World Sugar Research Organisation

Dietary Sugars & Obesity

What is Obesity?

Globally, around 1 in 2 adults are living with overweight or obesity[1].

Obesity is a build-up of excessive body fat, that can lead to an increased risk of developing diseases, such as cardiovascular disease, type 2 diabetes, and some cancers. The development of obesity is complex, and no factor is solely responsible. It is the consequence of a wide variety of factors including those related to individual biology, eating and physical activity; set within an obesogenic environment[2].

Dietary Sugars and Obesity

Excess calories (energy) over time from all foods and beverages, leads to weight gain. The overall scientific evidence is insufficient to establish sugars as being directly responsible for causing obesity, other than as a contributor of calories. When the amount of sugars in the diet is either increased or decreased, resulting in a corresponding increase or decrease in calorie intake, there is a corresponding change in body weight. However, when calories from sugars are replaced with other sources of calories, leading to a maintenance of total overall calorie intake, there is no change in body weight. The intake of sugars may only result in weight gain if more calories are consumed than used by the body. Scientific evidence does not show harmful effects of sugar when consumed in moderation and as part of a diet where calories are not consumed in excess[3-7].

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info@wsro.org / www.wsro.org

Sugars-Sweetened Beverages

When consumption of sugars-sweetened beverages results in excess calories to the diet, the increased sugars-sweetened beverages intake has been associated with weight gain[8]. Calories in drinks might not lead to feeling of fullness in the same way that calories in food do, which could result in excessive calorie intake[9]. Additionally, in terms of sugars sweetened beverages, high intakes often occurs within an 'unhealthy' diet and lifestyle, including less physical activity and higher alcohol intake. This could have a role to play in the association between sugars-sweetened beverages and weight gain[10–12].

Key Findings from Public Health Agency Reports

European Food Safety Authority (2022) – Evidence of a causal relationship between intake of added and free sugars and risk of obesity when consumed ad libitum (as much as desired), leading to increased calorie (energy) intake. The available evidence did not allow the setting of a Tolerable Upper Intake Level i.e. the maximum amount of dietary sugars that can be consumed safely over a long period of time[13].

U.S Dietary Guidelines Advisory Committee (2020) – Moderate evidence indicates that higher intakes of sugars-sweetened beverages is associated with greater body fat in children. There is limited evidence for a similar association in adults[14].

World Health Organization (2015) - reported that increased sugars intake was associated with a comparable weight increase among free-living individuals. This increase in body fatness is suggested to be caused by increased energy intake, and not a mechanistic effect of sugars. There was not enough evidence for the World Health Organization to make sugars recommendations based on obesity risk[15].

Obesity Prevention

Maintaining energy balance, rather than following a specific diet, is the primary strategy for obesity prevention. Evidence shows that weight loss can occur if overall calorie intake is reduced[4–6,16–18].

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