Advertising

Common Nutrition Criteria White Paper

Final

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Executive Summary

The overweight prevalence among children in Singapore has increased over the past few decades (Foo et al, 2013). Prevention of childhood obesity is important, because overweight and obese children are likely to stay obese into adulthood (WHO, 2004). Obesity increases the risks for diabetes, hypertension and heart disease.

Studies have shown that advertising influences children's food preferences, purchase requests and consumption patterns. Dietary habits of children are often formed well before the age of five and are very hard to change once children turn 11 (Skinner et al, 2002). The World Health Organisation (WHO) has also called for restrictions on the advertising of food and beverages that are high in fat, sugar or salt to children. In line with the WHO's recommendations, the Guidelines aim to promote healthier eating habits amongst children and help protect their health. Guidelines restricting advertising of food and beverages high in fat, sugar and salt to children will take effect from January 2015 in Singapore.

The industry embarked on a project to develop a set of common nutrient criteria covering both packaged food and food services to underpin the Advertising Guidelines. The common nutrient criteria will act as a framework that determines which food and beverage products can be advertised to children.

The common nutrition criteria are designed for the exclusive purpose of defining better-for-you options in the context of food and beverage advertising to children twelve years old and under and specifically for the product categories covered. This reflects international guidelines underlining the necessity to develop nutrient criteria that are tailored for a specific purpose.

The common nutrition criteria were developed on the basis of available international guidance and underpinned by some key principles agreed at the outset, including: a firm scientific basis; comprehensiveness; ability to make a difference; appropriateness in the Singaporean context; suitability for validation; clearness and transparency to foster ease of implementation and monitoring.

Different approaches to developing and applying nutrition criteria have been adopted across the globe. One approach is not necessarily better than another, but each system has specific advantages and disadvantages and all have inherent limitations. On the basis of a comprehensive discussion informed by the available evidence and guidance and underpinned by the above principles, the industry opted for a category-based approach, based on thresholds for key nutrients.

A category-based approach was selected because it is better able than a universal, across-the-board approach to reflect the role that different types of foods and beverages play in the average diet. It is also better at discriminating between food products within categories and therefore appropriate to further the core aim of the Advertising Guidelines, i.e. to limit the types of food and beverage products that are advertised to children, while incentivising competition for the development of better-for-you options, through innovation and reformulation.

A threshold-based system was preferred to a scoring system since a key driver of common criteria was to enhance the consistency of existing company-specific criteria, most of which were based on threshold systems. Another factor in favour of a threshold-based system was increased transparency, a threshold system being more transparent and easier to communicate than a scoring system, whereby nutritional scores are worked out on the basis of an algorithm.

The common nutrition criteria are not intended as a universally applicable system. They cover ten defined categories of products. The choice of categories was motivated by the need to balance the need for simplicity and consistent treatment of similar products on the one hand and, on the other, the need to avoid categories so broad that only lax nutrition criteria would accommodate all types of products represented in a category. In order to ensure both robustness and fairness, it was necessary to create sub-categories within most of the ten categories.

No nutrition criteria were developed for certain categories, such as chocolate, confectionery and soft drinks. This reflects existing commitments by several companies active in these categories not to advertise any of these products to children.

The common nutrition criteria are based on a set of "nutrients to limit" and "components to encourage" (nutrients and food groups). A system taking into account both is more in line with the core objective of the Advertising Guidelines– to foster innovation, reformulation and competition for a shift towards advertising of better-for-you products – than a system based solely on "nutrients to limit".

The "nutrients to limit" - sodium, saturated fat and total sugars – were chosen on the basis of widely available evidence that they are of public health concern because population average intakes are in excess of those recommended or desirable for health. Importantly, and in contrast to a scoring system, in the Advertising Guidelines common nutrition criteria "components to encourage" do not counterbalance "nutrients to limit": to be eligible for advertising to children 12 years old and under, a product will need to contain the required quantity of "components to encourage", *in addition to* being below the thresholds for "nutrients to limit" and under the calorie cap set for each category. A specific rationale is outlined for the choice of energy caps and nutrient values in each category.

Table 1: Advertising Common Nutrition Criteria Overview

Category 1: Vegetable and animal based oils, fats and fat containing spreads & emulsion-based sauces					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**Energy values are per portion and nutrient values per 100g, except when specified otherwise*				
Sub-category A: Vegetable & animal based oils, fats & fat containing spreads: all animal and vegetable based fats & oils used as spreads on bread and/or food preparation.[1]					
A1: Oils and fats (all types except tropical ambient stable margarine), chilled-fat spreads, butter mélanges, solid or liquid oil/fat products for roasting and frying	≤ 85	≤ 500	≤ 33% total fat is SAFA (in addition max TFA 1% total fat)	≤5	≥ 25% of total fat is PUFA
A2: Tropical ambient stable margarine and fat spreads	≤ 85	≤ 720	≤ 38% total fat is SAFA (in addition max FTA 1% total fat)	≤ 5	≥ 10% of total fat is PUFA
Sub-category B: Emulsion-based sauces: sauces that constitute only a minor component of the meal to which an emulsifying agent is added OR have a fat content ≥ 10% weight/weight.					
Mayonnaise, salad dressings, marinades, vinaigrettes	≤ 85	≤ 750	≤ 33% total fat is SAFA (including max TFA 0.5% total fat	≤ 15	≥ 25% of total fat is PUFA

[1] Butters as defined in Singapore Food Regulation Part IV, are excluded from this category as they are included in the exclusion list.

