

Changes in children’s intakes and sources of free sugars since 1997

S.A. Gibson¹, L.E. Francis¹, K.J. Newens² and M.B.E. Livingstone³

¹*Sig-Nurture Ltd, Guildford, Surrey,*

²*Sugar Nutrition UK, London, UK and*

³*University of Ulster, UK*

Meeting the target of 5% energy from free sugars is highly challenging given that present intakes are three times this level in children⁽¹⁾. Understanding the trends in intake may help in designing more effective strategies for sugars reduction. Free sugars intakes and sources among children aged 4–18 y were compared between 1997 NDNS (n1688) and NDNS 2008–2012 (n1687) by analysing original dietary records obtained from the UK Data Service <https://www.ukdataservice.ac.uk/>. Non-milk extrinsic sugars (NMES) was used as proxy for free sugars. Means were compared using non-parametric (Mann Whitney) tests.

Mean intakes of free sugars (% energy) among 4–18y olds fell by 10% (1.7 percentage points) between 1997 and 2008–2012 (mean 16.8% vs. 15.1%) $P < 0.001$, with a larger fall of 15% among 4–10y olds (mean 17.4% vs. 14.7%, $P < 0.001$). Absolute intake fell from 73.2 g to 60.9 g among 4–10y and from 81.6 g to 74.6 g among 11–18y olds ($P < 0.001$). Many foods contributed to the reduction in NMES, but notably among 4–10y, there were reductions in confectionery (–6.1 g NMES) and sugar-sweetened soft drinks (–5.6 g), partly offset by a rise in fruit juice (+4.1 g). Among 11–18y olds there were significant decreases in sugar from confectionery (–5.8 g), table sugar and spreads (–2.5 g) and cakes (–2.0 g), and a small rise in fruit juice (+2.5 g), but no significant change in sugar from soft drinks (+1.4 g).

| NMES g/day from source | | 4–10 years | | | 11–18 years | | | Total 4–18 years | | |
|---------------------------|------|------------|---------|---------|-------------|---------|---------|------------------|---------|---------|
| | | 1997 | 2008–12 | P value | 1997 | 2008–12 | P value | 1997 | 2008–12 | P value |
| | N | 835 | 803 | | 853 | 884 | | 1688 | 1687 | |
| Soft drinks | Mean | 16.8 | 11.2 | <0.001 | 23.6 | 24.9 | 0.412 | 20.2 | 18.8 | <0.001 |
| Fruit juice | Mean | 4.7 | 8.8 | <0.001 | 5.3 | 7.8 | 0.002 | 5 | 8.2 | <0.001 |
| Chocolate confectionery | Mean | 7.8 | 4.7 | <0.001 | 10.3 | 6.4 | <0.001 | 9.1 | 5.6 | <0.001 |
| Sugar confectionery | Mean | 8.2 | 5.1 | <0.001 | 6.3 | 4.4 | <0.001 | 7.2 | 4.7 | <0.001 |
| Sugar and spreads | Mean | 5.8 | 4.6 | <0.001 | 8.6 | 6.1 | <0.001 | 7.2 | 5.4 | <0.001 |
| Cakes & pastries | Mean | 6 | 5.1 | 0.04 | 5.7 | 3.8 | <0.001 | 5.9 | 4.4 | <0.001 |
| Biscuits | Mean | 5.8 | 4.4 | <0.001 | 4.7 | 4.7 | 0.001 | 5.2 | 4.6 | <0.001 |
| Breakfast cereals | Mean | 5.8 | 4.0 | 0.002 | 5.3 | 3.8 | <0.001 | 5.5 | 3.9 | <0.001 |
| Puddings & ice cream | Mean | 4.4 | 3.8 | 0.005 | 3.4 | 2.6 | <0.001 | 3.9 | 3.1 | <0.001 |
| NMES from all food/ drink | Mean | 73.2 | 60.9 | <0.001 | 81.6 | 74.6 | 0.001 | 77.4 | 68.5 | <0.001 |
| | SE | 1 | 1.5 | | 1.4 | 2 | | 0.8 | 1.3 | |
| % Energy from NMES | Mean | 17.4 | 14.7 | <0.001 | 16.2 | 15.4 | 0.002 | 16.8 | 15.1 | <0.001 |
| | SE | 0.2 | 0.3 | | 0.2 | 0.3 | | 0.1 | 0.2 | |

Whilst some progress is being made, on the current trajectory the new sugar target looks unachievable. A combination of strategies is needed including smaller portion sizes and reduced frequency of sugary foods and drinks, and in particular replacing sugar-sweetened drinks with low/ no sugar alternatives.

This study was funded by Sugar Nutrition UK

1. Public Health England (2015) Sugar Reduction: The evidence for action. <https://www.gov.uk/government/publications/sugar-reduction-from-evidence-into-action> (accessed August 2016).