IS SUGAR PUBLIC ENEMY NO 1?

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Sugar has dominated the news for more than a year, leaving dietitians wondering how the revised targets will be achieved, given the chasm between current and recommended intakes. Should sugar be a special focus of public health nutrition, or would the public benefit more from messages that put sugar into the context of a healthy balanced diet? Is there any need for sugar in the diet at all? This article will consider these points.

Since 1994, sugar recommendations have been couched as non-milk extrinsic sugars (NMES) and set at a limit of 10% daily energy.[1] However, in 2015, the Scientific Advisory Committee on Nutrition (SACN)[2] halved this to 5% of daily energy, equating to no more than 30g sugar per day for an average person over 11 years. In addition, the classification of non-milk extrinsic sugars was changed to free sugars, defined as all mono- and disaccharides added during processing or cooking, plus the sugars naturally present in honey and fruit juices. These recommendations put the UK in line with a 2015 WHO report.[3]

NEW RECOMMENDATION

The new recommendation was based on evidence from randomised controlled trials where sugar consumption had been increased deliberately, mainly by giving participants additional sugar-sweetened soft drinks (SSSD). The results typically showed that higher intakes of free sugars were statistically correlated with an increase in daily energy intakes. In one study, the baseline diet contained less than 5% energy from sugars as well as a lower amount of energy. SACN therefore concluded that cutting average intakes in the UK to less than 5% energy from free sugars would result in a fall in daily energy of around 100kcal.

Interestingly, while SSSD consumption was associated with higher body mass index, weight gain and an increased risk of Type 2 diabetes in cohort studies, no such relationships were found between these outcomes and free/added sugar intake. This suggests that added sugars in liquid form may be more detrimental than sugar present in foods, possibly because of their higher glycaemic load and lesser impact on appetite.

Both free sugars and SSSD were consistently found to be a risk for dental caries in children, but not in adults. There was insufficient evidence to link sugar or SSSD consumption with cardiovascular disease or associated risk factors, such as blood pressure, blood lipids or glucose tolerance.

SACN summary

- Dental caries linked to added/free sugars and SSSD intakes
- Energy intake linked to added/free sugars and SSSD intakes
- Body mass index, weight gain in children and Type 2 diabetes linked to SSSD, not sugars
- No links between added/free sugars and cardio-metabolic outcomes
- No links between cardiovascular disease and SSSD

INTAKES AND SOURCES

Current intakes of sugar, from the National Diet and Nutrition Survey, suggest that the new recommendations will be challenging to implement. As Figure 1 shows, adults consume an average of 11% energy from NMES while children's diets contain around 15%. Males typically eat more sugar than females.

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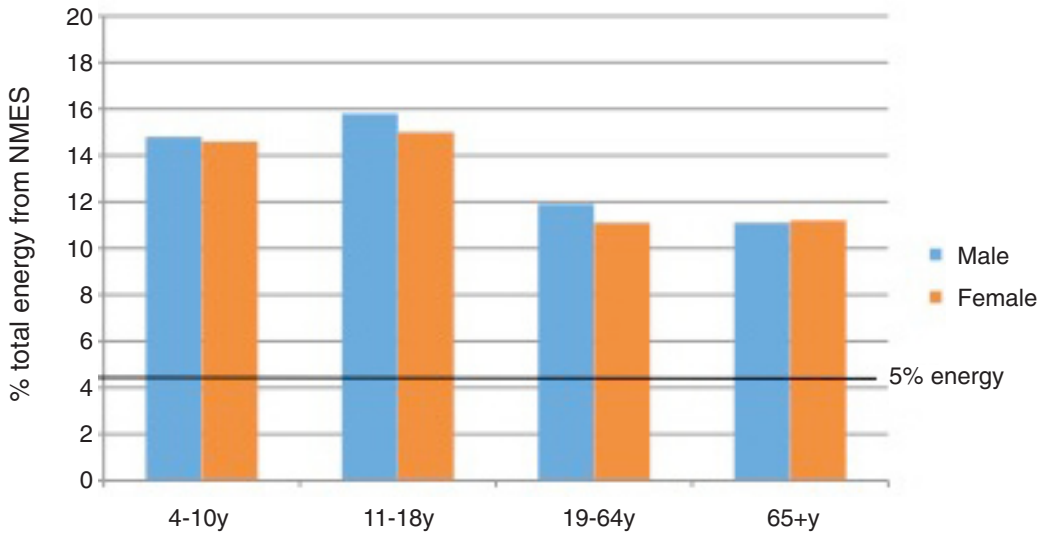
Figure 1: Average daily NMES intakes