Category 2: Fruits, vegetables and seeds,[2] except oil Vegetables include legumes and potatoes. Seeds include seeds, kernels, nuts. Nuts include peanuts and tree nuts.					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**Energy values are per portion and nutrient values per 100g, except when specified otherwise*				
Sub-category A: Products of fruits and vegetables except oils & potatoes (≥ 50g fruit and/or veg per 100g of finished product) that constitute a substantial component of the meal.					
Canned vegetables, baked beans, canned fruit, fruit salad, frozen vegetables ……	≤ 170	≤ 300	≤ 1.5	≤ 15	Min. ½ portion fruit and/or veg. Nutrients delivered through ingredients (fruit and/or veg).
Subcategory B: Potato & potato products, except dehydrated potato products: all potato based dishes (≥ 50g potato per 100g of finished products) that constitute a substantial component of the meal.					
Boiled, baked, fried, roasted and frozen potatoes and other potato preparations	≤170	≤ 300	≤ 1.5	≤ 5	Nutrients delivered through main ingredient (potato)
Subcategory C: Potato chips and potato based snacks, incl. dough-based products					
Potato chips/crisps and Extruded & pelleted snacks, stackable chips	≤170	≤600	≤10% kcal from SAFA	≤ 10	Fibre : ≥3g/100g or ≥3g/100ml or 1.5g/100 kcal; and/or > 40% total fat shall be poly unsaturated fatty acids, and < 20% total fat shall be saturated fatty acids and > 25% kcal shall be derived from fat ; and/or > 40% total fat shall be mono unsaturated fatty acids, and < 20% total fat shall be saturated fatty acids and > 25% kcal shall be derived from fat

[2] Exemptions: 100% fruit and vegetables and their products, including 100% fruit and vegetable juices, as well as 100% nuts and seeds and mixes thereof (with no added salt, sugar or fat). These products, presented fresh, frozen, dried, or under any other form may be advertised to children without restrictions.

Examples	Energy (kcal/portion*)	Sodium (mg/100g or 100ml*)	Saturated fats (g/100g or 100ml*)	Total sugars (g/100g or 100ml*)	Components to encourage
	**Energy values are per portion and nutrient values per 100g, except when specified otherwise*				
Sub-category D: Seeds and nuts					
Salted or flavoured nuts, mixed nuts, nut-fruit mixes, peanut butter	≤200	≤ 600	≤10	≤ 15	Nutrients delivered through ingredients (nuts and seeds)
Sub-category E: Fruit/Vegetable based meal sauces: all fruit/vegetable based sauces (≥ 50g fruit and/or vegetable per 100g of finished products) that constitute a substantial component of the meal					
Tomato sauce, pasta sauce…	≤ 100	≤ 500	≤ 1.5	≤ 10	Nutrients delivered through ingredients (fruits and/or vegetables)
Sub-category F: Fruit/Vegetable based condiments: all fruit/vegetable based condiments (≥ 50g fruit and/or vegetable per 100g of finished products) that constitute only a minor component of the meal.					
Tomato ketchup, Asian sauces, chutney…	≤ 85	≤ 750	≤ 1.5	≤ 25	Nutrients delivered through ingredients (fruit and/or vegetables)
Category 3: Meat based products: all kinds of processed meat/poultry, and meat products, consisting of minimally 50g of meat per 100g finished product					
Meatballs, meat nuggets, satay sticks, canned meat products, preserved and cured meat, chicken fillet, sausage	≤ 170	≤ 450	≤ 6	≤ 5	≥ 5g/100g of protein
Category 4: Fishery products: all kinds of processed fish, crustaceans and shellfish, consisting of min. 50g of fish, crustaceans, and/or molluscs per 100g of finished product					
Cod, fried fillet of haddock, fish fingers, mussels, tinned tuna	≤ 170 OR > 170 IF ≥ 25% total fat is PUFA	≤ 450	≤ 33% total fat is SAFA (including max. 0.5% TFA)	≤5	≥ 5g/100g of protein

Category 5: Dairy products					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**Energy values are per portion and nutrient values per 100g, except when specified otherwise*				
Sub-category A: Dairy Products other than cheeses: Must contain minimum 50% dairy					
Milks & milk substitutes; yoghurts; sweet fresh/soft cheese; curd & quark; fermented milks; dairy desserts	≤170	≤ 300	≤1.6	≤ 11	Protein: ≥5g/100g or ≥ 2.5g /100ml; and/or at least source of Calcium or Vit. D (111mg/100g or 67mg/100ml of Calcium or 0.35µg/100g or 0.21µg/100ml of Vit D)
Sub-category B: Cheese and savoury dairy based products: Must contain minimum 50% dairy					
Hard, semi-hard cheeses	≤ 85	< 600	≤ 15	< 5	Protein: ≥5g/100g or ≥ 2.5g /100ml; and/or at least source of Calcium or Vit. D (111mg/100g or 67mg/100ml of Calcium or 0.35µg/100g or 0.21µg/100ml of Vit D)
Cream cheese, quark	≤170	< 600	≤ 10	≤ 8	
Processed cheese slices	≤ 170	≤ 1250	≤ 10	≤ 8	

