

The Scientific Advisory Committee on Nutrition's recommendations on sugars

SACN recommends that the average intake, across the UK population, of free sugars should not exceed 5% of total dietary energy intake. This applies to all age groups from 2 years upwards.

The stats

- the recommended amount of free sugars has been halved from 10% of dietary energy to 5% or less
- Public Health England has calculated that this means:
 - no more than 19g/day of free sugars for children aged 4-6
 - no more than 24g/day for 7-10 year-olds
 - no more than 30g/day for children from age 11 and adults
- 13% (1 in 8) of adults already achieve this 5% dietary energy recommendation
- Average intakes of free sugars across the age groups range from 49-64g/day in females and 63-84g/day in males
- Highest intakes are in children aged 4-10 years (14.7% of dietary energy intake) and 11-18 year-olds (15.4% of dietary energy, on average)
- Sugars-sweetened drinks provide 30% of the free sugars intake of 11-18 year-olds, on average, and 16% in younger children and adults.

Context

The new sugars recommendation is part of a set of dietary recommendations from SACN that includes:

- an increase in dietary fibre intake to 30g/day (see fact sheet on fibre) and
- retention of the reference value for total carbohydrate; i.e. that we should continue to obtain about 50% of dietary energy from carbohydrates.

Current average intakes of free sugars are at least twice the new 5% recommendation (see Figure 1), and three times the 5% value in 11-18 year-olds. Main sources are drinks and cereal products sweetened with sugars, confectionery, table sugar and fruit juice (see Figures 2-4).

SACN's review of the evidence in relation to sugars has concluded that:

- prospective cohort studies indicate that higher consumption of sugars and sugars-containing foods and drinks is associated with a greater risk of tooth decay
- randomised controlled trials in adults indicate that increasing or decreasing total energy (calorie) intake from sugars leads to a corresponding increase or decrease in energy intake

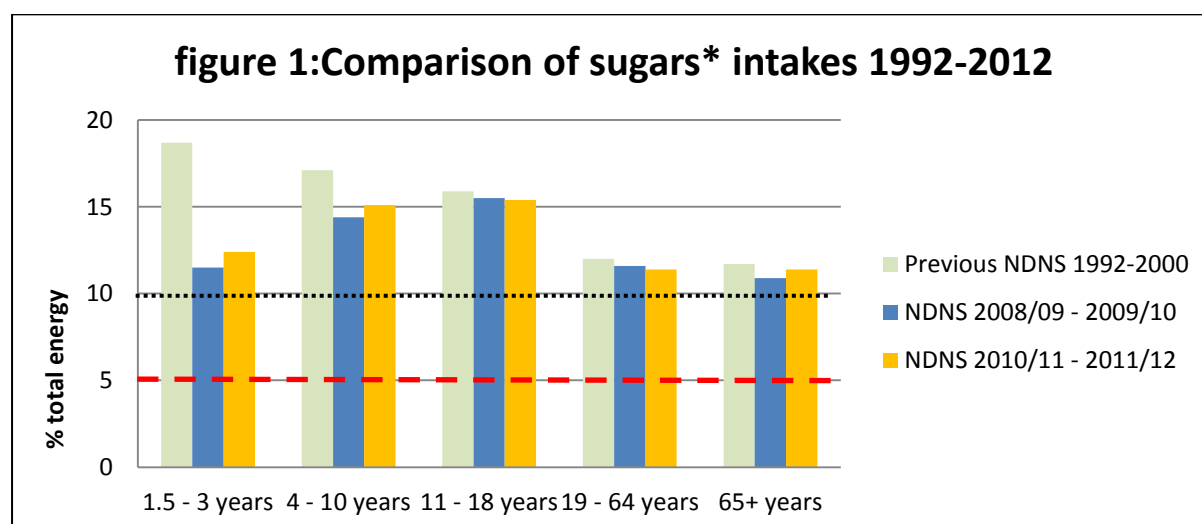
- in randomised controlled trials, consumption of sugars-sweetened drinks (compared to low calorie drinks) results in greater weight gain and increases in body mass index (weight for height) in children and adolescents
- there is no association between the incidence of type 2 diabetes and total or individual sugars intake. But prospective cohort studies associate greater consumption of sugars-sweetened drinks with increased risk of type 2 diabetes.

