Background & Purpose:
Development of effective physical therapy treatment strategies is needed in order to improve outcomes for patients with low back pain. Current practice guidelines support the use of core strengthening in the treatment of low back pain, however, there is limited research investigating the combined use of core strengthening and lower extremity flexibility exercises.

The purpose of this report is to describe the physical therapy management and functional recovery of an individual with work-related acute nonspecific low back pain.

Case Description:
51 year-old male with a one-month history of low back pain without radiating symptoms secondary to a work-related injury. Symptoms compromise his ability to optimally perform regular work activities which include prolonged standing, walking, forward bending, and lifting.

Examination:

**Impairments**
- Impaired thoracolumbar core strength.
- Impaired lower extremity flexibility.
- Impaired spine and hip joint mobility.
- Impaired posture.
- Pain.

**Activity Limitations**
- Unable to bend to lift more than 30 lbs.
- Unable to stand for more than one hour without pain.

The patient completed a three-week, six-visit episode of physical therapy care.

**Interventions:**

- Bike Warm-Up
- Quadriceps Str. 3 x 30 s.
- Hamstring Str. 3 x 30 s.
- Single Knee to Chest Str. 3 x 30 s.
- Piriformis Str. 3 x 30 s.
- Quadratus Lumborum Str. 3 x 30 s.
- Forward Planks 3 x 10 s.
- Bridges 2 x 10
- Bird Dogs 2 x 15
- Side Steps 2 x 15
- Lunges 4 x 10
- Review HEP X
- Lumbar Mobs: Grade II-IV 10 min.
- Soft Tissue Mobilization 10 min.
- Heat Pack 10 min.

**Outcomes:**

<table>
<thead>
<tr>
<th></th>
<th>Admission</th>
<th>Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain Score</td>
<td>6/7/10</td>
<td>4-5/10</td>
</tr>
<tr>
<td>Work Tolerance</td>
<td>1-2 hrs.</td>
<td>3-5 hrs.</td>
</tr>
<tr>
<td>Posture</td>
<td>Ant. Pelvic Tilt, L. Lordosis</td>
<td>slight improvement</td>
</tr>
<tr>
<td>LE Flexibility</td>
<td>31 cm to floor</td>
<td>14 cm to floor</td>
</tr>
<tr>
<td>Gross Thoracolumbar MMT</td>
<td>4/5</td>
<td>5/5</td>
</tr>
<tr>
<td>FOTO</td>
<td>46</td>
<td>63</td>
</tr>
<tr>
<td>Oswestry</td>
<td>30</td>
<td>26</td>
</tr>
</tbody>
</table>

**Discussion:**

Over the limited duration of the episode of care, the patient improved in work capacity and functional outcome measures.

FOTO scores improved from 46 to 63, surpassing the minimum detectable change and clinically important difference.

Oswestry scores improved from 30 to 26, which was not sufficient to surpass the minimum detectable change.

Improvements in core strength, LE flexibility, and posture may have positively contributed to the patient's outcomes.

Further research of longer duration and with larger sample sizes is needed to investigate the outcomes of this model of physical therapy management.

**References:**


- For the complete case report manuscript, visit dune.une.edu
- Exercise figures sourced from workolutlabs.com
- Contact the author at twilde@une.edu