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Body Composition, Strength, and Physical Function Following Two Training Interventions for Breast Cancer Survivors
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Cancer treatments including surgery, chemotherapy, radiation, and hormone suppressant therapy have greatly improved the survival of breast cancer patients. Although these treatments have been successful in reducing breast cancer mortality, they are accompanied by long-term side effects that include accelerated losses in muscle mass and gains in fat mass. These changes lead to losses in strength and physical function. While resistance training programs have been shown to attenuate these negative changes in body composition, strength, and physical function, there is a lack of research examining the effects of resistance training combined with high impact training or a low impact yoga program to maintain or improve these measures.

PURPOSE: To examine the effects of functional impact training (FIT) and yin yoga (YY) on body composition, strength, and physical function in breast cancer survivors (BCS).

METHODS: Forty-four BCS (60.3 ± 8.3 yrs) were assigned to a 24-week FIT (resistance+high impact exercises) or YY intervention (stretching+relaxation) 2x/wk. Pre- and post-body composition measurements were assessed via dual energy X-ray absorptiometry. Upper body strength was measured by a one-repetition maximum chest press test. Lower body strength was assessed by Biodex isokinetic knee extension and flexion at 60, 120 and 180°/s. The Continuous Scale-Physical Functional Performance (CS-PFP) test assessed physical function. Data were analyzed using a repeated measures analysis of variance. Significance was accepted at p≤0.05.

RESULTS: Body composition did not change. FIT improved upper body strength (73 ± 18 to 83 ± 22 kg) compared to YY (60 ± 15 to 59 ± 16 kg). Main time effects occurred for lower body strength with a mean extension and flexion improvement of 13% and 16%, respectively. A main time effect occurred for CS-PFP (68.53 ± 12.87 to 73.66 ± 12.62 U).

CONCLUSION: Our findings suggest that FIT and YY are beneficial for strength and physical function in BCS. FIT may be a high impact alternative to traditional weight training for BCS while YY may be a viable option for BCS who require a program of lower intensity. Supported by: ACSM Doctoral Student Grant; NSCA Graduate Student Research Grant.

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Cross-sectional Correlates of Physical Activity and Sedentary Time among Young Adult Cancer Survivors
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Cancer survivors are less active than the general population. Previous research has examined predictors of physical activity among cancer survivors; however, few studies have focused on adolescent and young adult (AYA) survivors.

PURPOSE: To examine cross-sectional relationships between demographic, psychosocial, disease-related characteristics, and measures of physical activity (steps, MVPA, and sedentary time) among AYA cancer survivors.

METHODS: Eligible participants were diagnosed with cancer between 18-39y, >6 months post-treatment, and engaged in <60 min/wk of exercise. Participants wore an activPAL monitor for 7-days to obtain estimates of physical activity and sedentary time. Participants self-reported their health history (e.g., cancer type and treatment), demographics, psychosocial correlates (e.g., self-efficacy), and symptoms (e.g., fatigue). We used Pearson correlations to assess bivariate relationships. For variables with significant correlations, we used linear regression models to assess the relationship between activity variables, demographics, and psychosocial factors.

RESULTS: Fifty-four participants were eligible and provided informed consent; of those, 51 completed the baseline assessments and 48 had valid baseline data. Fatigue was significantly correlated with steps per day (R = -0.39), minutes of MVPA (R = -0.38), and percent of time sedentary (R = 0.40). There were no other significant correlations between psychosocial variables and steps, MVPA, or sedentary time. After adjusting for age and gender, breast cancer survivors had significantly higher steps per day than other cancer types (1,651 steps), more minutes of MVPA (13.7 min/day) and less sedentary time (-8.4%, p<0.05). The relationship between higher levels of fatigue, less physical activity, and more sedentary time remained significant after adjusting for age, gender, and cancer type (p<0.05).

CONCLUSIONS: Preliminary results indicate a significant relationship between higher levels of fatigue, more sitting time, and less daily physical activity. Future research is needed to determine if increasing physical activity will reduce fatigue in AYA cancer survivors. Supported by Frost Fund and Cal Poly RSCA Grant.

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Social Representations About Physical Activity In A Group Of Women With Breast Cancer In Bogota
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ABSTRACT: The social representations are systems with an own logic and language with the function to establish an order both in the material and social world, which give explanations and generate codes to name and signify a lot of the experiences that accompany them. In the case of Physical Activity (PA) representation in patients with cancer, his meaning can be of vital importance for the illness coping. This investigation pretended identify the social representations of the physical activity (understanding P.A. as a mediator of all activity that generate pleasure, integration and identity to a group), in a group of women that live with breast cancer in Bogotá city. From a hermeneutic historical paradigm, a qualitative approach and a narrative design, we inquired 11 women that live with breast cancer about their representations of physical activity, using ATLAS TI as tool. A content analysis was developed, in which 65 codes and 18 emerging categories associated with the concepts of information, attitude and representational field were identified. According to this analysis physical activity is represented as a way to be more conscientious about their health and a mechanism that generates well being, favoring the quality of life. Likewise, it was recognized that physical activity is seen as an aspect that favors family relationships and a tool for strengthening networks generating attitudinal changes, a feeling of overcoming and the desire to help other people who live with the disease. The body and human movement in this disease is a mediator of the daily activities of women that gives a new meaning to cancer and the beliefs about the disease by making possible new alternatives of intervention in addition to the medical ones for management and treatment.

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Assessment of Physical Activity Levels and Quality of Life in Women Suffering from Breast Cancer
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A wealth of evidence suggests exercise as a complementary therapy for breast cancer (BC), by reducing the expression of oncogenes and atrophy genes, inducing antioxidant defense pathways and helping combat chronic inflammation. However, exercise appears not to be adequately incorporated in the therapeutic strategy of cancer.

PURPOSE: This study assessed the physical activity (PA) levels and quality of life (QoL) of women under different BC treatment strategies and compared them with those of age-matched healthy females.