SACN's recommendations on free sugars

On the basis of these findings, SACN made the following recommendations in its report published on 17 July 2015:

- the average intake across the UK population of free sugars should not exceed 5% of total dietary energy intake for age groups from 2 years upwards
- the consumption of sugars-sweetened drinks should be minimised in children and adults
- the term 'free sugars' should be adopted in the UK to describe the types of sugars that need to be consumed in smaller amounts. This term replaces 'non-milk extrinsic sugars'.

No quantitative recommendations are made for children under the age of 2 years due to the absence of information. But from about 6 months of age, gradual diversification of the diet to provide increasing amounts of whole grains, pulses, fruits and vegetables is encouraged.



* Sugars intakes measured as non-milk extrinsic sugars; data from the National Diet and Nutrition Survey (NDNS) – surveys in the 1990s compared with the Rolling Programme 2008-2012; Source Bates et al. 2014. Red dashed line is the new recommendation. Dotted line is the previous (10% of total dietary energy) recommendation.

SACN states that the new recommendation for sugars is designed to minimise risks associated with high free sugars intakes and to result in improved management of energy intake, and expects the recommendation to help with obesity risk reduction and to improve dental health.

The recommended amount of free sugars has been halved. Most people have free sugars intakes above the 5% level. Dietary patterns will need to change if the sugars (and also the new fibre) recommendations are to be met.

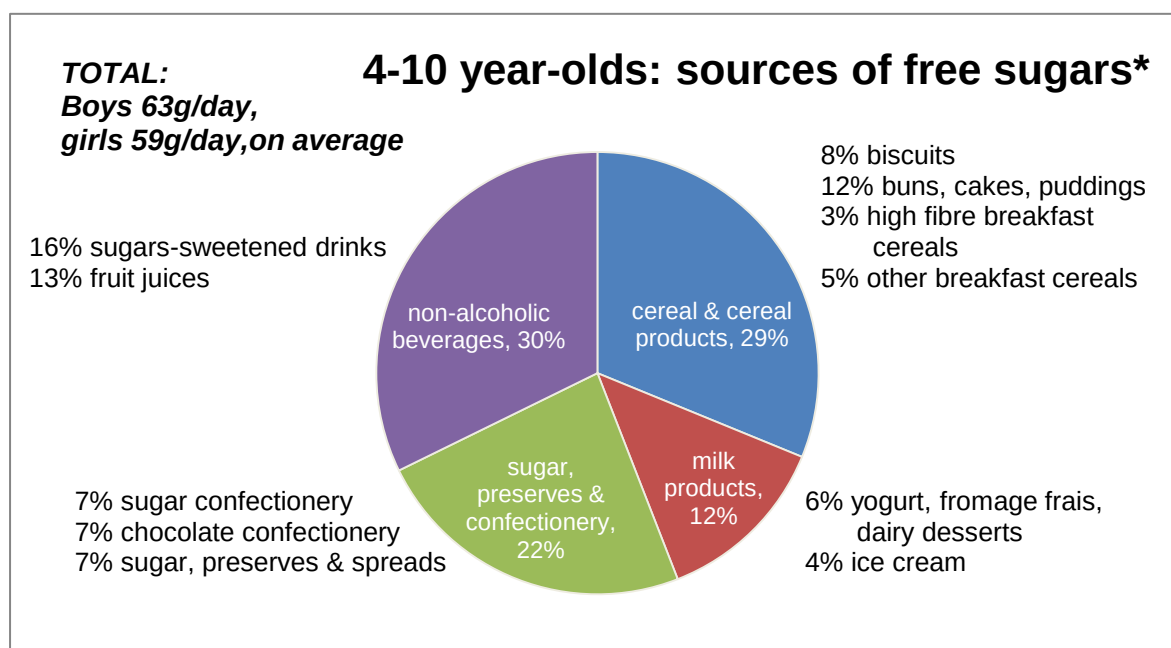
For those maintaining a healthy body weight, SACN advises that a reduction in free sugars is replaced by other carbohydrate sources (starches, fruit sugars and lactose in milk and milk products). For those who are overweight, the reduction in free sugars, if not replaced in full, could be part of a strategy to decrease energy intake.

SACN uses a new term to describe the types of sugars that need to be reduced in the diets of most of us if the new dietary recommendation is to be achieved – ‘free sugars’. This term has also recently been adopted by the World Health Organisation (WHO 2015). ‘Free sugars’ replaces the term non-milk extrinsic sugars (sometimes referred to as NMES), which has been in use in the UK for almost 25 years, although the details of the definition are very similar. The difference is that sugars provided by dried, stewed and canned fruit are not included in the free sugars definition.

