
SPORT RECONDITIONING AND CANCER

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Sport reconditioning (SR), encompassing both aerobic and resistance exercise, has emerged as a critical component in the management of cancer patients and survivors. The American Heart Association (AHA) emphasizes that structured exercise programs, tailored to individual patient needs and supervised by certified professionals, can significantly improve cardiovascular fitness (CRF), muscular strength, and quality of life (QoL) in cancer survivors.

Central to this approach is the Individual Rehabilitation Project (IRP), a tailored program designed to elevate the post-treatment quality of life. It stresses the importance of early interventions, particularly after surgery, to mitigate potential complications and functional deficits.¹ For instance, Dolan et al. reported significant improvements in CRF, QoL, and fatigue among breast cancer survivors (BCS) participating in supervised aerobic and resistance training programs.² For this reason, fostering adapted physical activity (APA) and healthy lifestyle (including a balanced diet and weight management) should become an everyday purpose of healthcare professionals. Fencing may be a well-suited activity to counteract fatigue, pain, and limited arm mobility.³

The American College of Sports Medicine (ACSM) supports the integration of exercise into cancer care, recommending moderate-intensity aerobic exercise for at least three sessions per week, combined with resistance training two to three times per week. These recommendations are based on a comprehensive review of randomized controlled trials (RCTs) and systematic reviews, which consistently demonstrate the safety and benefits of exercise during and after cancer treatment.⁴

Exercise has been shown to mitigate treatment-related toxicities such as fatigue, mood disorders, and cognitive impairment. An umbrella review by Bai et al. identified that exercise significantly reduces adverse events associated with cancer and its treatments, including cardiac toxicity, chemotherapy-induced peripheral neuropathy, and dyspnea. Exercise also modulates body composition and biomarkers, enhancing sleep quality, psychological well-being, and overall QoL.²

Despite the robust evidence supporting exercise, a significant proportion of cancer patients remain inactive during treatment. An American Society of Clinical Oncology (ASCO) survey revealed that 25% of patients did not engage in regular exercise, and another 25% exercised at suboptimal levels. This underscores the need for oncology providers to actively promote and integrate exercise recommendations into routine cancer care.⁵

Prehabilitation, or exercise interventions before cancer surgery, is an emerging field with promising results, particularly in lung cancer patients. Preoperative exercise has

been associated with reduced morbidity and mortality, although more research is needed to establish its benefits across other malignancies.⁶

The feasibility of implementing exercise programs in cancer care settings has been demonstrated in various studies. For instance, supervised aerobic and resistance training in BCS significantly improved CRF, QoL, and reduced fatigue. These findings support the inclusion of structured exercise programs in cancer rehabilitation models.²

Resistance training has been shown to improve muscle strength, bone mineral density, and functional mobility. Champ et al. highlight that individualized high-intensity compound movements can optimize health outcomes by enhancing the structural integrity of bones and muscles, stimulating metabolism, and minimizing injury risk.⁷

In conclusion, SR is a vital aspect of cancer care, offering numerous benefits that enhance treatment tolerance, physical function, and QoL. Guidelines from the American Heart Association, the American College of Sports Medicine, and other evidence-based literature provide a strong framework for the integration of exercise into oncology practice. However, efforts must be made to overcome barriers to physical activity and ensure that exercise recommendations are effectively communicated and implemented in clinical settings.

Keywords: Cancer Rehabilitation, Exercise Oncology, Sport Reconditioning, Resistance Training, Quality of Life.

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