Rationale for Promoting Physical Activity Among Cancer Survivors: Literature Review and Epidemiologic Examination

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Regular participation in physical activity is gaining wide acceptance as a health-promoting behavior that can help prevent and treat many chronic diseases (Warburton, Charlesworth, Ivey, Nettlefold, & Bredin, 2010), including cancer (Loprinzi, Cardinal, Smit, & Winters-Stone, 2012). For example, research indicates that regular participation in physical activity is inversely associated with breast cancer risk (Loprinzi, Cardinal, Smit, et al., 2012), with physical activity also having a protective effect against cancer recurrence and cancer-related mortality (Loprinzi, Cardinal, Winters-Stone, Smit, & Loprinzi, 2012). Although limited and showing mixed findings (Ballard-Barbash et al., 2012; Löf, Bergström, & Weiderpass, 2012), epidemiologic research among cancer survivors demonstrated that physical activity can improve other health parameters (e.g., systemic inflammation) (Loprinzi et al., 2013) that may influence cancer recurrence (Allin, Bojesen, & Nordestgaard, 2009) and quality of life (McClellan, 2013).

The current article includes two components. The first part provides an overview of the extant physical activity-related literature among cancer survivors to provide up-to-date evidence of the specific effects of physical activity and how best to promote physical activity among this population. The second part includes an epidemiologic examination from the National Health and Nutrition Examination Survey (NHANES), which will be used to address gaps identified in the literature review.

Literature Review

The authors performed searches in PubMed and Google Scholar up to July 2013 using the following key words interchangeably: physical activity, cancer, exercise, cancer survivors, and health.

After reviewing the literature related to physical activity among cancer survivors, the authors identified several areas of research that could aid in the promotion of physical activity among this population. Where appropriate, findings were summarized from review studies, as opposed to single empirical studies.

Physical Activity Before and During Cancer Treatment

Loprinzi & Cardinal (2012a) reviewed the extant literature related to the effects of physical activity on side effects associated with cancer treatment. Their review