‘Free sugars’ comprises all monosaccharides* and disaccharides* added to foods by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups and unsweetened fruit juices. Under this definition lactose (the sugar in milk) when naturally present in milk and milk products and the sugars contained within the cellular structure of foods (particularly fruits and vegetables) are excluded.

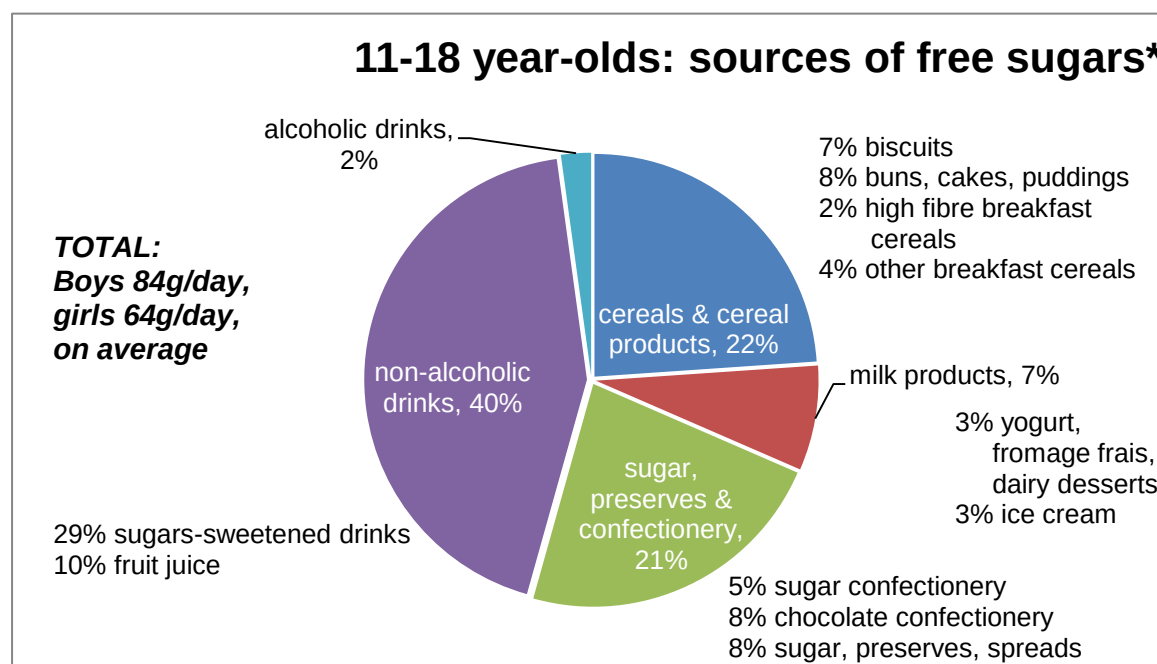
**Monosaccharides are single sugar units (glucose and fructose) and disaccharides are two single units joined together (sucrose).*

Figure 1



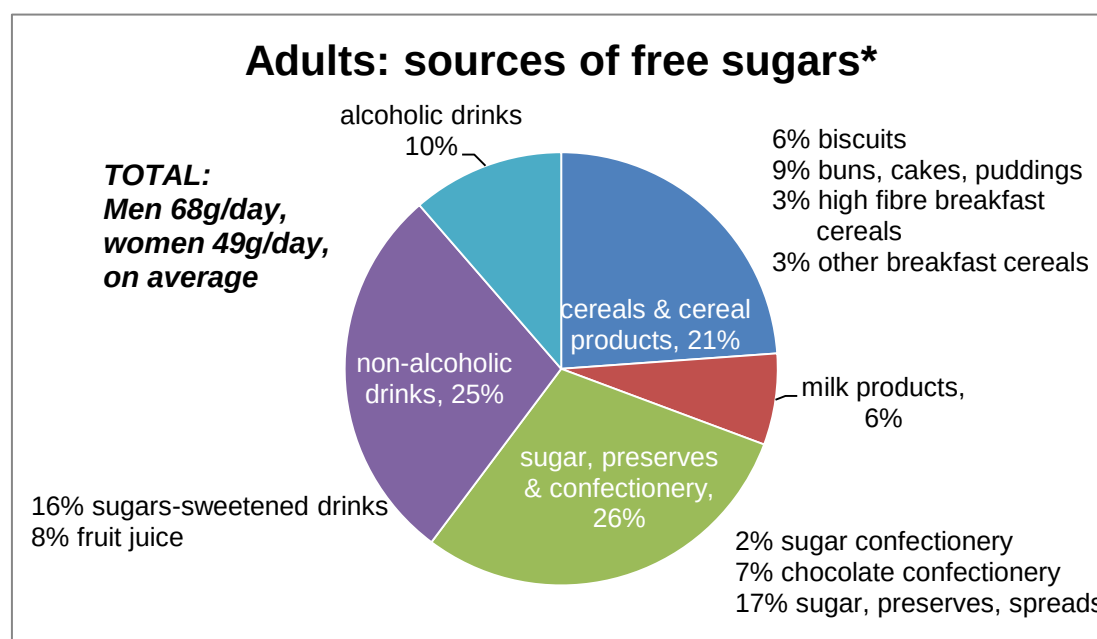
* Sugars intakes measured as non-milk extrinsic sugars; data from the National Diet and Nutrition Survey (NDNS) Rolling Programme 2008-2012. Source: Bates et al 2014.

