

# Substitution of sugar-sweetened beverages for other beverages and the risk of developing coronary heart disease: results from the Harvard Pooling Project of Diet and Coronary Disease

**Project: 480**

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## **Background:**

Sugar-sweetened beverage (SSB) intake is associated with metabolic disorders. The reduction of SSB intake has been promoted to prevent death and disability from chronic diseases. However, a lower SSB intake requires substitution by other fluids to maintain hydration.

We investigated the association between SSB intake and the risk of coronary events and death, and assessed if substitution of coffee, tea, milk, fruit juice and artificially sweetened beverages (ASB) for SSBs is associated with a reduced risk of coronary events and death.

## **Methods:**

This was a follow-up study in which data from six cohort studies were pooled.

## **Results:**

During the mean 5-10 year follow-up, 4248 coronary events and 1630 coronary death occurred among 284.345 individuals. 355 ml daily increase of SSB intake was associated with an increased risk of coronary events (HR: 1.08; 95%CI: 1.02, 1.14) and possibly coronary death (HR: 1.05; 95%CI: 0.96, 1.16). Substitution analyses suggested that replacing SSBs with coffee (HR: 0.93; 95%CI: 0.87, 1.00) or ASB (HR: 0.89; 95%CI: 0.83, 0.97), but not with tea (HR: 0.94; 95%CI: 0.87, 1.01), low-fat milk (HR: 0.96; 95%CI: 0.90, 1.03), whole fat milk (HR: 0.95; 95%CI: 0.87, 1.04) or fruit juice (HR: 0.97; 95%CI: 0.85, 1.07) was associated with a lower risk of developing coronary events. No associations were found for coronary death.

## **Conclusion:**

We found that SSB intake is associated with an increased risk of coronary events and possibly coronary death. Our findings also suggest that substituting ASBs or coffee for SSBs lowers the risk of developing CHD events.

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