SUGARY DRINKS' LINK TO CANCER

Article: "Sugary Drink Consumption & Risk of Cancer: Results from NutriNet-Santé Prospective Cohort"
Source: The BMJ (the British Medical Journal) 7/10/2019
Authors: Eloi Chazelas et al.

THE IMPACT:

Excess Body Fat is Related to Higher Risk of Cancer
(New England Journal of Medicine)

Review of multiple studies found higher BMIs significantly associated with colon, rectum, gastric cardia, liver, gallbladder, pancreas, and kidney cancer.

640 Million Obese
(The Lancet)

From 1975 to 2014, there has been a 6 fold increase in global obesity in adults.

60–95% Increased Cancer Risk with Higher Sugar Ingestion
(Annual Review)

Total dietary intake of sugar did not correlate with increased risk, but the subgroups of added sugars and sugary drinks did suggest detrimental associations.

Summary

Chazelas et al explored associations between the risks of cancer and the consumption of sugar and artificial sugar based beverages identified by repeated 24 hour dietary records on individuals of the NutriNet-Santé cohort. Data indicates the consumption of sugary drinks was significantly associated with the risk of overall cancer and breast cancer, especially with 100% fruit juices, while consumption of artificially sweetened beverages was not associated with the risk of cancer. Findings suggests that BMI and obesity may not be the direct cause of cancers, but rather the ingestion of sugar. Regardless, sugary drinks, which are widely consumed in Western countries, might represent a modifiable risk factor for cancer prevention. Points discussed:

- Strengths: Large sample size, robust statistical analysis, various confounders evaluated, medical records cross examined with multiple sources, and comprehensive, accurate, and time relative information was provided for patient beverage intake
- Limitations: other ingredients in beverages may contribute to increased risk, online volunteering participants don't fully represent general population (specifically the majority women from higher economical and more health conscious backgrounds), and study doesn't establish causation, possible bias of self reported health report
- More insights necessary on artificially sweetened beverages as well as sugar's role in cancer
- WHO evaluate evidence for the taxation and market restriction of sugary drinks, which might potentially reduce cancer incidences

Study Design

In the article, Chazelas et al followed **population based prospective cohort study** design: where a defined group of participants, with baseline information gathered before developing outcomes of interest, are monitored over a period of time for exposure to certain factors. The study depended on NutriNet-Santé, a web established French cohort utilizing online questionaries, of 101 257 individuals over 18 years old from 2009 to 2017. Fine & Gray hazard models with adjustments employed to assess risk of breast, prostate, and colorectal cancer due to the ingestion of various sugary drinks and a number of artificially sweetened beverages.

Session summaries and commentaries were given by Trang Hau & Christina Wira with support of The Premed Scene Journal Club

Additional Sources

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