Figure 2:



* Sugars intakes measured as non-milk extrinsic sugars; data from the National Diet and Nutrition Survey (NDNS) Rolling Programme 2008-2012. Source: Bates et al 2014.

Figure 3:



Sugars intakes measured as non-milk extrinsic sugars; data from the National Diet and Nutrition Survey (NDNS) Rolling Programme 2008-2012. Source: Bates et al 2014.

Table 1 provides a comparison of the total and free sugars contents of foods. This illustrates one of the challenges – nutrition labels include information on total sugars, by law, not free sugars. However, ingredient lists on foods can be helpful in this respect. To identify sources of free sugars, words to look for on food labels are cane sugar, honey, brown sugar, high fructose corn syrup, fruit juice concentrate, corn syrup, fructose, sucrose, glucose, crystalline sucrose, nectars.

Table 1 Comparison of the total and free sugars content of foods

	Portion size	Total sugars (per portion)	Free sugars (per portion)	Comment
Regular cola	330ml	36.0g	36.0g	All of the sugars are present as free sugars.
Calorie-free cola	330ml	Zero	Zero	No sugars present
Lemonade	330ml	27.4g	27.4g	All of the sugars are present as free sugars.
Calorie-free lemonade	330ml	Zero	Zero	No sugars present.
Semi-skimmed milk	200ml	9.4g	Zero	None of the sugars are free sugars; all of the sugar is lactose from milk, which is excluded from the definition of free sugars.
Flavoured milk	200ml	28.0g	16.2g	The sugars are a mix of added 'free sugars' and lactose (from milk). Flavoured milk is permitted within the School Food Standards if it does not contain more than 5% added sugars.
Plain yogurt (low fat)	125g	9.9g	Zero	None of the sugars are free sugars; all of the sugar is lactose from milk, which is excluded from the definition of free sugars.
Fruit yogurt	125g	15.9g	11.25g	The sugars present are a mix of free sugars, sugars from the fruit (not 'free') and lactose from the milk (also excluded from the free sugars definition). Levels of free sugars vary and can be low when non-caloric sweeteners are used, but typically are 8-10g/100g; 9g/100g has been used here.
Diet fruit yogurt (low fat, no added sugar)	125g	7.8g	Zero	None of the sugars are free sugars. The sugars present are from milk (lactose) and fruit, which are both excluded from the definition of fruit sugars.
Portion of fresh fruit salad	140g	19.6g	Zero	None of the sugars are free sugars. The sugars present are within the fruit structure (a mixture of fructose, glucose and sucrose).
Banana	100g	18.1g	Zero	None of the sugars are free sugars.
Orange	160g	13.6g	Zero	None of the sugars are free sugars.
Orange juice (150ml)	150ml	12.9g	12.9g	All the sugars are classed as free sugars, released from the fruit during juicing.
Honey (5g)	5g	3.8g	3.8g	All the sugars are classed as free sugars.

Source: McCance and Widdowson's The Composition of Foods, Seventh Summary Edition. PHE 2014

Public Health England has calculated recommended maximum free sugars intakes based on SACN's recommendations. Table 2 highlights the differences between these recommendations and current intakes in males and females.

Figures 5 and 6 show the percentage of teenagers and adults currently achieving 5% of energy from free sugars.

