

# Physical Exercise and Cancer-Related Fatigue in Hospitalized Patients: Role of the Clinical Nurse Leader in Implementation of Interventions

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**Background:** Guidelines suggest that aerobic endurance training and moderate resistance training lessen the effects of cancer-related fatigue (CRF). However, specifics regarding frequency, intensity, and type of physical activity required to alleviate fatigue are less specific. In addition, outcomes of these interventions during the initial stages of active treatment are not well documented.

**Objectives:** The purpose of this article is to review the current evidence-based literature regarding the effects of physical exercise on CRF and the role that the clinical nurse leader (CNL) can play in implementing interventions to address CRF and promote physical exercise to improve patient outcomes.

**Methods:** A literature review of the effect of physical exercise on CRF was conducted using the CINAHL®, PubMed, and Google Scholar databases.

**Findings:** As leaders in health care, CNLs have the knowledge and skill to take an active role in managing CRF and to develop evidence-based interventions to address fatigue in this patient population. Interventions may include creating and evaluating individualized exercise plans for inpatients with cancer and/or developing educational programs for the inpatient setting that may be continued after discharge and during outpatient treatment.

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Key words: fatigue; cancer program quality; caregiver strain and burden; complementary/alternative therapies; exercise/physical activity; quality of life

Digital Object Identifier: 10.1188/16.CJON.E20-E27

Cancer-related fatigue (CRF) is the most common side effect of cancer and its treatment (Kuchinski, Reading, & Lash, 2009). The National Comprehensive Cancer Network ([NCCN], 2016) defines CRF as “a distressing, persistent, subjective sense of tiredness or exhaustion related to cancer or cancer treatment that is not proportional to recent activity and interferes with usual functioning” (p. 1). Of note, 69%–99% of patients with cancer experience CRF during the course of treatment (Kuchinski et al., 2009). Although CRF may subside or improve after treatment, it can often persist for months or years (Kuchinski et al., 2009). CRF is much different from the fatigue that a healthy individual experiences (National Cancer Institute [NCI], 2013). In healthy people, sleep and rest can relieve fatigue experienced from typical day-to-day activities (Kuchinski et al., 2009). However, when patients with cancer experience fatigue, they may feel de-

bilited and be able to perform fewer activities, affecting their quality of life (Cramp & Byron-Daniel, 2012). This may result in sleeping more hours, worse mental fatigue, mood changes, and absences from school or work, leading to loss of money and health insurance (Chang et al., 2008).

The pathophysiology of fatigue in patients with cancer is not fully understood, but a combination of treatment (chemotherapy, radiation, and/or biologic therapy) and the physiologic changes from the disease itself are thought to be the culprits. As it relates to treatment, CRF is hypothesized to result from excess tissue damage or the accumulation of by-products produced by cell death. Fatigue may also be the side effect of treatment-induced anemia, medications, metabolic and hormone disturbances, decreased caloric intake as a result of loss of appetite, age, and the amount of plasma in the blood. It may also be exacerbated by pain, depression, and anxiety (NCI, 2013).