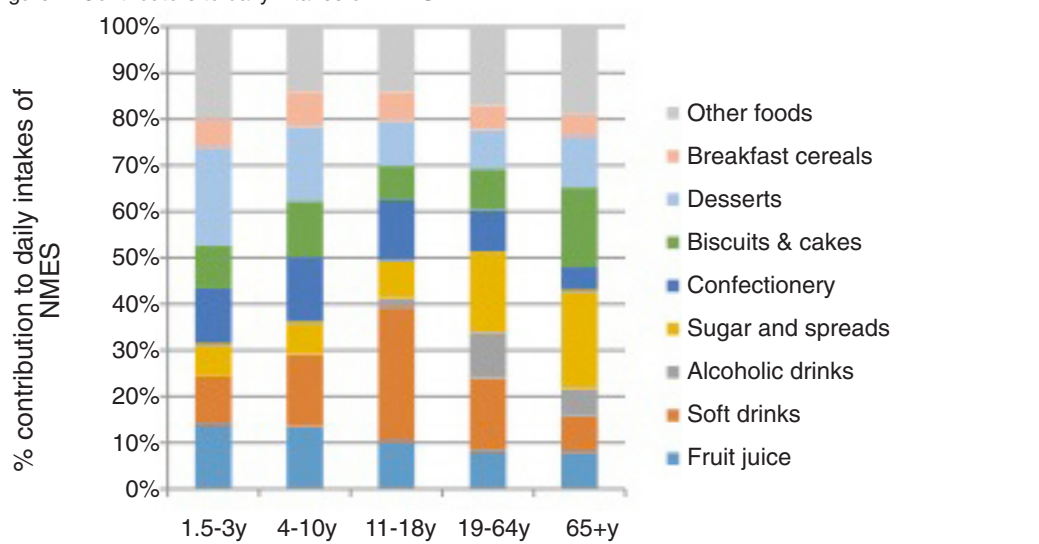
Key: NMES, non-milk extrinsic sugars; y, years. Source: Bates et al (2014)[4]

As presented in Figure 2, the top sources of NMES in children's diets are drinks, desserts and confectionery, while adults obtain a significant amount from drinks, including alcohol, sugar and preserves. Biscuits, cakes, sugar and preserves are major providers of NMES in older adults. In teenagers, drinks provide more than 40% of daily sugar intakes.

ACTION NEEDED

To lower intakes of free sugars, dietitians need to target specific food categories that provide a significant proportion of sugar in the diet. This could include advising reductions in SSSD and alcoholic drink consumption, switching from sugar-containing to sugar-free drinks, limiting portions and frequency of confectionery, biscuits,

Figure 2: Contributors to daily intakes of NMES



Key: NMES, non-milk extrinsic sugars; y, years. Source: Bates et al (2014)[4]

cakes and desserts and discouraging the addition of sugar to foods and drinks in the home. Such advice would be consistent with promotion of a healthy balanced diet as set out in the EatWell plate and other food-based dietary guidelines.

Reformulation would also need to play a role in lowering sugar levels in commonly-eaten foods. Where this is not technically possible, for example in baked goods and specialist confectionery, portion sizes should be lowered. Price promotions should also be addressed to avoid incentivising excess purchasing of high sugar options. Kantar data[5] show that 40% of foods on promotion are categorised as 'HFSS', i.e. high fat, sugar or salt, and that promotions significantly influence purchasing behaviour. The BDA should consider lobbying government and industry for a voluntary or regulatory change.

The British Nutrition Foundation recently published a sample seven-day meal planner[6] based on an adult achieving all dietary guidelines, including the new ones for sugar and fibre. The plan contains eight portions of fruit and vegetables daily, but only two alcohol drinks and two portions of 'treat' foods weekly. Fruit juice is limited to five servings a week and there are no SSSD. The sample plan is just one way of achieving dietary guidelines, but it nevertheless represents a huge shift from current intakes where around 25% of daily energy comes from discretionary foods.

ARE ALL SUGARS EQUAL?

While some researchers have expressed concerns about dietary fructose and liver fat, SACN only differentiated in health terms between free sugars, i.e. added to foods or in honey / fruit juice, and those naturally present in fruits or dairy foods. However, dental researchers have challenged whether sugars in fruit juice are any more cariogenic than sugars in fruit, as the latter is normally chewed, thus releasing the sugars in the oral cavity.[7] The idea that lactose added to a food is more dangerous than lactose naturally present also seems incongruous, and it is notable that free sugars are chemically identical to natural sugars. Further research will refine the new sugar guidelines so that consumers get the most effective advice.

The only information available at point of purchase is food labels which, by law, declare total sugars. This means that foods high in natural sugars, due to their fruit or dairy content, may seem unhealthy when, in fact, they do not count as a source of free sugars. Consumers may need help to differentiate between sugar-containing foods that are acceptable and those which need to be eaten sparingly. This is why a holistic approach looking at the overall nutritional content of a food or drink, rather than simply its sugar content, would be a better approach. Unintended consequences of a narrow focus on sugar may include consumers avoiding 'high' sugar foods which are rich in fruit or switching to low sugar snacks that are high in fat and calories. As sugar is often used to improve the palatability of high fibre products, such as breakfast cereals or cereal bars, sugar avoidance may encourage consumers to choose lower sugar, lower fibre options.

CONCLUSION

The gap between current sugar intakes and the new target is so large that reformulation alone is unlikely to be enough. People wishing to achieve less than 5% energy from free sugars would have to give up eating several categories of foods and drinks, and severely limit intakes of others. This may not be achievable for most, partly due to the limitations of food labelling. Dietitians need to consider whether sugars are so detrimental to health that a monumental shift in eating patterns is justified. Alternatively, they may consider that food-based dietary guidelines, which stress a holistic dietary view, are a more effective and achievable option.

References

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