

Title: Are prenatal exercise volume and level different between c-section and natural birth groups?

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Background: According to the World Health Organization (WHO), the ideal rate for c-section births is between 10% and 15% of births. However, the Centers for Disease Control and Prevention (CDC) reports there is a current rate of 31% for C-section births in the United States. The American College of Obstetricians and Gynecologists (ACOG) mentioned that based on observational studies, women who exercise during pregnancy have shown benefits such as decreased C-section births.

Objective: The purpose of the study is to compare exercise volume and level between c-section and natural birth groups.

Methods: Women who had given birth in the past two years were invited to participate in an online survey that asked for descriptive information (age and race) and mode of delivery. They provided information about the frequency of overall exercise and the frequency of engaging in high, moderate, and light intensity exercise. Exercise volume score was calculated using [(high intensity exercise frequency*3) + (moderate intensity exercise frequency*2) + (light intensity exercise frequency*1)]. Exercise level was calculated as Exercise volume score * Frequency of overall exercise. Comparisons were made using Mann Whitney U test.

Results: Data from 232 women (33±4.61 years, 75% white) was used for analysis. Responses show that 163 women (70.3%) gave birth naturally while 69 women (29.7%) had c-section delivery. Natural delivery group (8.19±6.18) had a significantly higher exercise volume score (p=0.048) when compared to the c-section group (6.39±5.50). No statistical difference was found in exercise level (p=0.102) between mode of delivery groups (17.63±17.92 vs 12.72±14.41).

Conclusion: Exercise level was similar between mode of delivery groups. However, women who gave birth naturally reported a higher volume of exercise than those who had a c-section. Health care providers should emphasize exercise intensity and frequency guidelines when discussing exercise with pregnant women.