Category 6: Cereal based products					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**Energy values are per portion and nutrient values per 100g, except when specified otherwise*				
Sub-category A: <u>Sweet</u> biscuits, bakery and other cereal based products: cereal must be listed as the main ingredient on the ingredient declaration.					
All kinds of biscuits and cakes, cereal bars, flapjacks…	≤ 170	< 450	≤10 (including max. 0.5% TFA)	≤30	Fibre (≥3 g/100g) and/or whole grain (15% total ingredients) and/or 20%E from UFA and ≥70% UFA/total fat and/or at least source of calcium (*>111mg/100g)*
Sub-category B: <u>Savoury</u> crackers and other cereal based products, including dough-based products: cereal must be listed as the main ingredient on the ingredient declaration.					
Savoury crackers, extruded, pelleted & popcorn-based snacks, popcorn, pretzel products	≤170	≤ 600	≤10	≤10	Fibre : ≥3 g/100g; and/or ≥40% UFA/total fat
Sub-category C: Breakfast Cereals including porridge					
Ready to eat breakfast cereals such as cornflakes, puffed rice, porridge	≤200	≤400	≤5	≤35	Fibre (≥3g/100g) and/or wholegrain (15% whole grain per total ingredients) And/or source of Calcium (>222mg/100g)
Sub-category D: Cereal and cereal products except breakfast cereals, biscuits, crackers and bakery products: cereal must be listed as the main ingredient.					
Bread, rusks, rice, noodles, pasta, polenta	≤300	≤450	≤5	≤5	Fibre (≥3 g/100 g) and/or wholegrain (15% of total ingredients)

Category 7: Soups, composite dishes, main course and filled sandwiches					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**Energy values are per portion and nutrient values per 100g, except when specified otherwise*				
Sub-category A: Soups: all kinds of soups and broths containing min 1 of the following: 30g fruit, vegetables, cereals, meat, fish, milk or any combination of those (calculated as fresh equivalent) per portion. (Thresholds apply to food as reconstituted, ready for consumption, following manufacturer's instructions).					
Tinned tomato soup, instant vegetable soup, soup in stand-up pouches	≤ 170	< 300	≤ 1.5	≤ 7.5	Nutrients delivered through ingredients (fruits and/or vegetables, cereals, meat, fish, milk)
Sub-category B: Composite dishes, main dishes, and filled sandwiches: all kinds of dishes & sandwiches containing min 2 of the following: 30g fruit, veg, cereals, meat, fish, milk or any combination of those (calculated as fresh equivalent) per portion. (Thresholds apply to food as reconstituted, ready for consumption, following manufacturer's instructions).					
Recipe mixes such as pasta salad with vegetables, stir-fry noodles with sauce, pizza, filled pancakes …	≤ 400	≤ 400	≤ 5	≤ 7.5	Nutrients delivered through ingredients (fruits and/or vegetables, cereals, meat, fish, milk)
Category 8: Meals: The combination of items served as a meal (main dish, side item (s) and a beverage) for breakfast, lunch or dinner.					
Meals	≤510/meal [a)] ≤340/meal [b)]	≤660/meal	≤10% kcal from saturated fat	≤20/meal (minus natural occurring sugar [c)] from 1 serving [d)] J/F/V/M/D)	Each meal must contain min. of: 1 serving [d)] fruit/ vegetables or/and 1 serving[d)] 100% juice or/and 1 serving qualified [d,e)] dairy product or milk or/and 1 serving [d)]of whole grain[f)]
Category 9: Edible ices: all kinds of edible ices (water ices and ice cream)					
Ice cream, water ice, ice lollies, sherbet ice	≤ 110	≤ 120	≤ 5 (including max 0.5% TFA)	≤ 20	-

Category 10: Beverages					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**Energy values are per portion and nutrient values per 100g, except when specified otherwise*				
Sub-category A: Soy based beverages					
Soya bean milk, flavoured soya bean milk	≤170	≤ 40	≤ 0.75	≤7	At least source of Calcium or Vit. D (67mg/100ml of Calcium or 0.21µg/100ml of Vit D)
Sub-category B: Cereal beverages: cereal must be listed as the main ingredient.					
Cereal beverages include instant etc…	≤170	≤ 80	≤1.5	≤8	Fibre (>3 g/100ml) and/or whole grain (15% of total ingredients)
Sub-category C: Malt based beverages - Definition: beverages with a relevant amount of malt extract in the composition					
Malt based beverages in powder format or ready-to-drink	≤ 170	≤ 80	≤1.5	≤ 8	-
Sub-category D: Fruit juice based beverages - Definition: beverages with a relevant amount of 50% fruit juice with no added sugar					
Diluted fruit juices with no added sugar	≤ 170	≤ 80	0	No added sugar	Min. ½ serving fruit and/or veg. Nutrients delivered through ingredients (fruit and/or veg)

