All cancer treatments potentially have serious side effects, including fatigue, muscle or hair loss, nausea, pain, weakness, loss of appetite or ability to perform activities of daily living, depression, anxiety, and sleep disruptions (Hanna, Avila, Meteer, Nicholas, & Kaminsky, 2008). In addition, specific treatments and surgical procedures can lead to lymphedema, restricted range of motion, joint pain, and osteoporosis (Schwartz, Mori, Gao, Nail, & King, 2001; Segal et al., 2001). Together, these can lead to loss of physical function, weight management issues, depression, decreased cardiovascular health, and, ultimately, an overall decline in quality of life (QOL) (Adamsen et al., 2009; Campbell, Mutrie, White, McGuire, & Kearney, 2005; Sandel et al., 2005; Vallance, Cournaya, Plotnikoff, Yasui, & Mackey, 2007).

Compared to healthy, age-matched controls, patients with cancer demonstrate multiple measures of impaired psychological and physical well-being during and after treatment. Aerobic endurance, muscular strength, depression, fatigue, and QOL are commonly assessed health and fitness components that are negatively affected by cancer (Gerritsen & Vincent, 2015).

Background
Aerobic Endurance and Muscular Strength

Aerobic endurance refers to the ability of the body to continuously transport oxygen throughout its various systems for extended periods of time (Adamsen et al., 2009; Segal et al., 2001). In addition, aerobic function and endurance are important during cancer rehabilitation to improve physical strength, adjust to a new lifestyle during or following treatment, and decrease the number of hospitalizations (Wu & McSweeney, 2004). Cardiovascular toxicity can occur from...