International Sweeteners Workshop

27–28 January 2015, London

Leading global experts from a wide range of disciplines—academia, government, nutritionists, toxicologists, non-governmental organisations, policy advisers, media experts, and the sweeteners and beverage industries—met for two days to share the latest understanding of the scientific evidence on sugars and sweeteners in relation to human health, to identify opportunities to partner in finding solutions to address obesity and nutrition-related non-communicable diseases (NCDs).*

The opinions expressed in this document are those of the experts—the meeting was held under the Chatham House Rule and the specific topics discussed are briefly summarised below.

1. Obesity, nutrition-related non-communicable diseases and sugars

Obesity and nutrition-related NCDs are reaching epidemic proportions and impose a burden on human health and economies worldwide. Almost 2 billion people are overweight or obese globally, 8.3% of the world’s population has diabetes, and the number of people affected by NCDs is expected to rise in the coming years. International efforts by the United Nations and the World Health Organization (WHO) to tackle NCDs and their risk factors were discussed during the workshop.

Sugar consumption and its role in driving the obesity epidemic are of considerable interest. Two recent reports on intake of sugars—WHO (March 2014) and UK’s Scientific Advisory Committee on Nutrition (drafted in July 2014 with the final version published in July 2015)—formed an important backdrop to the discussions.

2. Sugars – the evidence

There is currently no evidence of any difference between natural and refined sucrose in terms of digestion, metabolism and how the body deals with sucrose from different sources. Further, sugar introduced in place of another form of calories (substitution), such as starch, does not lead to more weight gain; however, if extra calories are added (addition), weight gain is observed.

Prospective cohort studies have shown a small association between sugar-sweetened beverage (SSB) consumption and obesity. This association is smaller than that with other important factors in the diet. Other studies have shown no association between total sugars and weight gain; however, this area needs further research.

Other topics discussed during the workshop included:

(i) ‘Is a calorie a calorie?’: Broadly, yes, no matter the source, although the calories that are available to be metabolised vary between foods (e.g. limited evidence suggests nuts (almonds, walnuts, pecans) are not fully digested to the extent expected by their theoretical energy value);

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* This meeting was held by C3 Collaborating for Health, in conjunction with The Coca-Cola Company.

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(ii) **Liquid versus solid calories**: The evidence suggests that SSBs are satiating, with the calories consumed in SSBs being partly, but not wholly, compensated at the next meal. Although ‘acute’ (i.e. short-term) consumption of calories is easier in liquid form (eating foods is more time-consuming), evidence on the impact of ‘chronic’ (long-term) consumption is not conclusive;

(iii) **Sugar ‘addiction’** (regarded as a misleading term): While ‘addiction-type behaviours’ may be seen in animal modelling of food consumption, the correlation between binging behaviour and addiction (as opposed to ‘emotional eating’) is unclear. On a practical level, ‘addiction’ is not a helpful paradigm for creating change – it is a disempowering concept for individuals, and can be an impediment to changing behaviour.

### 3. Non-nutritive sweeteners – the evidence

The negative perception of non-nutritive sweeteners (NNS) has been mainly driven by media reporting on the aspartame controversy – despite it being one of the most studied ingredients, and safe at levels currently used. Individual responses to NNS may vary, but data indicate that NNS typically do not increase appetite and do not promote weight gain (i.e. there is no compensation for the energy removed from the diet), they do not stimulate insulin and gut hormonal response, and they may be helpful in managing type 2 diabetes and weight loss.

### 4. Challenges to collect data accurately – to support evidence-based recommendations

There are several challenges to gathering evidence in the area of nutrition science. For instance, collecting accurate data from the *supply side* – e.g. sales data from retailers do not reflect actual intakes – and dietary intake surveys are challenging due to and under/over-reporting.

Furthermore, people do not eat single nutrients, people eat foods and follow various dietary patterns. Focusing on a single nutrient can be counter-productive when devising messages on weight management to the general public. This is particularly important in the context of the WHO guideline, such as the proposal which included a conditional recommendation (published in March 2015) to further reduce free sugars to below 5% of total calorie intake* – is this really feasible, particularly given that carbohydrate is still to be 50% of the total intake? There may be unanticipated consequences of removing a single nutrient from the diet – for example, if the substitution is to the more energy-dense fats then there could be a calorie increase. The importance of messaging around a balanced diet was highlighted by many of the experts.

