

The Effect of Two Abdominal Exercises on Diastasis Rectus Abdominis in Postpartum Women

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INTRODUCTION: Diastasis rectus abdominis (DRA), a separation of the rectus abdominis muscles from their attachment at the linea alba, commonly occurs during pregnancy and in up to 83% postpartum women. This separation does not resolve in many postpartum women and has been found in 52% of women with a mean age of 52 years. Potential consequences of ignoring DRA include lumbopelvic pain, urinary incontinence, and abdominal weakness.

PURPOSE: To compare the effects of two abdominal exercises, a supported head lift with external bracing and the typical abdominal crunch, in postpartum women with DRA.

METHODS: Fifteen women (mean age of 33.6 years, BMI of 27, parity of 2.8 pregnancies, and postpartum period of 12 months) participated in this study and were randomly divided into three groups: the abdominal crunch, supported head lift, and control groups. The subjects participated in an eight-week exercise class and completed the assigned abdominal exercise. Pre and post-ultrasonographic measurements of inter-rectus distance were taken prior to the onset of exercise classes and after completing the program.

RESULTS: Preliminary results of a paired samples t-test split by group reveals significant reduction in inter-rectus distance in both exercise groups, the supported head lift group $t(3) = 5.99$, $p = .009$ above the umbilicus and $t(3) = 3.68$, $p = .035$ below the umbilicus. The typical crunch group $t(6) = 4.15$, $p = .006$ above the umbilicus and $t(6) = 4.36$, $p = .005$ below the umbilicus. Whereas the control group did not experience a significant reduction in inter-rectus distance above or below the umbilicus, $t(3) = 2.86$, $p = .065$ and $t(3) = 2.49$, $p = .089$ respectively. A mixed factorial ANOVA could not be run to compare the groups due to the small number of subjects in each group. However, will be used to analyze the data once more subjects are recruited into the study.

CONCLUSION: The study demonstrates a trend in reduction of the inter-rectus distance over time in postpartum women when either abdominal exercise was performed; whereas the control group did not improve significantly. We cannot statistically demonstrate that one exercise reduces inter-rectus distance more than the other and further research is needed to make any clinical application suggestions for postpartum women.