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### Effect of a 12-week Supervised Exercise Program on Anxiety and Depression in Cancer Survivors

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A life-altering diagnosis, such as cancer, and its coinciding treatments, can lead to a number of adverse side-effects in patients. Cancer-related anxiety, depression, and fatigue along with physiological changes are common side effects of patients with cancer. The cause of such psychological side-effects can be multifactorial and difficult to treat. Exercise under the supervision of an exercise professional has been shown to reduce levels of anxiety and depression in patients with cancer. **PURPOSE:** To determine the effect of a 12-week, supervised exercise program on levels of anxiety and depression in a population of rural cancer survivors. **METHODS:** Seven (male, n=3; female, n=4) cancer survivors aged  $59.7 \pm 9.5$  years with a BMI  $33.1 \pm 7.9$  kg/m<sup>2</sup>, and a variety of cancer diagnoses and treatments, participated in twelve weeks of an individualized exercise program. Exercise sessions lasted 60 min and included balance, resistance, aerobic, and flexibility exercise for one to three days per week. Anxiety and depression scores were analyzed using the Hospital Anxiety and Depression Scale. **RESULTS:** Paired-sample T tests showed a significant decrease in anxiety from  $4.86 \pm 2.85$  to  $3.71 \pm 2.93$  ( $p = 0.03$ ). No significant changes were observed in depression  $3.00 \pm 2.16$  to  $2.43 \pm 2.57$  ( $p = 0.36$ ). **CONCLUSION:** A 12-week supervised exercise program may help the rural cancer survivor feel less anxiety during and after treatment and help them with their activities of daily living. All subjects in the study had depression scores in the “normal” range, meaning it was not necessary to recommend they seek further evaluation by a psychiatric professional. Although the changes in depression scores were not statistically significant, this suggests that an exercise program may help maintain these scores throughout and after cancer treatment.