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Background - Measurement of Intra-abdominal pressure (IAP) is very complex and we do not yet understand it fully in relation to PFD. Obesity, chronic cough and "certain high intensity exercises" are considered risk factors for PFD. Despite the lack of evidence we still advise patients to avoid increased IAP. This must be balanced with need to encourage healthy exercise.

Subjects - 53 healthy adult females
Validated intravaginal pressure device measured 6 parameters of IAP - figure 2
• mean pressure
• max peak pressure
• min trough pressure
• max pressure amplitude (max peak minus min trough)
• mean rate of pressure increase
• mean rate of pressure decrease
Two versions of 10 exercises - conventional and pelvic floor "safe" - Table 1

Statistical analyses - multivariate linear regression - 10 types of ex, 2 versions on all 6 parameters after adjusting for age, BMI and parity. Canonical discriminate analysis was performed for each version and the distance between the versions was calculated - Mahalanobis distance.

Results
• Difference between recommended and discouraged versions where significant with modified version better for most (table 2)
  o plank
  o cycling
  o step-ups
  o shoulder press - discouraged version better
  o run/walk
• Higher BMI assoc with higher pressures

Table 3 - we do not know which of these parameters is the most important (fig 3 may not agree)
exercises that have many low measures
• both core
• both plank
• both squat
exercises that has many high measures
• both ball rotation
• high step
• run
Discussion - there may be little difference in the amount of core stabilization between versions and because they are very similar to begin with this study did not show significance. High step ups and running are closest to valsava and cough and deserve further study. Also the level of fitness may impact results.

Strengths - validated sensor and statistical analysis
Limitation - threshold of clinically significant IAP is unknown and is most likely individual examine differences across exercises

Questions
How do you advise women which exercises are safe for POP?
What types of activities / exercises seem to precipitate POP in your patients?

Discussion centered around individualized instruction for patients and proper breathing. Some check manually to see if POP is lower with chosen exercise. Pelvic PT Distance Journal Club special project on the scoring of POP safe web sites will be sent out this Friday for more info.