

Effects Of 6 Weeks Exercise On Breast Cancer Survivors' Health And Fitness

Gabriel L¹, Selina K², Mohd Nahar Am¹, Nur Aishah T³, MYBCC Study Group

¹*Sport Medicine Department, University Malaya Medical Centre, University of Malaya*

²*Sports Centre, University of Malaya*

³*Department of Surgery, Faculty of Medicine, University of Malaya*

Purpose

To examine the effects of six weeks resistance band exercise (RBE) and aerobic Zumba dance (AZD) on breast cancer survivors' health and fitness recovery after completion of adjuvant chemotherapy (ACT) and postoperative radiotherapy (PRT) treatments.

Methods

Eleven female breast cancer survivors (age = 41 – 62 years old) who had completed ACT and/or PRT treatment performed RBE and AZD for strength and cardiovascular training for six weeks. Participants took part in RBE (eight exercises including chest, arms, legs, back and abdominal muscle) three times a week and AZD 60 minutes once a week. Pre and post measurement on VO₂ (ml/kg/min), knee and shoulder peak torque (N-m) and BIA including BMI, Skeletal Muscle Mass (SMM), percent body fat (PBF) and waist to hip ratio (WHR) were measured.

Results

Improvements were found in VO₂peak = 9.9 ± 17.6% (p > 0.05), SMM = 2 ± 7.54% (p > 0.05), BMI reduced 0.49 ± 1.1 points (p > 0.05), PBF reduced 1.8 ± 5.22% (p > 0.05) and WHR reduced 0.1 point ratio, lower body (Knee) peak N-m showed improvements in both extension 3.67 ± 14.04% (p > 0.05) and flexion 3.63 ± 2.22% (p > 0.05) and upper body (Shoulder) peak N-m showed no improvements in external and internal rotation.

Conclusion

This pilot study suggests that six weeks of AZD programme can improve health and fitness recovery in breast cancer survivors. RBE can be used initially for reconditioning upper and lower body strength.

Practical Implication

AZD and RBE can improve recovery in lower body strength and cardiovascular health and fitness. However, longer training is needed to improve upper body strength, especially involving the shoulder, in breast cancer survivors.

Key Words

Breast cancer, physical activity, weight training, resistance band, health and fitness

Declaration Of Conflicting Interests

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

The work was supported by the University of Malaya/Ministry of Higher Education (UM.C/HIR/MOHE/06) High Impact Research Grant MyBCC and approved by our Medical ethics committee (Mec no. 866.31 22/7/2011). This study was registered in

Australian New Zealand Clinical Trials Registry (ACTRN) ACTRN12615000561583.