World Sugar Research Organisation

Dietary Sugars & Heart Disease

Cardiovascular Disease

Cardiovascular disease (CVD) is a group of disorders affecting the heart (also known as heart disease) and blood vessels. It's usually associated with a build-up of fatty deposits inside the arteries and an increased risk of blood clots. It can lead to damage to the arteries (large blood vessel) and reduced blood supply in organs such as the brain, heart, kidneys and eyes. CVD is the leading cause of death worldwide, causing an estimated 19.8 million deaths[1]. There are several factors which can increase a person's chance of developing CVD. Some are unchangeable (ethnicity, age, family history, gender), whilst others have the potential to be changed (high blood pressure, overweight, smoking, physical activity, high blood cholesterol)[2].

Dietary Sugars and CVD

The current evidence does not show a direct link between sugars consumption and risk of CVD. Excess calories from all foods and beverages, including sugars, can lead to weight gain, increasing the risk of obesity and other chronic diseases, such as CVD. The effect of sugars on CVD risk is dependent on the total amount of excess calories in the diet[3,4]. Some calorie-containing nutrients (e.g., fats and carbohydrates) may make foods more palatable, which could promote the consumption of excess calories. Which foods and drinks the sugars come from in our diet may also be important. There does not appear to be a unfavourable effect of sugars consumed in certain nutrient-dense foods including yogurt, fruit, 100% fruit juice, whole grain cereals, if consumed as part of an overall healthy diet[5,6].

A link between high consumption of sugar-sweetened beverages (SSBs) and an increased risk of developing CVD has been found in some studies. However, this link may be influenced by other unhealthy lifestyle factors such as low physical activity, smoking, and high salt and saturated fat consumption, which are known risk factors for CVD and are more common in individuals who consume a lot of SSBs[7–9].

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Key Findings from Public Health Agency Reports

European Food Safety Authority Opinion (2022) - Evidence did not support a relationship between total sugars, added or free sugars and CVD risk. Low-moderate quality evidence supports a relationship between high intake of added and free sugars and certain CVD risk factors (such as elevated blood fats and high blood pressure)[10].

US Dietary Guidelines Advisory Committee (2020) - Limited evidence from observational studies suggests that higher consumption of added sugars in adulthood is associated with increased risk of CVD death[11].

UK Scientific Advisory Committee on Nutrition (2015) - There is no evidence of an association between total sugars and CVD, blood pressure, fasting blood cholesterol or fats[12].

Sugars can be consumed as part of a healthy, balanced, calorie-controlled diet.

CVD Prevention

The overall body of evidence suggests removing sugars entirely from the diet is not a requirement for preventing CVD. Sugars can be consumed as part of a healthy, balanced, calorie-controlled diet. Adopting a healthy diet and lifestyle (e.g., engaging in regular physical activity) and maintaining a healthy body weight can reduce CVD risk factors. Recommendations for CVD prevention often emphasize the importance of a healthy dietary pattern, rather than focusing on individual nutrients like sugars. For instance, the traditional Mediterranean diet, which is rich in fruits and vegetables, whole grains, and oily fish and low in red meat, processed meat, and dairy, has been associated with a 10% reduction in CVD risk[11,13,14].

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