

Characterizing the Neuromuscular Effect Breast Have on Postural Stability in Healthy Women

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Abstract

Today in America there is a movement going on called #LetHerDecide which has caught the attention of many people. Let Her Decide main goal is to establish Medicaid coverage for custom breast prostheses. Currently the good and best options are covered under Medicaid, but the better option is not. The “better” options allows women to have their breast prostheses customized to contour of the women’s skin tone and chest wall. Reconstruction and off-the-shelf prostheses are not the best options for all women so having the choice to decide between more options is important. In aide to this problem we must show that breast in women provide postural stability. The goal of the study is to characterize function of women’s breast on postural stability.

The Functional Movement Screen (FMS) is commonly used to assess and identify asymmetries that may result in functional movement disorders. The FMS helps clinicians screen for injury risks and identify imbalances in mobility and stability. Three healthy women ranging from the ages of 21-22 completed the seven screening tests of the Functional Movement Screen. The women completed the tests under two different conditions, with a bra on and without a bra. During the bra trials, each woman had the same brand and type of sports on. Each woman completed a total of four trials overall. The first two days of testing, the women did not have a bra and the last two days of testing the women all wore Reebok sports bras. While completing the FMS, the EMGs monitored and recorded the muscles activation of each muscle: pectoralis major, upper trapezius, tibialis anterior, medial gastrocnemius. After completing all trials, we expect to see the pectoralis

major and upper trapezius being heavily activated in the trunk stability pushup, deep squat, in-line lunge, and the hurdle step tests. These four tests focused on making sure the women kept their posture upright, aligned, and controlled while completing the test. From the preliminary data, we expect to see the breast have an influence on postural stability. Additionally, we anticipate the pectoralis major and upper trapezius being activated significantly more when the women were not wearing a bra.

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Biography:

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