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Setting Targets to Reduce New Zealand Children's Sugar Intakes through Food Reformulation

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Introduction

A high intake of total sugars is associated with weight gain, poor oral health, and an increased risk of cardiovascular disease. Diets high in total sugar also adversely affect blood pressure and cholesterol, independent of effects on body weight. An international review found total sugars currently comprise up to one quarter (14–25%) of total energy (TE) consumed by populations. Because of their contribution to the overall energy density of diets, their association with tooth decay in children, and the 2015 World Health Organization (WHO) sugars intake guideline, **reducing total sugar intakes** has become a key focus of dietary interventions and policies.

Key Research Contribution:
Outlines the methods for development of targets that would reduce, by 20%, the total sugar content of packaged foods and beverages commonly consumed by New Zealand children, using either or both of:

- Reformulation (i.e. healthier recipe)
- Reductions in portion size

Altering the food environment is likely to be the most effective and equitable way to reduce a population's sugar intake. A number of countries are implementing structural policies to target foods high in sugars, including:

- Taxes on sugar-sweetened beverages (SSBs) in several US states, Mexico, France, the UK, and Chile
- Warning labels on packaged foods with added sugars and high total sugar in Chile, Uruguay, and Mexico
- Sugar reduction targets for packaged foods in the UK

The UK sugar reduction targets are a component of the government-initiated national sugar reduction campaign led by Public Health England. Launched in 2016, and modelled on the UK's world-leading dietary salt reduction programme, the aim is to reduce the amount of total sugar in foods commonly consumed by UK children by 20% by 2020. Manufacturers of products in 10 broad, targeted food groups can achieve this goal by:

1. lowering sugar content per 100g of product
2. reducing the portion size of single-serving products, and/or
3. shifting consumer purchasing habits toward lower/no sugar alternatives

Although voluntary, this approach to reducing population sugar consumption is important because it reaches all population groups and may be more politically palatable than SSB taxes for example, particularly if focused on children's diets.

Study

Despite having the third highest prevalence of childhood obesity in the OECD, high prevalence of early childhood tooth decay, and striking inequalities in obesity and health outcomes between children of

different ethnic and income groups, the current New Zealand childhood obesity plan includes only **one** structural policy (nutrition labelling) aimed at making the NZ food environment healthier.

New Zealand sugar content and single-serve pack size targets were developed using a 6-step process informed by the UK sugar and salt reduction programmes. Food groups contributing more than 2% to children's total sugar intake were identified using national dietary survey data. Amounts consumed, sugar content, and pack size information were obtained from nationally representative household panel data linked with a packaged food composition database.

Methods

To achieve country-specific sugar content and pack size reduction targets:

1. Identify the major food groups contributing to children's total sugar intake
2. Identify appropriate food consumption and nutrient composition data sources and align food groups
3. Exclude products high in intrinsic sugars
4. Merge data sets and calculate mean weighted and unweighted sugar content and pack size
5. Calculate draft targets
6. Determine feasibility of targets and align with relevant existing targets.

Mechanisms of sugar reduction most relevant to each food group

Food group	Reformulation	Reduction in pack size
Fruit spreads	√	
Sweet spreads and sauces	√	
Sugar confectionary		√
Beverage powders	√	
Chocolate confectionary		√
Cakes		√
Biscuits	√	√
Cereal bars	√	√
Ice cream	√	√
Breakfast cereals - ready to eat	√	
Cordials	√	
Fruit bread	√	
Savoury spreads and sauces	√	
Energy drinks	√	√
Soft drinks	√	√
Yoghurt and yoghurt drinks	√	√
Fruit juices and fruit drinks	√	√
Flavoured dairy milk	√	√
Electrolyte drinks	√	√
Flavoured other milk	√	√
Breakfast cereals – hot	√	
Flavoured waters	√	√

Results

- 22 food groups contribute 2% or more to New Zealand children's total sugar intakes
- Food groups contributing most to New Zealand household sugar purchases are **fruit spreads, soft drinks, energy drinks, and ice cream**
- The NZ food group that would require the largest average reduction in sugar content to meet the targets was **beverage powders** (-49%), and the largest reduction in pack size required was for **electrolyte (sports) drinks** (-27%)
- The food group with the largest proportion of products currently compliant with the recommended maximum sugar target was **cereal bars (50% products)**
- The food group with the largest proportion of products meeting the single-serving pack size target was **fruit juices and fruit drinks (62%)**, while **chocolate** confectionary had the least (32%)
- The estimated reduction in annual household sugar purchases if sugar content targets were met is 26%, and if portion size targets were met the estimated reduction is 6%; an even larger drop in sugar intakes could be expected if both the sugar content and pack size targets are met.

Key Policy Implications:

- Targets to reduce population sugar intakes should be country-specific and take account of cultural preferences and typical dietary practices
- Programmes to reduce sugar content and pack size in packaged foods should also consider other nutrients (to ensure sugar reduction does not result in higher food contents of other nutrients of concern such as salt)
- Regulation should be considered if voluntary adoption of targets by food companies is not successful
- Reformulation programmes should be just one component of effective policy packages to improve population nutrition and reduce obesity; strategies should also encourage and support shifts in dietary habits toward more fresh, unprocessed foods

To find out more about this research, please visit: https://doi-org.ezproxy.auckland.ac.nz/10.1093/ajcn/nqz313
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