Table 2: A comparison of current intakes (g/day) with the new recommendations for free sugars

Age	Public Health England's recommended maximum free sugars intake, g per day (also see Table 1)	Current intakes of free sugars* in males, g/day	Current intakes of free sugars* in females, g/day
4-6 years	No more than 19g/day	63g at 4-10 years	58.5g at 4-10 years
7-10 years	No more than 24g/day		
From 11 years, including adults	No more than 30g/day	84g at 11-18 years 68.4g at 19-64 years 58.5g at 65+ years	63.9g at 11-18 years 49.2g at 19-64 years 46.2g at 65+ years

* expressed as non-milk extrinsic sugars; data from Bates et al 2014

Figure 5:

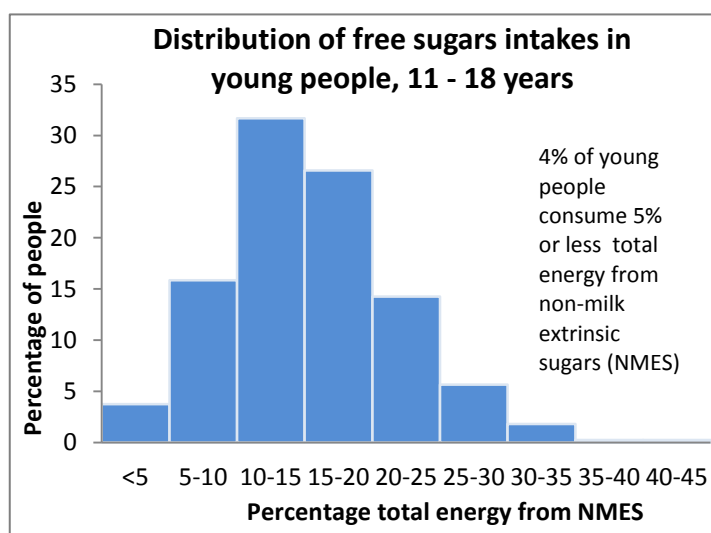
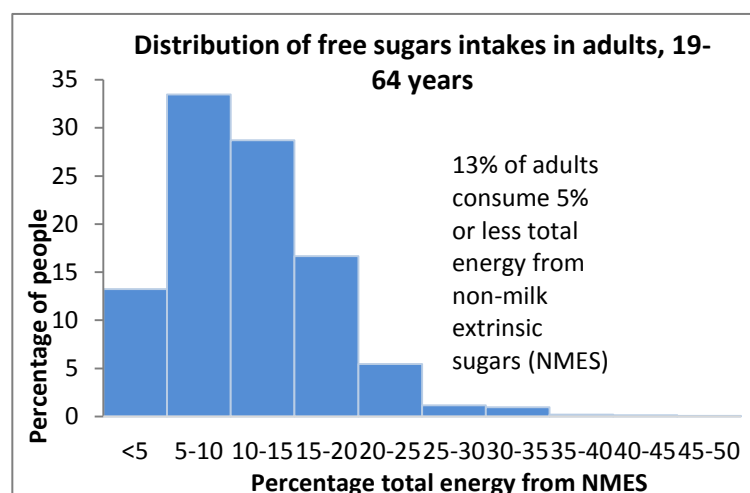


Figure 6:



The methodology used by SACN in its review

SACN's review was comprehensive and its report stretches to almost 400 pages. **Systematic reviews** of the literature were undertaken to identify the best quality evidence and SACN restricted its review to evidence from **randomised controlled trials** (which have the potential to demonstrate a causal relationship, e.g. between an aspect of diet and a risk factor for disease) and **prospective cohort studies** (which reveal associations, e.g. between an aspect of diet and a disease risk factor or endpoint) as these are considered to be the most robust study designs for diet and health research.

Strict inclusion and exclusion criteria for individual studies were applied to ensure the evidence considered was of sufficient quality to enable sound conclusions to be reached. For example, the duration of the study was a criterion. The evidence that emerged from a series of systematic reviews was assessed and graded by SACN. Details of the grading scheme can be found in Annex 2 of the SACN report.

The evaluation considered whether intakes of specific carbohydrates are a factor in the risk for cardiovascular disease (heart disease and stroke), obesity, type 2 diabetes and colorectal (bowel) cancers. The evidence for a relationship between carbohydrates and oral health was also considered.

SACN's recommendations are based on only those relationships where the evidence met the required standards. Where they existed, **dose-response relationships** between carbohydrate intakes and health outcomes were considered and used to inform the dietary recommendations.

16 July 2015