

## Relation between Chronic Mechanical Low Back Pain and Hip Rotation

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**Abstract :** Background: Chronic mechanical low back pain (CMLBP) is the most common complaint of the working-age population. Mechanical low back pain is often a chronic, dull, aching pain of varying intensity that affects the lower spine. In the current proposal the hip rotation-CMLBP relationship is based on that limited hip motion will be compensated by motion in the lumbopelvic region and this increase force translates to the lumbar spine. The purpose of this study was to investigate if there a relationship between chronic mechanical low back pain (CMLBP) and hip medial and lateral rotation (peak torque and Range of motion (ROM) in patients with CMLBP. Methods: Sixty patients with CMLBP diagnosed by an orthopedist participated in the current study after signing a consent form. Their mean of age was  $(23.76 \pm 2.39)$  years, mean of weight  $(71.8 \pm 12.7)$  (Kg), mean of height  $(169.65 \pm 7.49)$  (Cm) and mean of BMI  $(25.5 \pm 3.86)$  (Kg/m<sup>2</sup>). Visual Analogue Scale (VAS) was used to assess pain. Fluid Filled Inclinator was used to measure Hip rotation ROM (medial and lateral). Isokinetic Dynamometer was used to measure peak torque of hip rotators muscles (medial and lateral), concentric peak torque with tow Isokinetic speeds (60°/sec and 180°/sec) was selected to measure peak torque. Results: The results of this study demonstrated that there is poor relationship between pain and hip external rotation ROM, also there is poor relation between pain and hip internal rotation ROM. There is poor relation between pain and hip internal rotators peak torque and hip external rotators peak torque in both speeds. Conclusion: Depending on the current study it is not recommended to give an importance to hip rotation in treating Chronic Mechanical Low Back Pain.

**Keywords :** hip rotation ROM, hip rotators strength, low back pain, chronic mechanical

**Conference Title :** ICOT 2015 : International Conference on Orthopedics and Traumatology

**Conference Location :** San Francisco, United States

**Conference Dates :** June 07-08, 2015