ISLAND ORTHOPAEDICS

Phone: 808-548-7033 Fax: 808-548-7034

Hip Replacement Rehabilitation Protocol

The intent of this physical therapy protocol is to provide a guideline of postoperative rehabilitation for the clinician to help treat a patient who us undergone a **Total Hip Replacement**. It is not intended to be a substitute for clinical decision making. Clinical decision making on a postoperative course include physical exam and findings, individualized progress, and presence of any complications. If a clinician requires assistance with progression of a postoperative patient, please consult the referring surgeon.

In Revision Hip Arthroplasty or cases where there may be soft-tissue or bone compromise - there may be alterations to phase I and II

Precautions

- **Posterior Approach:** No hip flexion > 90 degrees. No internal rotation or adduction beyond neutral. No combination of above motions allowed for 6 weeks postoperative
- **Direct Anterior Approach**: Active hip extension and external rotation allowed. Limit passive extension and external rotation. Encourage normal extension/stride with gait.
- **Revision Total Hip: There may be additional precautions. Please confirm these precautions prior to rehabilitation.**

Pain Management:

Appropriate pain management includes an attempt at reducing the amount of narcotics and side effects of various pain medications by using various treatment protocols.Adequate preoperative pain measures include:

- **Spinal or epidural Blocks** - These are provided by an anesthesiologist preoperatively if clinically indicated
- **Local Analgesics** - Soft-tissue anesthetic injections may be used towards the end of the procedure to reduce post-operative pain
- **IV analgesics** - Postoperative pain medications in the acute postoperative phase may be provided with IV analgesics prior to discharge.
- **Oral analgesics** - Postoperative pain medications include opioids (oxycodone and norco), centrally-acting analgesics (acetaminophen or Tylenol), anti-inflammatory medications (NSAIDs such as meloxicam, celebrex, ibuprofen, or naproxen), and alpha-agonists (Tramadol).
- **Aspirin**: If prescribed may be used as a prophylaxis for deep vein thrombosis or pulmonary embolism as well as pain medication.
- **Cryotherapy -** Ice and cryotherapy may be applied to the affected extremity allows for improvement in pain control.
- **Elevation -** Keeping the affected extremity elevated above the heart while at rest.

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Deep Vein Thrombosis Prophylaxis

Deep vein thrombosis and pulmonary embolisms are serious complications following lower extremity surgery. In an effort to avoid deep vein thrombosis or pulmonary embolisms, the following protocol is implemented:

- Low-risk patients: Aspirin 325mg twice daily for 30 days
- High-risk Patients: Arixtra 2.5mg daily for 14 days, followed by 30 days of aspirin
- Alternatives may be provided depending on history of trauma, patient medical comorbidities, or history of thromboprophylaxis morphine. Alternatives include medications such as lovenox, heparin, or warfarin.

PHASE I - IMMEDIATE SURGICAL POST-OPERATIVE PHASE (0 - 2 days)

Goals:

- Weight-bearing as tolerated
- Reduce swelling and manage pain
- Perform bed mobility and transfers with minimal assistance
- Ambulate with assistive device for 25-100 feet. Ascend and descend stairs to allow for household independence
- Verbalize understanding of postoperative activity recommendations and precautions

Precautions:

- Weight-bearing as tolerated with assistive device
- No exercises with weights or resistance
- Avoid torque or twisting forces

Evaluation:

- Avoid falls
- Monitor wound healing and drainage - please contact the MD if there is more than a Quarter size of drainage on the dressing
- Monitor for loss of peripheral nerve integrity. Contact Dr. Morton if there are any issues, especially with new-onset ankle dorsiflexion
- If there is a significant amount of wound drainage, severe pain, or redness to the incision - please return to the orthopaedic surgeon's office for an immediate evaluation
- Maintain appropriate pain control postoperatively

Pain Regimen

- Continuous cryotherapy for 48 hours after surgery, or for at least 5 times daily.
- Continue cryotherapy 20 minutes before and after exercise program
- Acetaminophen 650mg every 4 hours, scheduled
- Meloxicam 15mg daily or Naproxen 500mg twice daily or Celebrex 200mg twice daily, ***scheduled,*** depending on kidney functional status
- Tramadol 50mg every 6 hours as needed for moderate pain
- Oxycodone 5mg every 4 hours as needed for severe pain
- If pain is not controlled with these measures, please contact Dr. Morton.

