



**SUGAR- AND ARTIFICIALLY SWEETENED BEVERAGES CONSUMPTION LINKED TO TYPE 2 DIABETES, CARDIOVASCULAR DISEASES, AND ALL-CAUSE MORTALITY: A SYSTEMATIC REVIEW AND DOSE-RESPONSE META-ANALYSIS OF PROSPECTIVE COHORT STUDIES.**

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Sugary drinks and excess dietary sugars have been related to the development of many non-communicable diseases such as obesity, heart disease and type 2 diabetes (T2D). Drinks with added sweeteners as a replacement for sugar are often regarded as a healthier alternative, however the exact effect on many non-communicable diseases is unknown. This systematic review and meta-analysis of 17 cohort studies assessed the effect of sugary drinks and artificially sweetened beverages (ASB's) on the risk of death, T2D, and heart disease. The results showed that the consumption of sugary drinks and ASB's increased the risk of developing T2D, heart disease and death from any cause. It was concluded that long-term consumption of ASB's and sugary drinks will have detrimental health effects. Reasons for the increased risk of T2D, heart disease and death by any cause following consumption of ASB's still remains unclear. However relationships between poor health outcomes and sugary drinks may be due to many different mechanisms such as increased blood sugar levels encouraging obesity and an increase in blood pressure following consumption. Healthcare professionals could use this paper to recommend a diet without ASB's and sugary drinks to prevent the development of these non-communicable diseases.

**ASSOCIATION OF MAJOR FOOD SOURCES OF FRUCTOSE-CONTAINING SUGARS WITH INCIDENT METABOLIC SYNDROME: A SYSTEMATIC REVIEW AND META-ANALYSIS.**

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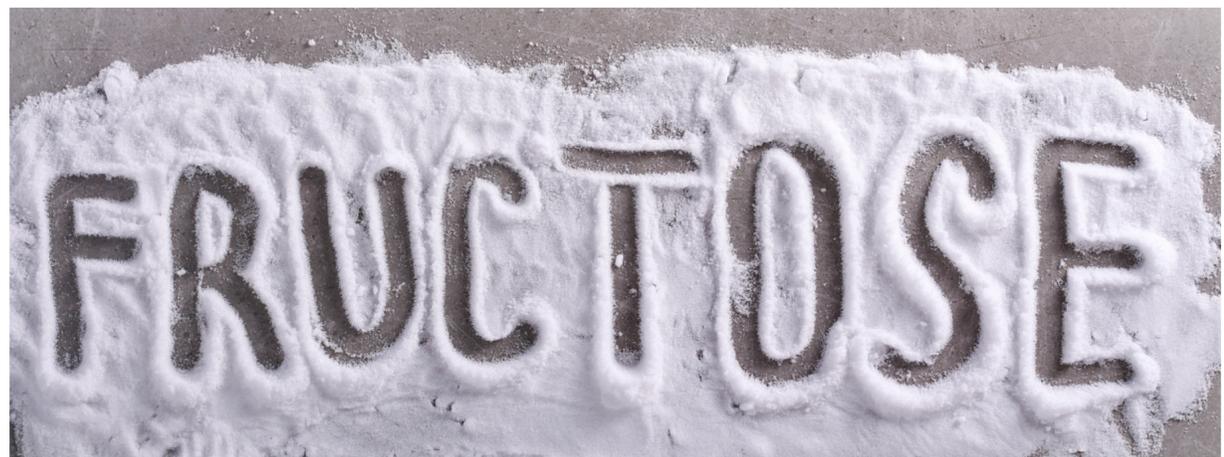
Fructose is a type of sugar that has been implicated as a contributor to the development of metabolic syndrome (MetS), which is a condition where large waist circumference, high blood pressure and elevated blood lipid levels may all coexist. However, it remains unclear as to the role of fructose containing foods in the development of MetS. This systematic review and meta-analysis of 13 prospective cohort studies aimed to determine the association of several fructose containing foods and drinks with MetS. The results showed that sugary drinks containing fructose increased the risk of MetS, whereas no associations were found with mixed fruit juice, 100% fruit juice, honey, ice cream or confectionary. Interestingly fruit and yoghurt containing fructose decreased the risk of developing MetS. It was concluded that fructose containing food and drinks are not all equal in their biological effects. .



**OBESITY AND SEX-RELATED ASSOCIATIONS WITH DIFFERENTIAL EFFECTS OF SUCRALOSE VS SUCROSE ON APPETITE AND REWARD PROCESSING: A RANDOMIZED CROSSOVER TRIAL**

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Added sweeteners are increasingly being used in foods to maintain the sweet taste without the added calories, however the health consequences of this are still unclear. Most of the research that exists is in men of normal weight, however women and individuals with obesity have shown to have differing appetite responses. This randomised crossover trial of 74 adults aimed to determine the effect of consuming sweetener compared to sugar on brain, hormone, and appetite responses and whether these differed by sex and obesity status. The results showed that women had increased food related brain responses and consumed greater calories following ingestion of an artificially sweetened drink. In those with obesity food related brain response was also increased following sweetener consumption. Blood glucose hormone response was decreased following sweetener consumption compared to sugar consumption. It was concluded that females and individuals with obesity have differing brain activity following consumption of sweetener. This study could be used by healthcare professionals to understand that the recommendation of artificial sweeteners for weight loss in women and those who are already suffering from obesity may lead to greater calorie consumption. However further research is needed to confirm this.



**DECREASED CONSUMPTION OF ADDED FRUCTOSE REDUCES WAIST CIRCUMFERENCE AND BLOOD GLUCOSE CONCENTRATION IN PATIENTS WITH OVERWEIGHT AND OBESITY. THE DISFRUTE STUDY: A RANDOMISED TRIAL IN PRIMARY CARE**

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Cardiovascular disease, diabetes and obesity have increased in recent decades and some studies have established a direct link between insulin resistance (IR) and these conditions. Currently, the relationship between sugar intake and the risk of obesity and diabetes remains controversial. However, some studies involving overweight or obese participants without diabetes concluded that increasing fructose intake under certain conditions lead to the development of hepatic IR in adults. The primary objective of this randomised controlled study was to determine whether decreasing the consumption of foods with high amounts of fructose, independent of a reduction in calorie intake, led to a decrease in IR after 24 weeks.

438 adults who were obese or overweight but not diabetic, took part in the 24-week study, one group ate a low fructose diet and the other a standard diet.

The low fructose diet did not reduce IR but it reduced waist circumference and fasting blood glucose. The authors conclude that in overweight and obese non-diabetic primary care patients, a small decrease in the consumption of added fructose in a sustained manner may be enough to achieve metabolic benefits.

New studies with larger number of patients are needed.

