TOTAL JOINT REPLACEMENT REHABILITATION

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WHICH CATEGORY BEST CAPTURES YOUR CREDENTIALS?

1. Nurses
2. Therapists
3. NPP (PA, ARNP)
4. Physician
5. Other

Poll results: 0%
## In What Environment Do You Currently Practice

<table>
<thead>
<tr>
<th>Environment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>0%</td>
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<tr>
<td>Private Practice</td>
<td>0%</td>
</tr>
<tr>
<td>Hospital and Private Practice</td>
<td>0%</td>
</tr>
<tr>
<td>Inpatient Rehab or Skel or WOC</td>
<td>0%</td>
</tr>
<tr>
<td>Home Health</td>
<td>0%</td>
</tr>
<tr>
<td>Outpatient Therapy</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
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</table>

## Current Trends in Joint Replacement

- CMS is forcing providers to find ways to reduce cost.
  - Bundling
  - Increased Over-Regulation
- Positive: Complications, Readm, ER visits
- Future?

"A Bend In The Road Is Not The End Of The Road... Unless You Fail To Make The Turn."

Helen Keller
REHAB....NOT JUST ABOUT THE PHYSICAL...

- Acute and the Post Acute Management (PAC)
- Education - Is consistent enough?
- Not just about the Readm or ER visits...it is about pt experience and outcome

COMPONENTS OF REHABILITATION

- Oversight Medication Mgmt
- Pain
- Constipation, N/V, Rash
- DVT Prophylaxis
- Swelling, Ecchymosis
- Elevated Temp
- PE, DVT, UTI, Anxiety
- Wound: Closure and Incisional Care
TOTAL HIP REPLACEMENT

SURGICAL INTERVALS

- **Anterior**: TFL and Sartorius (Smith-Pete)
- **Anterolateral**: Gluteus Medius and TFL
- **Direct Lateral**: Gluteus Medius/Min and Greater Trochanter (Hardinge)
- **Posterior**: Piriformis and Short External Rotators (Moore or Southern)

POSTERIOR APPROACH

Precautions

- Hip flexion > 90°
- Hip adduction
- Internal rotation
PRECAUTIONS BASED ON APPROACH

- ALL: No SLR
- Direct Lateral: No Active ABDuction
  No Unilateral Stance

- Anterior: Avoid Hyperextension or ER
- Posterior: No flexion, IR, Adduction

BIOMECHANICS REVIEW

- Trendelenberg Test
- ABD: TECHNIQUE:
  - Resisted Side Step: in stance/squat Gmx, G Md TFL
    TFL standing/tall
- Gait Training: Neuroplasticity and Dyskinesia
  - Initiated with flexors, not obliques
  - Stumbling 7.2 - 8.7 Peak BW Comp Forces J oip

Compressive Force

- Straight Leg Raise
  1 1/2 Bodyweight
- 1 Leg support
- 3 x Bodyweight

1 Joseph M. McBeth, MS, ATC, Jennifer E. Earl-Boehm, PhD, ATC, Stephen C. Cobb, PhD, ATC, and Wendy E. Huddleston, PhD, PT

2 Justin W. Berry, PT, DPT1, Theresa S. Lee, BS2, Hanna D. Foley, BS2, Cara L. Lewis, PT, PhD2


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The most effective way to unload the hip joint in standing is by touchdown weightbearing with a walker.

1/3 Bodyweight
Flexion contracture

> 10° 120 min. / day
< 10° 60 min. / day

**Methods to Increase Extension**

Joint Mobs (3/4)
Arthrokineamtics

**Methods to Increase Knee Flexion**

Bend knee until strong stretch is felt, hold for 5 seconds, then bend more. Hold for 5 additional seconds. 5 times

THERE IS NOTHING THAT IS BAD THAT WE CAN’T MAKE WORSE.
FUNCTIONAL ROM

- Walk: 67 - 75°
- Ascend Stairs: 83°
- Descend Stairs: 90°
- Sitting: 93°
- Tying shoes: 106°
- Pick up object from floor: 117°

EXERCISES

- Circulatory exercises: AP, QS, GS, HS
- ROM: LAQ, HSC, Heel Raise, ABD
- Balance
- Closed Chain and Functional Activities: Wall Slides, Mini Squats, Sit to Stand, Step outs, Step ups
- Function, Skill, Reaction, Timing
- Cognitive
- Arthrokinematics
- CR (AR vs RI)
- Always follow up from previous session
TOTAL HIP REPLACEMENT

