



## FACTSHEET

# Weight Control and Low/no Calorie Sweeteners

Weight control can be either losing weight to improve health, maintaining weight loss, or simply not putting on extra kilos. All of these situations require management of calorie intake and expenditure as part of a healthy diet and an active lifestyle.

In the current global challenge to lower high rates of obesity and diet-related non-communicable diseases (NCDs) such as Type 2 Diabetes, public health authorities worldwide advise reducing both calorie and free sugars intake. The World Health Organization (WHO) recommends that free sugars contribute no more than 5-10% of total calorie intake.<sup>1</sup>

Free sugars are those added to food by cooks, manufacturers or at the table, plus those naturally present in honey, syrups and fruit juices.

Low/no calorie sweeteners can be a significant aid to weight control by helping reduce intake of excess sugars while also lowering the calorie content of food and drink that contain them.

Their effectiveness is confirmed in both short- and longer-term randomised controlled trials (RCTs – studies providing the highest quality evaluations of cause and effect) that demonstrate using low/no calorie sweeteners in place of sugars results in total calorie reduction and weight loss.<sup>2</sup>

### More effective weight loss

Recent meta-analyses (a statistical analysis that combines the results of multiple studies) of RCTs highlight that replacing sugars with low/no calorie sweeteners results in average weight loss of 1-1.3kg increasing to about 2.5kg for people living with overweight or obesity.<sup>2,3</sup> Use of low/no calorie sweeteners was also found to lead to lower body mass index (BMI). BMI is a measure that can be used to see if people have a healthy or excess weight for their height and is calculated by dividing their weight in kilograms by the square of their height in metres.

Additionally, long-term studies in children with higher than average BMI showed that replacing sugar-sweetened beverages with low/no calorie sweetened diet drinks can help in weight management.<sup>2-4</sup>

There is no evidence from meta-analyses to support suggestions that users of low/no calorie sweeteners compensate for 'missing' calories in food and drink.<sup>2</sup>

Neither is there evidence to support claims that sweeteners might contribute to weight problems, a conclusion erroneously drawn from observational studies reporting overweight people as more likely to use low/no calorie sweeteners. In scientific terms, this demonstrates 'reverse causation' (i.e. people are turning to low/no calorie sweeteners to control their weight rather than low/no calorie sweeteners being the reason for overweight). Trying to lose or maintain weight is one of the main reasons for use of low/no calorie sweeteners.<sup>5</sup>

Maintaining successful weight loss is important, especially to prevent so-called yo-yo dieting: a repeated pattern of regaining weight lost on a diet followed by another 'diet'. A large RCT to determine whether weight loss was more successfully maintained among low/no calorie sweetened drink consumers than those drinking only water showed that after one year 44% of the diet drink group had maintained a 5% body weight compared with 22% of the water-only group.<sup>6</sup>

At a time when strategies are needed to combat the global challenge of obesity and its related health problems, experts confirm the use of low/no calorie sweeteners can make a significant contribution in combination with physical activity and healthy diet.<sup>7,8</sup>

### All studies are not the same: Why RCTs are the best study design for evaluating cause and effect

A randomised control trial (RCT) is a study in which subjects are randomly assigned to one of two or more groups. The experimental group receives the intervention e.g. the low/no calorie sweetened food or drink, and the control group receives the standard sugar-containing food or drink, or water, or a placebo (dummy treatment).

The groups are then followed up to investigate what effect the intervention (e.g. low/no calorie sweeteners) had on a specific point of interest such as effects on body weight or blood glucose after consumption.

Thus, RCTs, as opposed to observational studies, are the most appropriate method of investigating whether a cause-effect relation exists.

RCTs are sometimes referred to as gold-standard clinical trials because they give the most reliable, accurate and repeatable results.

There is no evidence to support claims that low/no calorie sweeteners might contribute to weight problems, a conclusion erroneously drawn from observational studies.



#### References

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