Exclusions (no nutrition criteria; that is products that are not advertised to children 12 yrs old and under)
• Sugar and sugar-based products, which include: Chocolate or chocolate products; Jam or marmalade; Sugar, honey or syrup; Non-chocolate confectionary or other sugar products • Carbonated and non-carbonated soft drinks[3] including diet drinks • Butters as defined in Singapore Food Regulation Part IV • Sugar-free gum and sugar-free mints • Infant formula governed by the Sale of Infant Food Ethics Committee Singapore (SIFECS) Code of Ethics
Exemptions that is products outside the scope of Advertising Guidelines restrictions
• 100% fruit and vegetables and their products, including 100% fruit and vegetable juices, as well as 100% nuts and seeds and mixes thereof (with no added salt, sugar or fat). These products, presented fresh, frozen, dried, or under any other form may be advertised to children without restrictions. • Bottled water • Low-energy drinks defined as energy value ≤ 40kcal/serving, sodium ≤ 15mg/100mg and fat 0g/100mg. • Follow-on formula and growing up milks • Foods for infants and young children as indicated in relevant Codex Alimentarius standards or national legislation

Notes:

[a] For lunch/dinner (30% energy)

[b] For breakfast (20% energy)

[c] If sugar content is higher than 20g for a meal and contains more than 1 J/F/V/M/D.

[d] Serving are:

- Fruits (F)/Vegetables (V): 60-80g
- 100% juice (J): 250ml
- Dairy (D): e.g. 30g cheese/100-150g yoghurt
- Milk (M): 150-250ml

[e] Meet individual category requirements

[f] Product qualified for a reasonable source of fibre which contains ≥ 8g whole grain

[3] The rationale for this exclusion is that currently some companies committed in 2008 not to market any soft drinks directly to children younger than 12 years old (see ICBA commitments: http://www.icba-net.org/files/resources/icba-marketing-to-children-guidelines.pdf). Bottled water and low-energy drinks defined as energy value ≤ 40kcal/serving, sodium ≤ 15mg/100mg and fat 0g/100mg are exempted from the Common Nutrition Criteria restrictions. Diet soda are excluded from this exemption.

Section I: Background, approach and rationale

Introduction

Background

To date there is no one single global set of nutritional guidelines to evaluate products on the basis of their nutrient content. There are however international and national recommendations for total diets (e.g. WHO 2003, Eurodiet 2001, Standing Nordic Committee on Food 2004). Such dietary guidelines usually include recommendations on daily caloric/nutritional intake; however, these are not specific to individual foods. Alternatively some countries have developed nutrient-based guidelines to communicate healthy dietary choices in terms of food products (e.g. HPB Healthier Choice Symbol Nutrient Guidelines 2013, Swedish Keyhole system 2009). Existing guidelines are also rarely adapted to children's dietary intakes.

Several companies have developed their own nutrition criteria for the purpose of distinguishing better-for-you options for children 12 years old and under. Such criteria have been developed on the basis of the most widely accepted national and international guidelines that exist (e.g. WHO, FAO, USDA, IOM, EURODIET). Companies that use nutrition guidelines to determine what they may choose to advertise to children have developed them individually, reflecting the diversity of their product portfolios. Some include products from a number of categories; others include only one category. Some companies have taken the decision not to advertise any of their products to children 12 years old and under, not on the basis of nutritional considerations, but because they direct their advertising primarily to the adults who make the household purchasing decisions and to young people older than 12 years.

Development of common criteria

The common nutrition criteria developed by the food industry are designed for the exclusive purpose of defining better-for-you options in the context of food and beverage product advertising to children 12 years old and under and specifically for the product categories covered. This reflects international guidelines (e.g. WHO unpublished; EFSA 2008) underlining the necessity to develop nutrient criteria that are tailored for a specific purpose.

Development process

The Nutrition Working Group was established following discussions in the course of 2013 with the Ministry of Health (MOH), the Health Promotion Board (HPB) and together with the Advertising Standards Authority of Singapore (ASAS).

The Nutrition Working Group, established in late 2013, drew on companies' internal expertise, by gathering senior nutritionists from several food companies. The Nutrition Working Group agreed on the terms of reference aimed at developing a consensual approach to Common Nutrition Criteria.

In a first phase, the Nutrition Working Group discussed how it would approach establishing a suitable process for developing common nutrition criteria. In this respect it relied to a significant extent on the draft WHO Guidance on the establishment of nutrient profiles (WHO unpublished) and on the work undertaken by the EU Pledge.

Second, the Nutrition Working Group reviewed the available evidence and existing standards that could provide a useful benchmark (See Annex IV, Reference documents).

Third, the Nutrition Working Group discussed and agreed on an overall conceptual approach that it deemed suitable for the purpose in hand, having weighed up the benefits and drawbacks of different approaches.

Fourth, the Nutrition Working Group discussed and agreed on the core parameters (scope, food categories, reference values, thresholds vs. scoring).

Fifth, the Nutrition Working Group set about agreeing specific values and, in the process, refined the key parameters where needed.

Finally, the resulting draft common nutrition criteria were subjected to a preliminary validation process, involving benchmarking against indicator foods and against companies' product portfolios and the database of packaged food and beverage products available in the Singapore supermarkets.

Overall approach

The Nutrition Working Group took on board the key points of the draft WHO Guidance on the establishment of nutrient profiles (WHO, unpublished 2011), namely the need to take into account:

- Dietary recommendations, public health considerations and generally accepted scientific evidence on the relationship between diet, nutrition and health;
- A balance between complexity and ease of understanding;
- Cultural sensitivity and knowledge of local food habits;
- A realistic use of the model in the context for which it is being developed.

