

Physical Performance Limitations and Participation Restrictions Among Long-Term Childhood Cancer Survivors: The Childhood Cancer Survivor Study

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Background: Childhood cancer survivors may have important disease and treatment related late effects, including physical performance limitations and participation restrictions.

Objective: This study evaluated physical performance limitations and restricted abilities to participate in personal-care, engage in routine activities like shopping or housework, and attend work or school (participation restrictions) in a cohort of childhood cancer survivors.

Design/Methods: Participants included 11,481 persons who were treated for primary brain cancer, leukemia, Hodgkins disease, non-Hodgkins lymphoma, kidney tumor, neuroblastoma, soft tissue sarcoma, or malignant bone tumor before age 21 years and who survived at least 5 years after diagnosis. The comparison group included 3845 siblings. Medical data were abstracted, and subjects or parents (if <18 years old at survey completion) completed a 24-page questionnaire.

Results: Compared with siblings, survivors were more likely to report limitations in physical performance (prevalence odds ratio (OR) 2.1; 95% CI 1.8-2.3), and report participation restricted personal care skills (OR 4.8; 95% CI 3.1-7.4), routine activities (OR 5.0; 95% CI 3.7-6.6), and the ability to attend work or school (OR 2.5, 95% CI 4.9-8.5). Brain (26.6%) and bone (36.9%) cancer survivors were most likely to report physical performance limitations, routine activity restrictions (brain 20.9%, bone 8.5%), and restricted ability to attend work or school (brain 20.0%, bone 11.2%). Brain cancer survivors were also most likely to report restricted personal care skills (10.5%).

Conclusions: This study demonstrated that persons treated for childhood cancer were at increased risk for physical performance limitations, and restricted personal care skills, routine daily activities, and work or school attendance.