

# Use of Core Stabilization Exercise and Medical Exercise Therapy in the Treatment of a Patient with Chronic Post Partum Low Back Pain: A Case Report



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## Unique

- Low back pain and lumbar hyper-mobility are common during and after pregnancy.<sup>1</sup>
- Chronic postpartum low back pain (LBP) can be difficult to manage.
- Core stabilization exercises (CSE) have been shown to improve function and reduce pain in patients with chronic LBP due to lumbar instability.<sup>2</sup>
- Medical Exercise Therapy (MET) has shown good outcomes in reducing pain in patients with LBP<sup>3</sup> but has not been thoroughly investigated in the treatment of chronic post partum LBP.
- There is limited research reporting the use of a combined treatment protocol utilizing CSE and MET in the treatment of chronic LBP in post-partum women.

## Foundation

- LBP is a prevalent disorder in postpartum women. Women who experience recurrent back pain after 3 months post-partum are considered at risk for chronic pain.<sup>4</sup>
- CSE have been used to treat chronic lumbar instability and improve pain in patients with LBP.<sup>2</sup> Previous research has found that core stabilization exercises are more effective than traditional exercises at treating pain and disability among patients with non-specific LBP.<sup>5</sup>
- The MET treatment philosophy focuses on areas of pain and disability with high repetition and low weight training exercises. Prior research has found MET reduces pain and improves function in patients with multiple musculoskeletal disorders.

## Observations

Tests & Measures	Initial Evaluation Results	Final Results
Lower Extremity Functional Scale (LEFS)	48/80	62/80
Patient Specific Functional Scale (PSFS)	4/10	7/10
Hip Scour Test	Negative	Negative
Slump Test	Right Slump Test – Positive with dorsiflexion and cervical flexion on the right. Left slump test – positive with dorsiflexion and cervical flexion on the right.	Negative
Flexion Abduction External Rotation Test (FABER)	Negative	Negative
Straight Leg Raise	Positive – patient reports slight increase in symptoms with straight leg raise testing.	Negative
Numerical Pain Rating Scale (NPRS)	Pain at present – 3 Pain at best – 3 Pain at worst – 7	Pain at best - 0 Pain at worst - 4

Table 1: Selected outcome measures at initial evaluation and discharge. These results demonstrated decreased pain and patient's increased ability to return to her prior level of function, with improved ability to take care of her 2-year-old daughter.

## Case Description

The patient was a 28-year-old female who presented with bilateral posterolateral hip and lumbosacral pain which began post-partum following her first birth. The patient reported no pain prior to her pregnancy; however, she did report a coccyx fracture during her home birth delivery. At the time of initial evaluation the patient was breast feeding and had a 2 ½ cm diastasis recti.

## Purpose

The purpose of this case report was to investigate a combined physical therapy treatment protocol of CSE and MET on a patient with chronic low back pain 2 years post-partum.

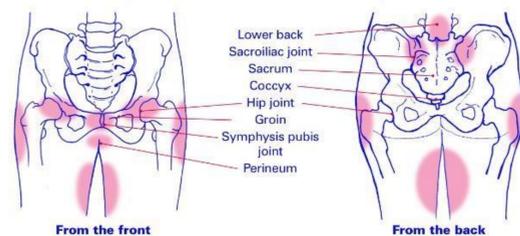


Image 1: Areas of Referred Pain from Posterior Pelvic Pain  
<https://roosephysio.files.wordpress.com/2015/07/ppp.jpg>

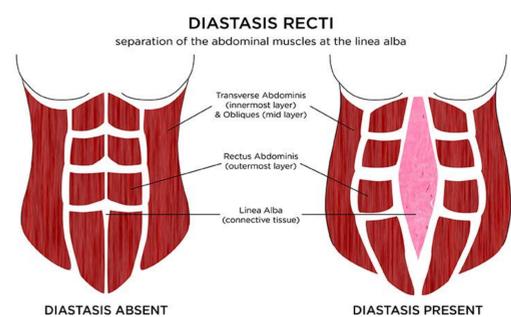


Image 2: Representation of Diastasis Recti, showing separation of the rectus abdominus at the linea alba  
<http://fitjourneywithcrystal.com/wp-content/uploads/2014/10/DiastasisRecti-v2-F.jpg>

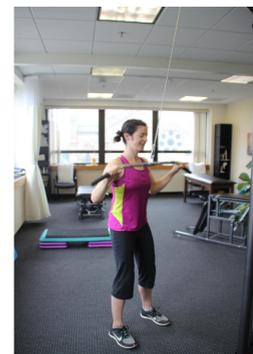


Figure 1: Straight bar pull downs



Figure 2: Golf Stabilizations



Figure 3: Rows



Figure 4: Squats

The patient was seen for physical therapy treatment for one-hour sessions, 2 times per week for 10 weeks. The MET protocol of low weight, high repetition exercises was utilized. Core stabilization exercise focused on quadruped alternating upper and lower extremity lifts (“bird dogs”) and functional pelvic alignment training. Due to relief of symptoms with the lumbar unloading test, manual lumbar traction in hooklying was also performed for approximately 12 minutes per session. All interventions were focused on decreasing pain at rest and improving pelvic stability. Outcome measures included the Lower Extremity Functional Scale (LEFS), Patient Specific Functional Scale (PSFS), and Numeric Pain Rating Scale (NPRS).



Figure 5: Planks



Figure 6: Dying Bugs

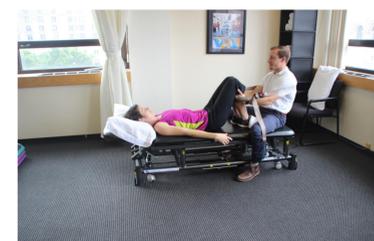


Figure 7: Manual Lumbar Traction

## Conclusion

- Chronic LBP can be difficult to manage and post-partum laxity is an additional source of disability.
- This case report demonstrated that a combined intervention of CSE, and MET can decrease pain and improve function in a 28-year-old female with chronic post-partum LBP.
- Future studies should investigate the combined effects of CSE, and MET in a larger population of patients with LBP.

## References

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