Based on this guidance, the Nutrition Working Group developed some key principles to underpin its work, namely that the criteria would be:

- **Scientifically grounded:** i.e. backed up by an articulated and up-to-date science-based analysis of state of the art evidence wherever possible.
- **Comprehensive:** i.e. applicable to all products in defined categories (see table on Nutrition criteria overview), unless exemptions are justified (a) scientifically, (b) by the fact that such categories/products are not currently marketed to children 12 years old and under at all.
- **Meaningful:** i.e. more than the minimum common denominator, the objective being to effect meaningful change compared to the current benchmark and to encourage product innovation and reformulation.
- **Robust:** i.e. defensible vis-à-vis other privately developed and government standards.
- **Acceptable:** i.e. the overall approach can to be supported by all members.

- **Appropriate:** i.e. suitable for the Singaporean context and compatible with standards developed elsewhere.
- **Credible:** i.e. likely to be acknowledged positively by institutional stakeholders and independent experts.
- **Validated:** i.e. amenable to a validation process ensuring quality and legitimacy (specifics to be determined at a later stage).
- **Communicable:** i.e. with a clear rationale and relatively straight-forward to communicate externally to lay audiences.

Different approaches to developing and applying nutrition criteria have been adopted across the globe. One approach is not necessarily better than another on the basis of the above criteria. However, each system has specific advantages and disadvantages and, as noted above, all have inherent limitations (WHO, unpublished 2011 and EFSA, 2008).

On the basis of a comprehensive discussion informed by the available evidence and guidance[4] and underpinned by the above principles, the Nutrition Working Group decided to favour a category-based approach, based on thresholds for key nutrients, on the basis of the following main considerations:

Category based approach

- A category-based approach is most relevant when the intention of the intervention is to help shift consumption to healthier foods within a category, and also more categories may be more effective in encouraging product reformulation. The "across the board" approach is most helpful in supporting a change between categories (WHO, unpublished 2011).
- A category-based approach therefore works better to discriminate between food products within categories. It is therefore better suited than a universal system to further the core aim of the Advertising Guidelines, namely to limit the types of food and beverage products that are advertised to children, while incentivising competition for the development of better-for-you options, through innovation and reformulation.
- The Healthier Choice Symbol Nutrient Guidelines (2013) are also based on a category approach.

Threshold-based approach

- As recommended by the European Food Safety Authority (EFSA), the choice between threshold-based and scoring models should be guided by pragmatic considerations related to the specific needs of the system (EFSA, 2008).
- WHO states that the main advantage of a simple threshold model is that it is relatively easily understood (WHO, unpublished 2011).

[4] See Annex IV for a list of key reference documents used.

- On this basis, the Nutrition Working Group considered that a threshold-based system would be more appropriate, since:
    - A key driver of establishing common nutrition criteria was to enhance the consistency of existing company-specific criteria, most of which were based on threshold systems;
    - Another key driver was increased transparency, and a threshold system is more transparent and easier to communicate to stakeholders and to the consumer than a scoring system, whereby nutritional scores are worked out on the basis of an algorithm.

Scope and product categories

In defining product categories, the Nutrition Working Group was guided by the following principles:

- The common nutrition criteria are not intended as a universally applicable system. They should cover defined categories of foods.
- Those categories related to products not advertised to children under companies' corporate commitments should be excluded.
- The number of categories should be limited as much as possible with a view to ensuring consistent treatment of similar products, as well as maintaining as much simplicity as possible.
- At the same time, the number of categories should not be limited to an extent where categories could be so broad as to require less stringent values in order to accommodate all types of products represented in the category.

On this basis and at this stage, the following ten categories were developed and agreed:

1. **Vegetable oils, butter and spreadable fats & emulsion-based sauces (e.g. mayonnaise)**
2. **Fruits, vegetables[5] and seeds[6] and their products except oil**
3. **Meat based products**
4. **Fishery products**
5. **Dairy products**
6. **Cereal based products**
7. **Soups, composite dishes, main courses and filled sandwiches**
8. **Meals**
9. **Edible ices**
10. **Beverages**

It became clear that in order to ensure both robustness and fairness, it would be necessary to create sub-categories within most of the above categories. These are detailed in Section II below.

[5] Vegetables include legumes as well as potatoes.
[6] Seeds include seeds, kernels and nuts. Nuts include peanuts and tree nuts.

In order to ensure that products would fit appropriately into one of the above categories, each category was defined on the basis of minimum content of the food group in question (e.g. min. 50g meat/100g). In a couple of cases, the definition was based on "main ingredient" considerations instead. This is to account for the fact that in some categories it is common to have products that contain significant percentages of more than one food group without reaching a minimum threshold for either category (e.g. some cereal products). In order to fit into the most appropriate category, the "main ingredient" criterion is more suitable in these cases.

No nutrition criteria were developed for the following categories that are not advertised to children 12 years old and under according to companies' corporate commitments:

- Sugar and sugar-based products, which include:
  - Chocolate or chocolate products
  - Jam or marmalade
  - Non-chocolate confectionery or other sugar products
  - Sugar, honey or syrup
- Soft drinks[7]
- Butters
- Sugar-free gum and sugar-free mints
- Carbonated and non-carbonated soft drinks, including diet drinks

This reflects existing commitments by several companies active in these categories.

Reference units

The Nutrition Working Group based its selection of reference units on pragmatic considerations related to the needs of the particular scheme in question.

