

# Dietary Supplement Use in Adult Cancer Survivors

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**D**uring the post-acute care stage, cancer survivors may initiate diet, physical activity, and other lifestyle changes in an attempt to prevent recurrence or chronic disease or to improve overall health and quality of life (Demark-Wahnefried, Aziz, Rowland, & Pinto, 2005). Complications or consequences related to cancer treatment also may provide the impetus for health-related behavior change. Despite limited scientific data available regarding the role of dietary supplements in promoting health and preventing cancer recurrence or secondary cancers (Brown et al., 2003), one of the most common behavior changes among survivors is the use of dietary supplements.

According to the U.S. Dietary Supplement and Health Education Act (DSHEA) (1994), dietary supplements include products containing vitamins and minerals as well as herbs or other botanicals, amino acids, glandular extracts, or other non-nutrient ingredients. Under the DSHEA, dietary supplements are not required to undergo prescreening or safety and efficacy studies prior to production and marketing by manufacturers (Larsen & Berry, 2003). In addition, since the passage of the DSHEA, the use of dietary supplements has increased, with the sharpest growths noted in the non-nutrient and antioxidant sectors (Wold et al., 2005). The rise in dietary supplement use is of particular concern because cancer survivors appear more likely to use dietary supplements compared to the general U.S. adult population. In contrast to a prevalence rate of approximately 50% in the general population, prevalence rates range from 64%–81% among cancer survivors (Velicer & Ulrich, 2008).

Several potentially beneficial roles for dietary supplements have been suggested. A daily multivitamin or multimineral supplement supplying nutrient doses at or below recommended intake levels (Institute of Medicine [IOM], 1997, 2000, 2001, 2004) generally is considered safe by physicians, other healthcare professionals, and the research community (Norman et al., 2003). Furthermore, guidelines recently issued by the World Cancer Research Fund and the American Institute for Cancer Research (2007) suggested that select vitamins and minerals from dietary supplements, such as calcium

**Purpose/Objectives:** To assess dietary supplement use and its association with demographic and health-related characteristics among cancer survivors and to investigate differences in supplement use patterns by cancer site.

**Design:** A cross-sectional survey.

**Setting:** Computer-assisted telephone survey.

**Sample:** 1,233 adult (ages 30–69) survivors participating in the Penn State Cancer Survivor Study who underwent an interviewer-administered questionnaire.

**Methods:** Descriptive statistics with multivariate logistic regression to determine demographic, disease, and health-related predictors of supplement use.

**Main Research Variables:** Use of dietary supplements and types of supplements taken.

**Findings:** Supplement use ranged from 50% among blood cancer survivors to 85% among melanoma skin cancer survivors, with an overall prevalence rate of 73%. Multivariate logistic regression revealed statistically significant associations ( $p$  values  $< 0.05$ ) between supplement use and older age ( $\geq$  age 50), higher levels of education and physical activity, female gender, lower body mass index, and white ethnicity.

**Conclusions:** Overall, a wide variety of supplements were reported, although multivitamins, calcium and vitamin D combinations, and antioxidant vitamin combinations were the most prevalent. Seventy-eight percent of supplement users took more than one supplement.

**Implications for Nursing:** The findings support continued efforts by oncology nurses to identify the types of supplements cancer survivors are using. Nurses should caution against the use of individual supplements as well as combinations of different supplements containing nutrient quantities above recommended daily intake levels. Furthermore, oncology nurses and other healthcare professionals should be receptive to questions and prepared to initiate conversations with patients about their use of dietary supplements.

and selenium, may decrease risk of certain cancers. On the other hand, a growing body of evidence suggests that the use of antioxidant supplements, namely beta-carotene and vitamins A and E, may pose health-related risks (Bjelakovic, Nikolova, Gluud, Simonetti, & Gluud, 2007). Coupled with the increasing prevalence of fortified foods, supplemental intake of vitamins and minerals could result in nutrient intake surpassing