

## Exercise after Breast Cancer



### Introduction

Breast cancer is the most common cancer among women worldwide. Despite the increased incidence of breast cancer, with advanced treatment technology leading to higher recovery rates, survival years have been significantly extended. However, survivors often experience numerous physical and psychosocial adverse effects including cardiac toxicity, pain, physical fitness, fatigue, depression, fear of recurrent and reduced quality of life after their treatments (Campia and Barac, 2016) (Cramp, Cramp and Byron-Daniel, 2012) (Juvet *et al.*, 2017) (Samuel *et al.*, 2015).

Radiation therapy and chemotherapy have short- and long-term complications, and their toxicities may be linked to the reported high prevalence of fatigue and poor exercise tolerance that can negatively affect quality of life (Bower *et al.*, 2006) (Schneider *et al.*, 2007). Additionally, some research found that using tamoxifen and

aromatase inhibitors (Drugs used to treat breast cancer) have also been associated with long-term fatigue.

Fatigue is the most common and debilitating side effect of cancer and its treatment. This may affect daily activity levels, produce negative emotions and change survivors' quality of life. Fatigue has been documented in 34% of breast cancer survivors 5–10 years after diagnosis (Bower *et al.*, 2006). Increasing evidence has shown that exercise as an intervention has beneficial outcomes in many cancer survivors experiencing chronic or late side effects (Galvao and Newton, 2005) (Mutrie *et al.*, 2012) (Samuel *et al.*, 2015).



Exercise interventions for cancer survivors affect various dimensions including physical condition (physical performance, functional status, reduced body weight and fatigue), psychological condition (depression and psychosocial status), decreased cardiovascular risk ((Peel *et al.*, 2014) and overall quality of life (Healy, Bird and Swain, 2008) (Mishra *et al.*, 2012) (Schneider *et al.*, 2007).

Many recent randomized controlled trials (RCTs) have explored the positive effects of exercise training on fatigue in post-treatment cancer survivors (Kim, Kang and Park,

2009) (Meneses-Echávez, González-Jiménez and Ramírez-Vélez, 2015) (Zhu *et al.*, 2016) Several systematic reviews and meta analyses (the highest level of research evidence quality), have showed the benefits of exercise in patients with breast cancer both during and after treatment (Juvet *et al.*, 2017) (Meneses-Echávez, González-Jiménez and Ramírez-Vélez, 2015) (Zhu *et al.*, 2016). However, no review has compared the type, duration and intensity of exercise intervention for this specific group. Most meta-analyses included patients with breast cancer during and after treatment as samples simultaneously (Juvet *et al.*, 2017) (Samuel *et al.*, 2015). Whether completion of treatment affects responses to exercise is not clear.

## **Conclusion**

The numerous studies and research findings underscore the multifaceted benefits of exercise for cancer survivors. These include improved physical health, reduced fatigue, enhanced mood, strengthened mental resilience, and a reduced risk of cardiovascular complications. Exercise is not just about getting in shape; it is about reclaiming one's life and finding joy and vitality.

Moreover, the positive effects of exercise extend beyond the physical realm. The mental and emotional well-being of survivors can be positively influenced, as exercise becomes a source of hope, empowerment, and improved self-esteem. The sense of control that exercise provides over one's body and mind is a powerful asset for post-treatment survivors.

By embracing the healing power of exercise, cancer survivors can look forward to brighter and healthier tomorrows, with renewed strength and resilience.



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