The objective of the present scheme is to differentiate between products within categories – products which are invariably pre-packed and promoted and sold in specific portion sizes or with serving size instructions. On this basis, it was agreed that the reference unit for the first key discriminating criterion, i.e. energy, should be "per portion"[8] [9]. This would ensure that the absolute energy value of a product would need to be below a specific cap to be eligible for advertising to children 12 years old and under.

[7] The rationale for this exclusion is that currently some companies committed in 2008 not to market any soft drinks directly to children younger than 12 years old (see ICBA commitments: http://www.icba-net.org/files/resources/icba-marketing-to-children-guidelines.pdf). Bottled water and low-energy drinks defined as energy value ≤ 40kcal/serving, sodium ≤ 15mg/100mg and fat 0g/100mg are exempted from the Common Nutrition Criteria restrictions. Diet soda are excluded from this exemption.

[8] Given that standard reference portion sizes do not exist in Singapore, it was decided to refer to the portion indicated by the manufacturer on pack. However, to ensure consistency, common principles on the setting of portion sizes were agreed. See Annex II, Portion sizes.

[9] Some exceptions to this rule were however needed, e.g. in the case of quick service restaurant meals, where the reference value is "per meal", as these are marketed as such, i.e. as a combination of main dish, side dish, dessert and drink.

With regard to key nutrients, it was agreed that the reference unit would be "per 100g/ml"[10]. This is because:

- Standardised reference portion sizes do not exist for all product categories in Singapore or elsewhere in Asia.
- The nutrient values per 100g/ml can easily be translated into values per portion where standard reference portions exist.

This approach is in line with the Health Promotion Board "Healthier Choice Symbol Nutrition Guidelines".

Nutrients to limit

With regard to "nutrients to limit", the Nutrition Working Group reviewed the available evidence (see Annex IV), with the following WHO recommendation as a guiding principle: "*the more comprehensive models try to become, the more practical issues come to the fore. There is little point in nutrient profile models used for regulatory purposes including a component for which a) data are often missing in food composition tables or b) the analyses have not been carried out by a manufacturer because the information is not needed for routine food labelling*" (WHO, 2011 unpublished). This principle is also supported by EFSA which states that "*the virtues of nutrient profiles based on a large number of nutrients should be weighed against the burden that such complexity would constitute*" (EFSA 2008).

The pragmatic decision taken by the Working Group was to focus on those nutrients that are most widely considered of public health concern (WHO 2004) – not because inherently problematic – but because population average intakes are in excess of those recommended or desirable for health. In addition to energy, the "nutrients to limit" chosen were:

- Sodium
- Saturated fat
- Total sugars

The sodium values given can be converted into salt values by applying the standard conversion formula: salt value = 2.5 x sodium value.

The Health Promotion Board makes two recommendations regarding sodium daily intake for children (HPB 2012):

- For children 1 to 6, they recommend 1000mg/day
- For children 7 to 18, they recommend 2000mg/day

For the age group in question (4 to 12 years), the Nutrition Working Group calculated the sodium daily recommendation to be 1700mg/day. See Annex III: Sodium Daily Value.

[10] As above. An additional exception was needed in the case of saturated fats in some categories: where fat is a dominant nutrient in the product, what matters more nutritionally is the proportion of saturated fat to total fat, rather than the total amount of saturated fat per 100g.

With regard to fat, the decision to focus mainly on saturated fats was taken on the basis of:

- The consideration that total fat content is already limited by an energy cap.
- The fact that saturated fat is consumed in amounts that exceed those that are recommended for health.
- The understanding that *trans* fatty acids have been reduced to minimal levels for most of the food groups in Singapore[11] and Asia.

The WHO Recommendation to limit energy intake from saturated fat to 10% has been taken in consideration in establishing thresholds for saturated fat. *A* threshold *for trans* fatty acids has been included as part of the saturated fat value for some categories, where relevant.

With regard to total sugars, the Nutrition Working Group calculated a daily value based on recommended intake of fruits and vegetables, dairy and added sugar. The amount derived is of 99g per day which represents about 23% of energy for a 1700kcal/day (See Annex IV).

Components to encourage

The Nutrition Working Group agreed that a system taking into account both "nutrients to limit" and "components to encourage" (nutrients and food groups) is more in line with the core objective of the Advertising Guidelines– to foster innovation, reformulation and competition for a shift towards advertising of better-for-you products – than a system based solely on "nutrients to limit".

The choice of "components to encourage" was made on a category basis, i.e. pinpointing those positive components most relevant in each category, e.g. fibre and wholegrain in cereal-based products; protein and calcium in dairy products; protein in meat and fishery products; poly-unsaturated fatty acids (PUFAs) in vegetable oils, spreads and fats, etc.

In addition, it was decided to only allow the addition of vitamins and minerals (fortification) to qualify as "components to encourage" in specific food categories where such fortification is most strongly encouraged on public health grounds (e.g. vitamin D in dairy products). In all other cases, only intrinsically occurring "components to encourage" qualify.

Importantly, and in contrast to a scoring system, in the Advertising Guidelines Common Nutrition Criteria, "components to encourage" do not counterbalance "nutrients to limit". Where they are listed in the criteria, the specified quantity needs to be present in the product *in addition to* the product meeting the criteria for "nutrients to limit".

