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**COMPARISON OF VAGINAL ELECTROMYOGRAPHY (EMG)
IN LYING, SITTING AND STANDING.**

Aims of study

Surface electromyography (SEMG), via vaginal electrodes, can be used to monitor pelvic floor contractility and is used in biofeedback therapy. However, many patients are monitored in lying, but actually need to be able to contract their pelvic floor muscles when standing and sitting, both in daily pelvic floor exercise sessions, and functionally to reduce urine loss during episodes of increased intra-abdominal pressure in these positions.

Aims of study: to compare the contractility of the pelvic floor muscles in lying, sitting and standing, using SEMG.

Method

Following digital vaginal assessment to ascertain correct pelvic floor muscle contraction, 51 appropriate consecutive incontinent female patients were tested as part of a routine assessment, using the Periform electrode (Neen HealthCare, UK) and PRS 900 (Holister, USA). Maximum voluntary contractions were recorded (in microvolts) in lying, sitting and standing. To avoid the effect of muscle fatigue during the tests, the order of testing was varied.

Results

The following mean values (+/- SD) (in microvolts) were calculated from the data: lying 21.75 (12.1), sitting 15.71 (11.5) and standing 12.96 (9.9). There was a significant difference between lying and sitting ($p=0.0161$) and lying and standing ($p=0.0001$), but no significant difference between sitting and standing ($p=0.0928$).

Conclusion

This study has demonstrated reduced pelvic floor contractility in sitting and standing compared with lying. These results suggest the need to assess the pelvic floor muscles in all positions, to ascertain functional contractility.