

# The Relationship Between Self-Reported Exercise Levels During Pregnancy and Labor Pains

Maria Johnson<sup>1</sup>, Jaiden Outten<sup>1</sup>, Juliana Meireles<sup>2</sup>, Ph.D., Sadaf Dabeer<sup>2</sup>, Ph.D., Janeen Amason<sup>3</sup>, RN, PhD, Katherine H. Ingram<sup>2</sup>, Ph.D.

Departments of Biology<sup>1</sup>, Exercise Science and Sport Management<sup>2</sup>, and WellStar School of Nursing<sup>3</sup> at Kennesaw State University

## Abstract

**Background:** Physical activity is important to maintain overall health and wellness even during pregnancy. There are numerous benefits to exercise during pregnancy that include reduced back pain and lower risk of preeclampsia and gestational diabetes. Recent studies have shown an association between aerobic exercise and reduction in the intensity of labor pains. **Purpose:** The purpose of this study is to determine the association among level of exercise level and the intensity of pain during active labor. **Methods:** Women up to 2 years postpartum were invited to complete an online survey about the frequency of exercise (none, occasionally, a few times a week, or most days of the week) and intensity (high, moderate, and light). To calculate exercise level, we used the formula  $\text{exercise level} = [(\text{high} \times 3) + (\text{moderate} \times 2) + (\text{light} \times 1)] \times \text{Frequency}$ . Participants also answered how intense their active labor pains were using a scale of 1-10, with 10 being the worst. The Kolmogorov-Smirnov test was used to evaluate data distribution and Spearman's test to verify the correlations. **Results:** A cohort of 160 women aged between 22 to 47 years (mean age  $32 \pm 3.6$  years, BMI  $29 \pm 0.47$ ) suggested no correlation between exercise intensity during pregnancy and pain intensity during active labor ( $p > 0.05$ ). In addition, the mean exercise level was 20.17, the maximum being 69. The labor pain mean was 7.5, with the maximum being 10. For high exercise intensity, half of the population reported none. For moderate exercise intensity, the majority reported sometimes. For light exercise intensity, the majority claimed they exercised 2-3 days of the week. **Conclusion:** There was no correlation between exercise levels during pregnancy and labor pains. However, ACOG recommends that women include exercise in a healthy pregnancy to ease discomfort. Therefore, further research is needed to determine the role of exercise in labor pains with previous studies showing a linkage between exercise and pain during labor.

