

## RESEARCH BRIEF

# The Effects of Group Exercise on Fatigue and Quality of Life During Cancer Treatment

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**Purpose/Objectives:** To determine the feasibility of participating in a structured group exercise program (SGEP) for adult patients receiving cancer treatment and to test the impact of an SGEP on reducing cancer-related fatigue (CRF) and improving quality of life (QOL).

**Design:** One-group, prospective, pre- and post-test design.

**Setting:** Two community outpatient infusion centers.

**Sample:** Convenience sample of 12 adults with varying cancer diagnoses receiving cancer treatment.

**Methods:** Nine of 12 subjects participated in SGEP twice weekly for six weeks. Exercises focused on strengthening proximal muscle groups and improving functional ability. All subjects completed the Fatigue Symptom Inventory and the Short Form-36 version 2 (SF-36v2) Health Survey at baseline and six weeks.

**Main Research Variables:** Feasibility of the intervention, CRF, and QOL.

**Findings:** No difference in reported fatigue was found. The SF-36v2 subscale score for bodily pain showed a significant decrease in this symptom. Subscale scores for physical role, vitality, and social function increased but did not yield statistical significance. Social interactions resulted in strong group cohesiveness. A postprogram questionnaire identified themes of support, learning from shared information, and the usefulness of having an exercise program that also serves as an informal support group.

**Conclusions:** SGEP is feasible, safe, and well tolerated by adult patients with cancer and may have positive effects on CRF and QOL.

**Implications for Nursing:** The benefits of exercise for patients with cancer receiving treatment are well documented. Using a multidisciplinary approach, oncology nurses, working with an exercise physiologist, can safely create an SGEP, combining the power of group interactions with the appeal of a wellness-promoting behavior, and provide an additional tool to assist in the management of physiologic and psychosocial effects of cancer treatment.

### Key Points . . .

- ▶ To date, little is known about the efficacy of a group-based exercise program; the benefits of exercise as an intervention for the management of cancer-related fatigue in adults with cancer have been well documented in the literature, but most studies have examined individual, home-based exercise programs.
- ▶ Combining the positive effects of group interaction with the well-documented benefits of exercise may have an effect on reducing cancer-related fatigue and improving quality of life in adult patients receiving cancer treatment.
- ▶ Additional research with a larger, more homogenous cohort and longer duration of the intervention is needed to validate the findings of this pilot study.

as a multidimensional phenomenon, CRF has physiologic and psychosocial components (Ahlberg, Ekman, Gaston-Johansson, & Mock, 2003; Lesage & Portenoy; National Comprehensive Cancer Network; Ream et al.). Metabolic changes in skeletal muscle and the effects of cytokines create a reduction in protein stores resulting in muscular weakness, wasting, and a subsequent decrease in functioning, contributing significantly to the physiologic development of CRF (Ahlberg et al.; Dimeo, Stieglitz, Novelli-Fischer, Fetscher, & Keul, 1999; Lesage & Portenoy; Winningham, 2001). Rest has been the primary intervention for the treatment of fatigue, but evidence clearly illustrates that further inactivity

Cancer-related fatigue (CRF) affects 60%–100% of all patients with cancer and remains the most prevalent and difficult cancer-related side effect to manage, profoundly affecting everyday functioning and quality of life (QOL) (Lesage & Portenoy, 2002; Mock et al., 2001; National Comprehensive Cancer Network, 2004; Ream, Richardson, & Alexander-Dann, 2002; Stricker, Drake, Hoyer, & Mock, 2004). Described throughout the literature

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