Study suggests possible link between sugary drinks and cancer

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A study published by *The BMJ* today reports a possible association between higher consumption of sugary drinks and and an increased risk of cancer.

While cautious interpretation is needed, the findings add to a growing

body of evidence indicating that limiting sugary drink consumption, together with taxation and marketing restrictions, might contribute to a reduction in cancer cases.

The consumption of sugary drinks has increased worldwide during the last few decades and is convincingly associated with the risk of obesity, which in turn is recognised as a strong risk factor for many cancers. But research on sugary drinks and the risk of cancer is still limited.

So a team of researchers based in France set out to assess the associations between the consumption of sugary drinks (sugar sweetened beverages and 100% fruit juices), artificially sweetened (diet) beverages, and risk of overall cancer, as well as breast, prostate, and bowel (colorectal) cancers.

Their findings are based on 101,257 healthy French adults (21% men; 79% women) with an average age of 42 years at inclusion time from the NutriNet-Santé cohort study.

Participants completed at least two 24-hour online validated dietary questionnaires, designed to measure usual intake of 3,300 different food and beverage items and were followed up for a maximum of 9 years (2009-2018).

Daily consumption of sugary drinks (sugar sweetened beverages and 100% fruit juices) and artificially sweetened (diet) beverages were calculated and first cases of cancer reported by participants were validated by medical records and linked with health insurance national databases.

Several well known risk factors for cancer, such as age, sex, educational level, family history of cancer, smoking status and physical activity levels, were taken into account.

Average daily consumption of sugary drinks was greater in men than in women (90.3 mL v 74.6 mL, respectively). During follow-up 2,193 first cases of cancer were diagnosed and validated (693 breast cancers, 291 prostate cancers, and 166 colorectal cancers). Average age at cancer diagnosis was 59 years.

The results show that a 100 mL per day increase in the consumption of sugary drinks was associated with an 18% increased risk of overall cancer and a 22% increased risk of breast cancer. When the group of sugary drinks was split into fruit juices and other sugary drinks, the consumption of both beverage types was associated with a higher risk of overall cancer. No association was found for prostate and colorectal cancers, but numbers of cases were more limited for these cancer locations.

In contrast, the consumption of artificially sweetened (diet) beverages was not associated with a risk of cancer, but the authors warn that caution is needed in interpreting this finding owing to a relatively low consumption level in this sample.

Possible explanations for these results include the effect of the sugar contained in sugary drinks on visceral fat (stored around vital organs such as the liver and pancreas), blood sugar levels, and inflammatory markers, all of which are linked to increased cancer risk.

Other chemical compounds, such as additives in some sodas might also play a role, they add.

This is an observational study, so can't establish cause, and the authors say they cannot rule out some misclassification of beverages or guarantee detection of every new cancer case.

Nevertheless, the study sample was large and they were able to adjust for

a wide range of potentially influential factors. What's more, the results were largely unchanged after further testing, suggesting that the findings withstand scrutiny.

These results need replication in other large scale studies, say the authors.

"These data support the relevance of existing nutritional recommendations to limit sugary drink consumption, including 100% fruit juice, as well as policy actions, such as taxation and marketing restrictions targeting sugary drinks, which might potentially contribute to the reduction of cancer incidence," they conclude.

More information: Sugary drink consumption and risk of cancer: results from NutriNet-Sante? prospective cohort , *BMJ* (2019). DOI: 10.1136/bmj.l2408 , www.bmj.com/content/366/bmj.l2408

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