MEASUREMENT OF PASSIVE HIP EXTENSION IN TWO POSITIONS OF THE MODIFIED THOMAS TEST AT THE SIDE OF THE BED

Calley DQ, Fischer SC, Nissen AC, Pyrz ME

Mayo Clinic School of Health Sciences' Physical Therapy Doctoral Program

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BACKGROUND AND PURPOSE: The Modified Thomas Test (MTT) has been shown to be a valid measure of passive hip extension when it is compared to pelvic position. The MTT is used for stretching muscles crossing the anterior hip. There may be differences in pelvic tilt and passive hip extension in different positions of the non-tested leg during the MTT. The purpose of this study was to determine the relationship between passive hip extension and pelvic inclination in two different positions of the MTT.

SUBJECT(S): Forty healthy adults (26 women), ages 21-45, participated.

METHODS AND MATERIALS: A cross-sectional non experimental design was utilized. Participants were randomly assigned to perform two positions of the MTT. Position one involved the subject flexing their left hip bringing the knee to chest. Position two involved placing the subject's left leg remaining on the plinth at 90 degrees of knee flexion. Average measures of pelvic inclination, passive hip extension relative to horizontal, and true passive hip extension were recorded using the Dr. Goniometer application.

ANALYSES: All angles measured were normally distributed, so paired t-tests were utilized.

RESULTS: Anterior pelvic tilt measurements were significantly greater in position two (17.8° ± 6.0°) than in position one (13.7° ± 6.0°). Passive hip extension compared to horizontal angle measurements were significantly greater in position two (28.3° ± 7.3°) than in position one (12.5° ± 7.2°). True passive hip extension measurements were significantly greater in position two (7.8° ± 5.2°) than in position one (1.0° ± 5.8°).

CONCLUSIONS: MTT positions showed differences in true passive hip extension and pelvic tilt. Position one may have advantages of controlling lumbar lordosis by inducing more posterior pelvic tilt. Position two may have advantages of allowing end range passive hip extension.

IMPLICATIONS: This study informs clinicians that when using the MTT, the position of the opposite leg influences pelvic inclination and measures of passive hip extension.