**Pitfalls**
- Over aggressive
- SLR
- DA:
  - Unilateral Stance
  - ABD
- Walls slides/squats too soon
- LLD

**Pearls**
- Less is More
- Gait
- Positioning: Swelling, S/L, avoid contracture
- Mechanics
- ABD when able: Technique!

TOTAL KNEE REPLACEMENT

**Pitfalls**
- Open PP
  - Recliner
  - Soft Mattress
  - Sidelying
  - Forcing/Assisting Knee Flexion
  - LLD

**Pearls**
- This is a painful procedure
- Work through the pain
- 21 Days
- Heel Props
- Pt is in control
- Frequently throughout the day
- Gait: Heel Off
- Positioning: Swelling
- Arthrokinematics

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7/23/2018
OPIOID CHANGES JULY 1, 2018

- 3 Day Rx
- 7 Day Rx Max: Must Document
- Office visit Q 7 days PRN
- Providers must consult Prescription Drug Monitoring Program (PDMP) prior to dispensing
- PLAN: Refer pt back to Physician

MEDICATION OVERSIGHT ACETAMINOPHEN

<table>
<thead>
<tr>
<th>Pain Reliever</th>
<th>Maximum Dose</th>
<th>Mg per pill and Daily Max</th>
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<tbody>
<tr>
<td>Reg Tylenol Acetaminophen</td>
<td>4000 mg</td>
<td>325 mg daily (12 pills)</td>
</tr>
<tr>
<td>ES Tylenol Acetaminophen</td>
<td>4000 mg</td>
<td>500 mg daily (8 pills)</td>
</tr>
<tr>
<td>TYLENOL ARTHRITIS</td>
<td>3900 mg</td>
<td>650 mg daily (6)</td>
</tr>
<tr>
<td>Naproxen/Aleve</td>
<td>440 mg</td>
<td>220 mg daily (2)</td>
</tr>
<tr>
<td>ASA (Reg) Acetaminophen</td>
<td>4000 mg</td>
<td>325 mg daily (12)</td>
</tr>
<tr>
<td>Ibuprofen</td>
<td>1200 mg</td>
<td>200 - 400 mg daily (3 - 6)</td>
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</tbody>
</table>

Consider new pt taking Norco 5/325 mg (Acet)

INCISIONAL CARE

- Numerous methods
- Running SC suture
- Stiches
- Staples
- Zipline (Shield)
- Derma bond - Prineo
- Coverings: Various
  - Aquacel, Silverlon, PICO, Cosmopor, DSD
TESTING FOR OBJECTIVE MEASURES

• Tinetti
  • TUG > 12 sec (3*) (7*) (8*) (9*) 13.5 sec (10*) 13 sec (11*)
• BERG < 50 Falls 36 (3*) (OULST < 19.7 sec non falls 11.7 sec falls (2*) (1**)  
  • 30 second sit to stand: < 10 Reps (5*) 17 in chair, no UE
• SIS, FF SIS < 12 sec faller (3*) 17 in chair (4*) No UE
• 10 STS, non faller: 20 sec Fall: 28.4 sec (2*)
• Stair Climb Test: 9 steps (8" ht) .41 - .48 sec/step
• 40 M Speed Test:
  • PSFS (Pt Specific Functional Scale)

PATIENT SPECIFIC FUNCTIONAL SCALE (PSFS)
RATE EACH ONE BETWEEN 0 – 10

<table>
<thead>
<tr>
<th>Date and Score 0 – 10</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<tr>
<td>4</td>
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</table>

Total the score, higher is better

<table>
<thead>
<tr>
<th>Activity</th>
<th>Peak Force (BW)</th>
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</thead>
<tbody>
<tr>
<td>Walking Slow</td>
<td>1.6 - 4.19</td>
</tr>
<tr>
<td>Walking Normal</td>
<td>2.1 - 3.36</td>
</tr>
<tr>
<td>Walking Fast</td>
<td>1.8 - 4.37</td>
</tr>
<tr>
<td>Sitting and Standing</td>
<td>1.5 - 2.24</td>
</tr>
<tr>
<td>Ascending and Descending Stairs</td>
<td>1.5 - 5.8</td>
</tr>
<tr>
<td>Jogging</td>
<td>4.3 - 5.0</td>
</tr>
<tr>
<td>Stumbling</td>
<td>7.2 - 8.7</td>
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<tr>
<td>Unilateral stance</td>
<td>3</td>
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</tbody>
</table>

ANTEROLATERAL APPROACH

**Precautions**

- Hip flexion > 90°
- Hip adduction
- External rotation
- Extension

Open Packed Position

**HIP PRECAUTIONS OBSERVED FOR:**

- **Primary**
  - 6 weeks
  - 90° hip flexion
  - WBAT to TDWB (20# WB)

- **Revision**
  - 3 months
  - 20 # WB x 6 wks
  - 50% WB x wks 7 – 12
  - 60° Hip flex x 6 wks
  - 90° Hip flex x wks 7 - 12
Methods to Increase Extension

Flexion contracture

> 10° 120 min. / day
< 10° 60 min. / day