

The Effect of an Exercise Class and Three 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% of 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 an exercise class and three abdominal exercises, a supported head lift (SHL) with external bracing, the typical abdominal crunch (TC), and diaphragmatic breathing (Control) in postpartum women with DRA.

METHODS: Thirty-one women (mean age of 33 years, BMI of 27, parity of 2.7 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 diaphragmatic breathing 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: Results of a mixed factorial ANOVA reveal no significant difference main effect of interrectus distance above the umbilicus between the three groups, $F(2, 28) = 0.736, p = 0.488$. There was a significant effect of time on interrectus distance, $F(1, 28) = 69.05, p < 0.0001$. All three groups experienced a reduction of interrectus distance over time: SHL (8) $m_{pre} = 3.23$ cm, $m_{post} = 2.37$ cm; TC (13) $m_{pre} = 2.88$ cm, $m_{post} = 2.18$ cm; and Control (10) $m_{pre} = 2.96$ cm, $m_{post} = 2.16$ cm). However, there was also no significant interaction between time and group assignment, $F(2, 28) = 0.219, p = 0.805$.

CONCLUSION: There has recently been emphasis placed on assisting women through what is being called the 4th trimester of pregnancy, also called the postpartum period. The results of this study indicate further research is needed to determine the most effective exercise for physical therapists to prescribe to postpartum women that have a diastasis rectus abdominis. Future research should consider zero participation of a control group.