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8 - EXERCISE AS AN ADJUVANT THERAPY FOR FATIGUE AND CARDIORESPIRATORY FITNESS IN BREAST CANCER PATIENTS: A REVIEW OF CURRENT EVIDENCE

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Introduction: During primary breast cancer (BC) treatment, both systemic and local therapies are used to eliminate tumoral cells and reduce the risk of recurrence or disease progression. However, despite the efficacy and success of these treatments, most patients have their quality of life affected by some treatment-related side effects. Among them, fatigue and reductions in cardiorespiratory fitness are commonly observed in response to treatment toxicities during and even following primary treatment. To date, exercise has been considered an effective intervention to counteract these side effects. In the past few years, guidelines from the American Cancer Society, American College of Sports Medicine, and Exercise and Sport Science Australia were published highlighting the importance of being physically active before or after a cancer diagnosis. Recently, the Brazilian Clinical Oncology Society also started a new guideline in exercise and oncology. However, even with numerous studies demonstrating that exercise is effective, the relationship between its prescription variables and effects on these outcomes is unclear. Consequently, it is of great interest to understand the effects of different exercise modalities (e.g., resistance training, aerobic exercise or combined resistance, and aerobic exercise) and their effects on fatigue and cardiorespiratory fitness. ***Objective:*** The aim of this study was to describe the effects and moderators of exercise on fatigue and cardiorespiratory fitness in women with BC. ***Methods:*** This is a narrative literature review concerning the exercise effects and moderators of exercise response on fatigue and cardiorespiratory fitness in women with BC. The search was undertaken in PubMed using the following terms: "cancer" AND "exercise" AND ("fatigue" OR "cardiorespiratory fitness") in November 2021. Given the specificity of the topic and outcomes of interest, we selected seven systematic reviews with meta-analysis to describe the exercise effects and moderators of exercise response on fatigue and cardiorespiratory fitness in BC patients. ***Results:*** In summary, the design of supervised exercise programs could benefit women with BC. In addition, exercise could result in greater effects in patients presenting higher levels of fatigue when compared to those who do not present. Some examples of supervised exercise programs are in studies from the Supervised Trial of Aerobic Versus Resistance Training (START), Combined Aerobic and Resistance Exercise (CARE), and Optimal Training Women with BC trials (OptiTrain). These studies prescribed resistance training, aerobic exercise, and combined resistance and aerobic exercise, 2–3 exercise sessions per week, 1–3 sets of 8–12 repetitions at 60–70% of one-repetition maximum (1RM) per resistance exercise, and 20–30 min of continuous or high-intensity interval aerobic exercise at 13–15 of the rated perceived exertion (RPE) scale. Regarding the exercise program prescription, supervised, high-intensity, or nonlinear schedule aerobic exercises are also associated with greater effects on cardiorespiratory fitness. The fact that supervised exercise results in greater benefits in cardiorespiratory fitness compared to unsupervised programs (supervised exercise, ES=0.34, 95%CI 0.28–0.40; unsupervised exercise, ES=0.19, 95%CI 0.07–0.32) is an important information. ***Conclusion:*** Sufficient evidence indicates that exercise promotes significant effects on fatigue and cardiorespiratory fitness in women with BC. In addition, specific subgroups of patients based on age and baseline levels appear to respond more favorably than others. Regarding contraindications, the exercise prescription should occur accordingly to and with the clearance of the oncologist and the medical team, respecting patients' individualities, the feasible period for exercise, symptoms, and treatment course.