

Prevalence and Clustering of Multiple Unhealthy Behaviors in Adult Survivors of Childhood Cancer: Results from the Childhood Cancer Survivor Study

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Introduction: Unhealthy behaviors in childhood cancer survivors may exacerbate the risk of future disease related to cancer treatment exposures. Clustering of multiple unhealthy behaviors among adult survivors has not been previously described.

Methods: The prevalence of clustering of 4 unhealthy behaviors (i.e., physical inactivity, risky drinking, smoking and overweight (as indication of poor dietary quality)) was reported by questionnaire from 8,532 childhood cancer survivors and 2,837 sibling controls.

Associations between unhealthy behavior clusters and characteristics of cancer diagnosis and treatment as well as demographics and psychosocial distress were tested using multinomial regression.

Results: Among survivors, 63% reported inactivity (physically active < 3 days/wk), 39% were overweight (BMI \geq 25 kg/m²), 31% reported risky drinking (> 2 alcoholic drinks per day for men; > 1 for women), and 18% were current smokers. Smoking (OR=.6; 95%CI = .6, .7), risky drinking (OR=.8; 95%CI = .7, .9), and overweight (OR=.8; 95%CI = .7, .9) were less likely in survivors compared to siblings, after adjusting for age, gender, race/ethnicity and education; inactivity was more likely in survivors compared to siblings (OR = 1.3, 95%CI= 1.1,1.4). Among survivors, 14% reported no unhealthy behaviors, 38% reported 1, 32% reported 2, 13% reported 3, and 3% reported 4 unhealthy behaviors. For survivors reporting only one unhealthy behavior, inactivity was the most prevalent (23%). Older age, less education, no health insurance and depression were associated with a greater likelihood of multiple unhealthy behaviors (3 or 4) compared to none or one behavior (all p < .05) in multinomial models.

Conclusions: Many (86%) adult survivors of childhood cancer report at least one unhealthy behavior. Screening and prevention programs are particularly needed among underserved populations such as those without medical insurance. Targeting interventions to reduce inactivity among survivors may hold the largest potential population impact.