

Is there a Correlation between Resistance Training and Cancer?

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Abstract. Although the importance of resistance training for a variety of health benefits has been recognized for quite some time, its effects on the risk of different types of cancer is not yet clear and additional research into this area has been recommended. Thus, in the present report we will summarize the most important updates on how exercising and especially resistance training could be or not correlated with the very complex cancer pathology. In this way, the recommendation for moderate to vigorous physical activity and resistance training are supported by the current level of knowledge in this area, which shows a reduction in risk of death from cancer as a result of increased cardiorespiratory fitness and muscular strength. In addition, the available data suggests that physical training programs have beneficial effects on the physical or psychosocial capacity of the cancer patients, with improved aerobic capacity, muscle strength and quality of life. Based on these findings, it seems that it could be recommended for the strength training to be incorporated for decreasing the risk of developing cancer, as well as for cancer rehabilitation, with careful screening of the patients and their supervises during training.

Keywords: cancer, exercising, resistance training.

Introduction

Cancer accounts for 23% of all deaths in the United States and is the second leading cause of death. In 2013 it was estimated that every year approximately 1.6 million new cancer cases would be diagnosed and 68% of survivors would live more than 5 years [1].

Moreover, the number of cancer survivors is expected to continue increasing each year with improvements in early detection and treatment. In addition, cancer treatment is often associated with many adverse physical side-effects including muscular atrophy, decreased muscle strength and reduced aerobic capacity [2]. These side-effects are known to contribute to the development of cancer-related fatigue [3]. It is also known that about 70% of cancer patients report fatigue complaints during chemotherapy and radiotherapy [4]. Furthermore, even years after the treatment,