

It's the Sugar!

Study provides more reasons to cut sugar

How much sugar do you consume daily? Are you above or below average? How much sugar does our government say is fine? What diseases are associated with sugar intake? How much can we improve our risk with a reduction in sugar intake?



Abstract

- Objective: To evaluate the quality of evidence, potential biases, and validity of all available studies on dietary sugar consumption and health outcomes.
- Design: Umbrella review of existing meta-analyses.
- Data sources: PubMed, Embase, Web of Science, Cochrane Database of Systematic Reviews, and hand searching of reference lists.
- Inclusion criteria: Systematic reviews and meta-analyses of randomised controlled trials, cohort studies, case-control studies, or cross sectional studies that evaluated the effect of dietary sugar consumption on any health outcomes in humans free from acute or chronic diseases.
- Results: The search identified 73 meta-analyses and 83 health outcomes from 8601 unique articles, including 74 unique outcomes in meta-analyses of observational studies and nine unique outcomes in meta-analyses of randomised controlled trials. Significant harmful associations between dietary sugar consumption and 18 endocrine/metabolic outcomes, 10 cardiovascular outcomes, seven cancer outcomes, and 10 other outcomes (neuropsychiatric, dental, hepatic, osteal, and allergic) were detected. Moderate quality evidence suggested that the highest versus lowest dietary sugar consumption was associated with increased body weight (sugar sweetened beverages) (class IV evidence) and ectopic fatty accumulation (added sugars) (class IV evidence). Low quality evidence indicated that each serving/week increment of sugar sweetened beverage consumption was associated with a 4% higher risk of gout (class III evidence) and each 250 mL/day increment of sugar sweetened beverage consumption was associated with a 17% and 4% higher risk of coronary heart disease (class II evidence) and all cause mortality (class III evidence), respectively. In addition, low quality evidence suggested that every 25 g/day increment of fructose consumption was associated with a 22% higher risk of pancreatic cancer (class III evidence).
- Conclusions: High dietary sugar consumption is generally more harmful than beneficial for health, especially in cardiometabolic disease. Reducing the consumption of free sugars or added sugars to below 25 g/day (approximately 6 teaspoons/day) and limiting the consumption of sugar sweetened beverages to less than one serving/week (approximately 200-355 mL/week) are recommended to reduce the adverse effect of sugars on health.

U.S. dietary guidelines recommend getting no more than 10% of daily calories from added sugars. For a typical 2,000-calorie-per-day diet, that equals no more than 200 calories or about 12 teaspoons. The CDC reports that the average person consumes 17 teaspoons per day, with the largest sources being sugar-sweetened beverages, desserts, and snacks. For perspective, one 12-ounce can of Coke contains the equivalent of 9 teaspoons of sugar!

This is another umbrella review of existing studies on dietary sugar consumption and health outcomes. The authors identified 73 meta-analyses of 8,601 articles covering 83 health outcomes in adults and children. Researchers looked at studies that evaluated the impacts of consuming free sugars, which means any food that contains processed or naturally occurring sugars like table sugar, honey, or maple syrup. Sugar found in whole fruits, vegetables, and milk is not free sugar. They identified harmful associations for dietary sugar consumption with 18 endocrine/metabolic outcomes, 10 cardiovascular outcomes, 7 cancer outcomes, and 10 other outcomes (neuropsychiatric, dental, hepatic, osteal, and allergic). Highest versus lowest dietary sugar consumption was associated with increased body weight and ectopic fatty accumulation, with moderate-quality evidence. Each serving/week increment of sugar-sweetened beverage consumption was associated with a 4 percent higher risk for gout and each 250-mL (8 oz)/day increment of sugar-sweetened beverage consumption was associated with a 17% higher risk for coronary heart disease and 4% increase in all-cause mortality.

Additional low-quality evidence showed that every 25-g (~1oz)/day increment of fructose consumption was associated with a 22% higher risk for pancreatic cancer.

It's amazing how much sugar we consume – 17 tsp/day on average and our government says 12 tsp daily is fine! My patients know that I preach that sugar is the enemy. This study certainly backs up that assumption. Based on these findings all of us need to be aware of our sugar intake and reduce the obvious sources of sugar to see a significant reduction in various health risks.

Huang Y, Chen Z, Chen B, Li J, Yuan X, Li J et al. Dietary sugar consumption and health: umbrella review *BMJ* 2023; 381:e071609 doi:10.1136/bmj-2022-071609.