

# Soft Drinks Linked to Pancreatic Cancer Risk

Study Shows Those Who Often Drink Soda Have a Higher Pancreatic Cancer Risk

By CHRIS EMERY  
Contributing Writer, [MedPage Today](#)

Feb. 8, 2010—

Regular consumers of sugary soft drinks are at higher risk for pancreatic cancer than fruit juice drinkers or the general population, a new Singaporean study has found.

Chinese men and women living in Singapore who drank two or more soft drinks per week were 87 percent more likely to develop pancreatic cancer after the researchers adjusted for factors such as smoking, according to the report published Feb. 8 in *Cancer Epidemiology, Biomarkers & Prevention*.

"In this large prospective cohort of Chinese men and women in Singapore, those who reported regular soft drink consumption were at increased risk of pancreatic cancer when compared with those who largely abstained," Mark Pereira, of the School of Public Health at the University of Minnesota, and colleagues wrote. "There was no association between consumption of juice and risk of pancreatic cancer."

While pancreatic cancer is relatively rare, it is one of the most deadly cancers, with less than 5 percent of patients surviving five years after diagnosis. Although rates have generally plateaued in the U.S., they continue to climb in some Asian countries, including Singapore.

"This increase may reflect demographic and socioeconomic shifts as well as a transition towards a more westernized lifestyle and diet," the authors wrote.

Research has shown that insulin promotes pancreatic cancer cell growth, and some researchers think sugary foods could result in blood sugar and insulin fluctuations that expose the pancreas to high concentrations of insulin.

While fruit juices contain sugar, soft drinks are the major sources of added sugar in the U.S. diet and major contributors to hyperglycemia and hyperinsulinemia.

Pereira and colleagues followed 60,524 men and women who enrolled in the Singapore Chinese Health Study between April 1993 and December 1998 and were followed for 14 years.

At enrollment, the participants completed a 146-question food frequency questionnaire, which contained three items related to soft drinks and juice. The questions asked the participants how much, if any, they drank of soft drinks such as Coca-Cola and 7-Up, orange juice, and other fruit and vegetable juices.

The dietary data was later cross-referenced with records from the Singapore Cancer Registry and the Singapore Registry of Births and Deaths, to determine which of the participants had died of pancreatic

cancer and whether it might be related to their soft drink or juice consumption.

Overall, researchers found that 140 participants had developed pancreatic cancer.

The results were largely consistent with three of four previous U.S. studies on the links between pancreatic cancer and soft drinks. Three of the U.S. studies found an association between soft drinks and cancer.

The author acknowledged that soft drink consumers are more likely than abstainers to participate in other unhealthy behaviors, including smoking and overeating, which makes it difficult to determine that soft drink consumption is an independent risk factor for pancreatic cancer.

For instance, smokers in their study were at higher risk for pancreatic cancer. "We could not rule out the possibility of residual confounding by factors associated with the habit of drinking soft drinks or other unascertained factors such as waist circumference," they wrote.

They also noted that the study was limited in statistical power because pancreatic cancer is rare, which limited the sample size of cancer cases. "Also, because we were unable to collect repeated dietary measurements in this study, we were unable to account for changes in consumption of soft drinks and juices," they wrote, "especially when the diagnosis of diabetes occurred after the baseline interview."

The study was funded by the National Cancer Institute.

The authors reported no financial conflicts of interest.

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