Television Viewing and Time Spent Sedentary in Relation to Cancer Risk

An increase in sedentary lifestyle has been identified as a potential risk factor for the development of chronic disease. This article identified the impact of prolonged TV watching along with other sedentary behaviors (e.g., computer use, less physically demanding occupations, video viewing, reading, sitting during long commutes, social inactivity) as possible cancer risk factors. This article quantitatively summarized the correlation between sedentary behavior associated with ingestion of unhealthy foods, leading to the potential to smoke and gain weight. Smoking and obesity are linked to an increased risk of cancer.

The authors of this study conducted an electronic literature search through February 2014 and identified 43 epidemiologic observational studies examining sedentary lifestyles in relation to cancer incidence, spanning a variety of cancer diagnoses. All of these studies were required to meet uniform inclusion criteria. The data were extracted independently by the authors and summarized using random-effects article and meta-regression; statistical tests were two-sided. Many of these studies adversely linked sedentary behavior with cancer incidence. Because these studies did not provide epidemiologic evidence correlating sedentary behavior with cancer risk, the article attempted to quantitatively link TV viewing and recreational, occupational, and total sitting time as risk factors for certain cancer diagnoses.

The article found that prolonged TV watching and sedentary behavior is associated with increased risk of colon and endometrial cancers. Every increase of two hours per day in sedentary time was related to a statistically significant 8% increase in colon cancer risk and a 10% increase in endometrial cancer risk. Colon and endometrial cancers are tumors that are related to the comorbidity of obesity; therefore, the authors suggest that sedentary behavior and obesity mediate the risk for certain cancers. In addition, a correlation was found between high versus low sedentary behavior and lung cancer. No associations between sedentary behavior and risk of developing cancer of the breast, ovaries, prostate, stomach, esophagus, testes, renal cell, or non-Hodgkin lymphoma were found.

This article illustrated a potential biologic cascade that associates sedentary lifestyle and cancer risk. Sedentary time takes away light-intensity physical activity and can cause a decrease in energy expended, resulting in weight gain and obesity, which are related to cancer risk.

The authors acknowledged that the major limitations of this study were the broad variation of the definition of high and low levels of sedentary behavior, as well as the use of self-reporting and interviews as opposed to the use of objective data collection methods. Both of these limitations may have affected the true amount of sedentary time spent in each study. The strengths of the review were the summarized risk of a large number of patients with cancer, studies with uniform criteria, and reporting on a variety of cancer diagnoses.

The relevance of this article for practicing oncology nurses is the clinical applicability of cancer prevention and the potential impact for developing public health programs focusing on accessible, active, and healthy lifestyles for diverse populations.