Lack of understanding of *nutrition labelling* can also be an issue – the need for better definitions and terminology was discussed (e.g. ‘sugars’/’free sugars’/’total sugar’/’natural sugar’/’added sugar’).

*The Guideline states ‘Conditional recommendations are made when there is “less certainty about the balance between the benefits and harms or disadvantages of implementing a recommendation”. This means that “policy-making will require substantial debate and involvement of various stakeholders” for translating them into action.’

### 5. Challenges to reporting scientific data accurately

There is significant confusion about the role of sugars (and other nutrients) in the diet from policy, media and public perception standpoints. Where and how mistranslation of scientific evidence comes about – and how to correct it – was a major part of the discussion. Common distortions in the reporting of science include: associations being reported as causation, animal findings being extrapolated to humans, ignoring power (smaller, short-term studies can have apparently dramatic conclusions that make the headlines, but these may not be substantiated in subsequent larger, long-term studies), and failure to place the new finding within the context of what is already known.

As a company or a university, the response to the media can be to ignore it, to be reactive or to be proactive and persevere. There is also a need to improve peer review, to foster the skill set that effectively
translates the science into media messaging, and to engage with and use social media in smarter ways. Finally, messaging should be segmented by audience – consumer, scientific community and government/policymakers.

6. Taking action

The implementation and translation of science can be challenging. What will work in practice will vary between socioeconomic groups, age-groups and cultures.

Education, messaging and behaviour change

Education, particularly when positive messaging is used, facilitates the public understanding of nutrition and empowers individuals with the knowledge of what is (and is not) a healthy choice. Nutrition guidelines – and particularly their translation into dietary advice for consumers – came under scrutiny and some criticism for including occasional contradictions and for not mentioning non-nutritive sweeteners as an option. Messaging on diet and nutrition should be practical, realistic and achievable.

Messaging and education alone is insufficient: changing the food environment can play a role in shifting consumption behaviour. Examples of environmental change discussed included:

(i) reformulate products – the product must still taste good;
(ii) provide access to healthier options – NNS-sweetened beverages are often non-existent outside large cities in developing countries;
(iii) adjust portion size – greater availability of smaller portions;
(iv) price adjustment – lowering the relative cost of low-sugar options could provide an economic incentive to consumers to buy the lower-sugar product option.

Voluntarism and regulation

Examples were given of ways in which the food and beverage industries have worked to make their products healthier on a voluntary basis (e.g. UK efforts on salt reduction). Regulation currently under discussion includes warning labels on products that are high in sugar and sugar/soda tax.

Partnership

The timing is right for business to be part of the global solution to the crisis of NCDs. Both the UN’s 2011 Political Declaration on NCDs and the WHO’s Global Action Plan on the Prevention and Control of NCDs 2013–20 call for a ‘whole-of-society approach’, including the private sector. The Sustainable Development Goals – due to be approved by the UN in September 2015 – also focus on cross-sector partnership to achieve the Goals, including on improved nutrition and NCD prevention.

The experts called for industry to make an effort to reach out to external stakeholders, to discuss external views within the company (avoiding ‘disconnects’ between – for example – the marketing and corporate responsibility teams), and to respond with a clear strategy. NGOs and governments may be concerned with the risk of reputational damage that can come about through partnership with industry – but consistent efforts can make a difference.

7. Suggestions for industry action

The experts were asked to suggest actions that the beverage industry could take to make it easier for the healthier options to be chosen. These included:

• reduce portion size (underpinned by a clear strategy on reducing portion size and calories) and mandatory, clear portion-size labelling on packaging;
• mandatory pairing of caloric and low-calorie beverages (including water), with premium placement of the low-calorie options;
• promote only low-calorie options, and rebranding of these options as the ‘flagship’ brand;
• re-establish a social norm of ‘treats’ for special occasions, rather than an everyday food;
• establish price differentials for the low-calorie options;
• link rewards for company employees to health goals, as well as sales targets;
• develop a ‘new compact’ with society – for example, a commitment from the industry on healthy eating (such as on producing less energy-dense products in smaller portion sizes); and
• undertake an ‘invisible strategy’ of reformulation: keeping the taste the same while reducing calories, but without labelling it as ‘healthier’ (which can act as a disincentive to buy).