Nutrient values

[11] This reduction is also a consequence of the introduction in 2012 of the Regulation on *trans* fatty acids in fats and oils in Singapore. See http://app.ava.gov.sg/data/Publications/ListOfPublications/AVAVision/food-bites-ava-readies.html.

All values referring to energy, "nutrients to limit" and "components to encourage" in the Common Nutrition Criteria apply to food products as sold, except where specified, for those products which cannot be consumed without reconstitution (e.g. soup powder, dehydrated mashed potatoes, milk drinks etc.).

The values for each nutrient in each category are based on:

- Local and International dietary guidelines referring to nutrient intake (e.g. Health Promotion Board, WHO).
- The contribution of different foods to children's overall diet, on the basis of average consumption.
- The overall importance of specific nutrients in food products within each category, i.e. benchmarking of what are higher or lower end percentages.
- Technological feasibility and consumer acceptance.

With regards to energy values, these are calculated as a percentage of reference intake values. The Health Promotion Board has recently published Recommended Daily Allowance values[12] including Summary of Average Requirements for Energy (kcal/day) by Life Stage Group. These values were used to calculate the energy requirements for children 4 to 12 years old. The Nutrition Working Group estimated the energy requirements for children in this age group to be 1700kcal/day (See Annex I, Energy values).

Food intake during the day is usually divided across: breakfast, lunch, evening meal and food consumed between meals (snacks). As a wider range of foods is customarily consumed at lunch and dinner compared to breakfast, these are conventionally assigned a greater proportion of intake: 20% of daily energy intake at breakfast; 30% for lunch; 30% for dinner; and 20% for snacks (UK Food Standards Agency 2007[13]). Given that children customarily consume five meals per day, including two snacks, each of these snacking occasions can account for 10% of energy intake, or 170 kcal on the basis of the daily reference energy intake of 1700 kcal described above. On the basis of the same rationale, the average child's breakfast energy intake reference value was set at 340 kcal, while lunch and the evening meal can account for 510 kcal respectively. Energy caps for foods consumed as part of a meal have been set as a share of the energy reference value of the meal in question, taking into account the customary contribution of the particular product to the eating occasion, e.g. breakfast cereals as part of a complete breakfast; main dishes as part of a complete lunch or dinner.

Specific additional rationales for individual values are given in the category sections in Section II below.

[12] See http://www.hpb.gov.sg/HOPPortal/health-article/2652

[13] This distribution is similar to the NNS 1998 recommendation for distribution of energy among meals for breakfast, lunch, dinner and snacks is 15%, 30%, 35% and 20 %.
http://www.hpb.gov.sg/data/hpb.home/files/edu/nationalnutritionsurvey1998.pdf - page 164

Section II: Nutrition criteria by category

1. Vegetable and animal based oils, fats and fat containing spreads & emulsion-based sauces (e.g. mayonnaise)

Category 1: Vegetable and animal based oils, fats and fat containing spreads & emulsion-based sauces					
Sub-category A: Vegetable and animal based oils, fats and fat containing spreads: all animal and vegetable based fats and oils used as spreads on bread and/or the preparation of food[14].					
Product examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
A1: Oils and fats (all types except tropical ambient stable margarine, chilled-fat spreads, butter mélanges, solid or liquid oil/fat products for roasting and frying (solid or liquid)	**≤ 85**	**≤ 500**	**≤ 33% total fat is SAFA (in addition max TFA 1% total fat)**	**≤ 5**	**≥ 25% of total fat is PUFA**
A2: Tropical ambient stable margarine and fat spreads	**≤ 85**	**≤ 720**	**≤ 38% total fat is SAFA (in addition max TFA 1% total fat)**	**≤ 5**	**≥ 10% of total fat is PUFA**
Sub-category B: Emulsion-based sauces: sauces that constitute only a minor component of the meal to which an emulsifying agent is added OR have a fat content > 10% w/w.					
Mayonnaise, salad dressings, marinades, vinaigrettes	**≤ 85**	**≤ 750**	**≤ 33% total fat is SAFA (including max 0.5% TFA)**	**≤ 15**	**≥ 25% of total fat is PUFA**

[14] Butters as defined in Singapore Food Regulation Part IV, are excluded from this category because they will included in the list of excluded products.

Serving size indicated by the manufacturer on pack applies. However typical serving size is 10g for sub-category A and 14g for sub-category B.

- **Product group:**
  - **Sub-category A:** The product group includes all animal and vegetable based fats and oils used as spreads on bread and/or the preparation of food[15]. Examples are oils and fats (all types), low-fat margarine, margarine, butter mélanges, oil/fat products for roasting and frying (solid or liquid).
  - **Sub-category B:** The product group includes sauces that constitute only a minor component of the meal, to which an emulsifying agent is added OR have a fat content > 10% w/w. Examples are mayonnaise, salad dressings, marinades, and vinaigrettes.

- **Energy:** The threshold (85kcal) is equivalent to 5% of children's daily reference value (1700kcal) per portion. Application of this energy threshold only allows low-fat emulsion-based sauces (e.g. low fat mayonnaise) to comply.

