

## PELVIC FLOOR MUSCLE CONTRACTION DURING DIFFERENT FUNCTIONAL MOVEMENT PATTERNS IN THE LOWER EXTREMITY: COMPARISON BETWEEN WOMEN WITH AND WITHOUT STRESS URINARY INCONTINENCE

### Hypothesis / aims of study

Pelvic floor muscle (PFM) dysfunction has been associated with development of stress urinary incontinence (SUI). Little is known about the automatic activity of the PFM during different patterns of the lower limb movement. The purpose of this study was to investigate the involuntary contraction of the PFM during different functional movement patterns in women with and without SUI.

### Study design, materials and methods

A total of 40 non-pregnant female (20 with SUI, 20 without SUI) participated in this study. A two-factor mixed-design was used to compare PFM function in five lower extremity movement patterns including:

- (1: Active straight leg raising (ASLR);
- 2: Flexion-adduction-external rotation (D1F);
- 3: Extension-abduction-internal rotation (D1E);
- 4: Flexion-abduction-internal rotation (D2F)
- 5: Extension-adduction-external rotation (D2E)

### Results

The result of two-way mixed-ANOVA revealed that the effect of different lower limb movement patterns on PFM contraction was statistically significant ( $p < 0.05$ ). However, the effect of health status and interaction of health status with movement patterns were not statistically significant. ASLR led to more involuntary PFM contraction than different PNF patterns in incontinent women.

### Interpretation of results

No significant difference was found between ASLR and other movement patterns in continent women. No significant difference was found in involuntary PFM contraction during lower extremity movement patterns between continent women and those with SUI. The findings of this study showed more PFM involuntary contraction in ASLR than lower extremity PNF patterns in women with SUI.

### Concluding message

It seems that ASLR is more effective than diagonal patterns of the lower limb to activate the PFM in women with SUI.

### References

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2. 2. Haslam J (1997). The effect of proprioceptive neuromuscular facilitation on pelvic floor contraction. Newcastle: ICS 4th annual meeting.

### Disclosures

**Funding:** No funding **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Ethical approval for this study was granted from the internal ethics committee at the University of Social Welfare and Rehabilitation Sciences **Helsinki:** Yes **Informed Consent:** Yes