

Pelvic Physical Therapy Distance Journal Club

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Lauren Trosch

A randomized interventional parallel study to evaluate the effect of different frequencies of pelvic floor muscle exercises with core stabilization using three-dimensional ultrasound: the PELSTAB study. Hagovska M, Svihra J, Urdzik KP et al. Int Urogynecol J. 2023; Mar 14.

Aim:

1. To study whether a higher or lower frequency pelvic floor muscle training (PFMT) program is superior for the treatment of stress incontinence (SUI)
2. To measure changes in levator ani muscle strength/morphometry, quality of life, and patient reported improvement in both groups after treatment

Study Design:

Randomized parallel control study of 71 subjects- mean age 40 years +/- about 9 years, >80% with regular periods, average parity ~2

Two groups- performed a combination of core/hip/pelvic floor muscle exercises- see Table 2 for details

- \*\*note- paper states the evidence supports stabilization/pelvic floor exercises for treatment of UI and provides one reference from 2012\*\* the literature is mixed and we do not have strong evidence for one specific type of pelvic floor muscle training over another for all those with SUI

High frequency group: 5x/week, 30 min/day- 900 PFM contractions/week

Low frequency group: 2x/week, 15 min a day- 180 PFM contractions/week

Subjects strength/endurance measured with perineometer and palpation (PERF score- repetitions 3 second holds instead of holding as long as endurance measure)

Levator Hiatus area and diameter measured with 3D/4D US

Results:

Improvements in all outcome measures were superior in the high frequency group

Note- in low frequency group- ICIQ-UI SF scores decreased by less than one point and incontinence episodes decreased by 2.9 incidences (from 9.31 to 6.38).

Discussion:

The study supports higher frequency PFMT to decrease incontinence and improve symptoms/QoL

Strength/morphometry measures also support a higher frequency training program

-Note decreased levator hiatus area at rest post treatment is not seen in Antônio article that we will discuss

Strengths/weaknesses:

Use of palpation to identify levator avulsion? Or did they use US (not clear). No avulsions in group of 71 Subjects with >80% of subjects having had vaginal delivery?

Valsalva used to assess prolapse (likely meant bearing down)- was a POP-Q measure performed and was prolapse assessed via other measures?

They stated no prolapse was present? How did they define prolapse?

Conclusion/Summary:

Intensive pelvic floor muscle training + stabilization exercises lead to greater improvements in incontinence signs and symptoms, improved PERF/strength measures, and levator hiatus measures than a lower frequency program

Clinical Application-

It would seem prudent to assign more intensive training programs for patients. The frequency of the two groups (900 vs 180 contractions/week) are very different and this study does not inform us which specific training loads lead to greatest of gains in continence.

As the same type of core/pelvic floor training program was performed by all subjects- we cannot assume that these exercises are superior than others for the treatment of SUI

While we see improvement in PFMT training programs- we cannot assume that improvements are due to changes in strength/endurance or even morphometry- more research needed

List discussion questions

As the low frequency group's ICIQ UI SF scores decreased by less than one point and incontinence episodes/week decreased by 2.9 incidences (from 9.31 to 6.38)- do you think 2 times/week for 15 min is insufficient for clinically important changes?

How does this change the way you educate your patients about their HEPs?