Therapy:

- Active, Active Assist, Passive exercises in the supine position: ankle pumps, heel slides, hip abduction/adduction, hip internal/external ROM, hip flexion/extension (as precaution dictates)
- Exercises in sitting position: Long arc quads, ankle pumps
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PHASE II - INITIAL OUTPATIENT (2 days - 3 weeks)

Goals:

- Focus on areas of weakness in the operative extremity as well as any other areas in upper extremity, trunk or contralateral lower extremity.
- Proprioception training to improve spatial awareness
- Endurance training
- Functional - promote independence in activities of daily living
- Gait training - Discontinue assistive devices when patients have appropriate extremity strength and balance between 1 and 4 weeks
- Reduce swelling and inflammation

Evaluation:

- 10-14 day postoperative visit: Check for any wound complications. There should be no wound drainage.
- Evaluate any erythema or redness

Precautions

- Patients typically WBAT with assistive device for primary Total hip
- Dislocation precautions
- Enhanced precautions for hip revision patients include hip abductor brace

Pain Management

- Cryotherapy 1-3x/day for swelling/pain management
- Other modalities depending on clinical findings
- Wean from narcotic usage. Continue to use NSAID, Tramadol and Tylenol as prescribed

Therapeutic exercises (Week 1 - 4)

- Continue prior exercises
- Strengthening: Qaudricep sets in full knee extension, gluteal sets, short arc quadriceps, towel squeeze
- Gait training: Wean from walker to crutches.
- Postural cues/re-education during all functional activities

Therapeutic exercises (Week 4 - 6)

- Continue above exercises
- Front and lateral step up and step down
- 1/4 front lunge
- Sit-to-stand and chair exercises to increase knee flexion during functional tasks
- Continue stationary bicycle for ROM
- May begin pool program if incision healed

Criteria for progression to phase III

- Minimal pain, inflammation and swelling
- Ambulates with assistive device with minimal pain or gait abnormalities
- Daily home exercise program
- Progress to driving - must be off narcotics. Discuss specifics with surgical team.

PHASE III: - Intermediate (3 - 6 weeks)

Goals

- Good strength for all lower extremity musculature and trunk
- Balance and proprioception training
- Return to functional activities
- Begin light recreational activities (walking, pool program)
- Active ROM without pain.
- Minimal pain or swelling

Therapeutic Exercises

- Continue Phase II exercises with resistance and repetitions
- Stationary bike
- Transverse abdominis and trunk stabilization
- 3-way straight leg raise (Flexion/abduction/extension)
- Balance exercises: single leg stance, alter surface, eyes open/closed
- Lateral step-up and step-down with eccentric control
- Front step-up and step-down
- sit-to-stand activities
- Ascending/descending stairs
- Gait training

Phase IV - Advanced strengthening and higher-level function stage (Week 6 to 12)
6 Week Visit: X-ray obtained to confirm appropriate implant placement May discontinue precautions as guided by surgeon

Goals:

- Improve balance
- Reduce pain, inflammation and swelling
- Step-over-step stairs
- Functional activity for ADLs and mobility

Therapeutic Exercises

- Continue prior exercises
- increased duration of endurance
- Front lunge and squat
- progress trunk stabilization
- Progress balance and proprioception activities (ball toss, perturbations)
- initiate overall exercise and endurance training (walking, swimming, progress biking)

Criteria for Discharge

- Non-antalgic and independent gait
- Independent step-over-step stair climbing
- Pain-free active range of motion
- at least 4+/5 strength to all lower extremity musculature
- Age-appropriate proprioception
- Patient independent with home exercise program.

Phase IV - Return to function stage (Week 12+)

- May return to appropriate sport (doubles tennis, gentle downhill skiing, biking) as tolerated.

If you have any questions, please do not hesitate to reach out to Dr. Morton at (808)548-7033.