

# Comparison of Immediate Effect of Cryostretching and Muscle Energy Technique in Range of Motion and Pain in Patients with Mechanical Neck Pain

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## ABSTRACT

**Introduction:** Mechanical neck pain is one of the common musculoskeletal conditions, and the involved region is back of the neck and behind the shoulder. Most cases of neck pain are due to taut bands of trapezius muscle located behind the neck region. The taut band of the upper trapezius causes the formation of myofascial trigger points leading to restricted cervical ranges as well as pain and tenderness. The aim of this study is to compare the effect of Cryostretching with Muscle Energy Technique (MET) on Pain and Range of motion (ROM) in people with mechanical pain

**Methods/Procedure:** 30 participants were equally divided and allotted to either MET or Cryostretching groups. Both groups received a single session of treatment. The baseline and post assessment were taken for the ROM using universal goniometer, and pain intensity using the Numerical Pain Rating Scale (NPRS).

**Result:** Analysis was done using independent t test for comparison of ROM and NPRS between the two groups, and for within the group comparison paired t test done. There were significant differences noted within the group for both MET as well as Cryostretching, MET- Right side flexion ( $p=0.00$ ,  $t= -6.856$ ), Left side flexion ( $p=0.00$ ,  $t= -5.781$ ), NPRS ( $p=0.00$ ,  $t= 6.081$ ). Cryostretching – Right side flexion ( $p=0.00$ ,  $t= -6.964$ ), Left side flexion ( $p=0.01$ ,  $t= -4.088$ ), NPRS ( $p=0.00$ ,  $t= 6.959$ ). For between the group comparison Right side flexion ( $p=0.682$ ,  $t= 0.413$ ), Left side flexion ( $p=0.644$ ,  $t= 0.467$ ), NPRS ( $p=0.441$ ,  $t= -0.782$ ) which shows no statistically significant differences ( $p>0.05$ ).

**Conclusion:** Both MET and Cryostretching groups were effective in improving ROM and pain in persons with mechanical neck pain. However, there was no difference between the effectiveness of the two treatments when compared.

**Keywords:** Muscle energy technique, Cryostretching, Mechanical neck pain

