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18 months of physical exercise effects in children and teenagers with cancer diagnosis

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Childhood cancer (CCA) is a global and devastating disease. Although it is relatively rare compared to CA in adults, its incidence is still significant. The most common types of CCA include leukemia, central nervous system tumors, and lymphomas. The causes of CCA are not yet completely understood, but genetic, environmental, and immunological factors play important roles. Early diagnosis is essential for successful treatment, and despite advances in research, CCA continues to pose a significant challenge due to its complexity and emotional impact on families. Continued efforts are needed to improve survival rates and quality of life for children affected by CA. In this sense, physical exercise (PE) has been increasingly used as a safe and effective intervention to improve the health and well-being of patients with CA, but few studies have evaluated its effect on children/teenagers.
PURPOSE: Thus, the present study aimed to analyze the impact of 18 months of regular PE practice on children and teenagers. METHODS: 11 Maple Tree Cancer Alliance patients (12.4±3.4 years old) admitted or undergoing treatment at the GPACI Children's Cancer Hospital (GPACI), in Sorocaba/SP –Brazil, participated in this research. Each PE session, accomplished twice weekly, consisted of cardiorespiratory, coordination, balance, strength, and flexibility exercises. Assessments of functional capacity (TUG), strength (hand grip), resistance (elbow flexion), and flexibility (sitting and reaching) were carried out before and after the intervention. RESULTS: As a result, after regular PE practice, all the capacities evaluated obtained statistically significant improvements, with special attention to the reduction of fatigue and its correlation with muscular strength. CONCLUSION: Thus, we conclude that the regular practice of guided PE brought physical and functional improvement to children and teenagers affected by CA.

Keywords

neoplasms
fatigue
childhood cancer
resistance training

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

Author: Prof. FURQUIM, Andressa (Maple Tree Cancer Alliance Brasil)

Co-authors: FRANCISCO, Alice (Maple Tree Cancer Alliance Brasil); BRITO, Jader (Maple Tree Cancer Alliance Brasil); WONDERS, Karen (Maple Tree Cancer Alliance); MACHADO, Otavio (Maple Tree Cancer Alliance Brasil)

Presenter: WONDERS, Karen (Maple Tree Cancer Alliance)

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