Anterior Approach

- Dislocation rate with this approach is very low, in addition to faster, less painful recovery
- The patient is positioned supine on either a radiolucent OR table or a specialized traction table
- The fascia overlying the TFL is separated
- TFL is preserved during the procedure
- An interval found between the TFL and sartorius muscles is developed
- An anterior capsulotomy or capsulectomy is carried out

## Total Hip Replacement Rehabilitation Protocol

### Phase 1 (Day 1-hospital discharge)

Hospital LOS normally 4-5 days

#### Twice daily physiotherapy

- Chest physiotherapy if needed
- **NO SLR**
- Circulatory exercises
- Glute, quad, and hamstring sets
- Heel slides
- AAROM hip abduction/adduction
- Bed mobility
- Transfer training
- Gait training with assistive device
- From day 3, may progress exercises to standing calf raises, hip abduction, knee lifts, knee flexion, in supported standing position
- From day 3, teach stairs negotiation with crutches

### Phase 2 (Hospital discharge-6 weeks)

- Dislocation precautions
- WBAT with elbow crutches. Progress to using one crutch on opposite side after 3 weeks
- Monitor wound for signs of infection
- Monitor any increased swelling
- Continue with exercises from previous phase
- Initiate gentle hamstring, gastroc/soleus, QL, and quadriceps stretching
- Bridging
- Standing hip flexion/abduction/adduction/extension- CAN BE PROGRESSED TO WORKING AGAINST GRAVITY TOWARDS THE END OF THIS PHASE

#### Dislocation Precautions

- No hip flexion beyond 90° (no sitting on a low chair)
- No IR/ER
- No adduction beyond neutral (i.e., no crossing legs/side lying)
- No combinations of the above motions
- For anterior approach- No bridging nor hip extension in standing
- Your patient will need to use a raised toilet seat in the bathroom

#### Weightbearing After Surgery

- Partial weightbearing with elbow crutches or a walking frame
- After 3 weeks, the patient may walk with one crutch on the opposite side
- Crutches may be discontinued after 6 weeks

Proper gait pattern must be achieved in order to discontinue use of assistive devices!

#### Driving

**This will be guided by your surgeon**

**Always get in and out of the car with the operated leg on the outer side. The seat must be moved back as far as possible, with the backrest lowered.**

If right hip was replaced, no driving of manual car for 6 weeks. May drive automatic car after 2-4 weeks

If left hip was replaced, no driving of manual car for 6 weeks. May drive automatic car after 2-4 weeks



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Physiotherapy

## **Total Hip Replacement Rehabilitation Protocol**

- **Progress to SLR ONLY TOWARDS THE END OF THIS PHASE**
- Progress to closed chain exercises including terminal knee extensions, mini-squats, step ups, and mini-lunges by the end of this phase
- Gait and stair-training
- Stationary bicycle from 3-4 weeks post-op. NO RESISTANCE
- Proprioception: WS activities; Single leg balance
- Continue with all strengthening exercises increasing resistance and decreasing repetitions
- Continue with all phase 3 proprioception exercises, increasing difficulty as tolerated
- Continue stationary bicycle, walking programme
- Activity/sport-specific training exercises

### **Phase 3 (6-12 Weeks)**

- Dislocation precautions
- Continue ROM exercises from phase 1 and 2 until ROM normalised
- Continue with phase 2 exercises adding and increasing resistance as tolerated
- Emphasize eccentric control of quadriceps and hip abductors with closed chain exercises
- Single leg stance
- Static balance on Bosu/wobble board/foam/etc
- Add gentle agility exercises (i.e., tandem walk, side stepping, backwards walking)
- Continue biking, adding mild to moderate resistance as tolerated
- Begin walking program

### **Phase 4 (12+ Weeks)**

- Dislocation precautions according to surgeon's orders
- Avoid high impact and contact sports
- Avoid repetitive heavy lifting
- Continue daily ROM and stretching exercises