- **Sodium:**
  - **Sub-category A:**
    - A1: Oil and Fat spreads: The level of 500mg/100g is challenging for products in Singapore. Considering a typical portion of 10g, it represents about 3% of the sodium DV. As portion sizes for this product group are relatively small, sodium contribution is relatively low comparing to energy target at 5% DV. A2: Tropical ambient stable margarine: Salt provides needed preservation under tropical ambient distribution. The proposed threshold (720 mg/100g) represent 4% of the sodium DV which is relatively low comparing to energy target at 5% DV.
  - **Sub-category B:** A relatively higher sodium level than sub-category A is necessary for preservation in this subcategory (microbes grow in water, not in fat; microbes do not grow in water with some sodium; products with higher water content, such as low-fat mayonnaise, therefore need higher sodium to prevent spoilage), and thus not to penalize reduced-fat products. Note that products in this category, in contrast to the other sub-category, are mainly ambient stable. As portion sizes for this product group are relatively small, sodium contribution is relatively low (about 105mg/ portion) corresponding to 6% of the sodium DV (See Annex III).

- **Saturated fats:** For these product groups, consisting of relatively high-fat products, application of the reference amount "% of total fat" is more relevant than "g/100g". Indeed, there is scientific consensus that reducing SAFA per se is not beneficial for heart health but what matters is what SAFA are replaced by. In this product group, for both high and low fat levels, it is appropriate to replace SAFA by PUFA. Therefore, expression of SAFA as "% of

[15] Butters as defined in Singapore Food Regulation Part IV, are excluded from this category because they will not be advertised towards children.

total fat" better identifies healthier options within the product group, which are not necessarily products with a low SAFA content. The "g/100g" reference would also not provide an incentive for relatively low fat products to reformulate. Trans-fatty acids (TFAs) are included in the saturated fat threshold, due to their public health relevance in this group. For sub-category B, the threshold corresponds to the requirement for Healthier Choice Symbol Programme Trans Fat Free logo.

- **Sub-category A:**
  - **A1: Oil and fat spreads:** The SAFA threshold (33% of total fat) is in accordance with WHO and dietary guideline from Singapore Heart Foundation and resembles the fatty acid profile of the healthier oils and fats and will exclude virtually all animal based products.
  - **Trans fats:** WHO recommends TFA to be no more than 1% energy, and total fat intake between 20-35% energy (<35%en for active individuals, <30%en for sedentary individuals). TFA could be limited for fat/oils at (TFA 1%en) / (total fat 30%en) *100 = 3.3 % total fat. The TFA threshold (1% of total fat) is challenging and provides significant improvement to fat intake for the population and it is half the maximum amount of 2g/100g of total fat set for fats and oils by legislation (see AVA Food Regulations, Amendment 2012)
- **A2: Tropical ambient stable margarine, fat spread:** In tropical countries, spreads need to be affordable and stable at temperatures up to 35°C, which requires a higher saturated fat level. Typically, margarines in these countries currently have saturated fat levels of 50%. We are investigating cost-effective technologies that will allow us to reduce saturated fat by approximately a third in these countries – taking the saturated fat level to 38% – while still keeping products affordable. Reducing to this level in tropical countries still represents a significant improvement in fat composition and therefore saturated fat intake for the population. The TFA threshold (1% of total fat) is challenging and provides significant improvement to fat intake for the population and it is half the maximum amount of 2g/100g of total fat set for fats and oils by legislation (see AVA Food Regulations, amendment 2012).

- **Total sugars:** For Subcategory A, sugars are not considered to be relevant. Nonetheless, the Singaporean value for "low in sugar" as per the Handbook on Nutrition Labelling (Singapore), Health Promotion Board (5g/100g) is applied. With typical serving of 14g, the proposed 15% sugar threshold would represent about 2% of the calculated DV (See annex IV).

- **Components to encourage:** The products in this category are sources of poly-unsaturated fatty acids (PUFAs) (WHO 2003). PUFAs are widely acknowledged as nutrients making a positive contribution to the diet and for which the average consumption among the Singaporean population is inadequate (National Nutrition Survey 2010 Singapore). As the evidence for PUFAs is stronger than for monounsaturated fatty acids (MUFAs) (Mozaffarian et al., 2010) the latter are not included.

What's in and what's out?

- The energy threshold will allow reduced-fat sauces (e.g. low-fat mayonnaise) to comply but exclude full-fat varieties.
- The saturated fat criterion will exclude animal fat-based products, as well as stick margarines.
- The sugar threshold is challenging for reduced-fat sauces

2. Fruits, vegetables and seeds, except oil

Category 2: Fruits, vegetables and seeds,[16] except oil Vegetables include legumes and potatoes. Seeds include seeds, kernels, nuts. Nuts include peanuts and tree nuts.					
Sub-category A: Products of fruits and vegetables except oils & potatoes (≥ 50g fruit and/or vegetable per 100g of finished products) that constitute a substantial component of the meal.					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Canned vegetables, baked beans, canned fruit, fruit salad, frozen vegetables, frozen fruit, dried fruit or vegetables (with added salt, sugar or fat)	**≤170**	**≤ 300**	**≤ 1.5**	**≤ 15**	**Min. ½ portion of fruit and/or vegetables. Components to encourage delivered through ingredients (fruits and/or vegetables)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 100g.

- **Product group**: The product group includes all fruit/vegetable based dishes (≥ 50g fruit and/or vegetable per 100g of finished products) that constitute a substantial component of the meal.

- **Energy:** The threshold (170kcal/portion) represents 10% of the average value of 1700kcal/d for children aged 4-12 years (See Annex I).

- **Sodium:** The sodium threshold (300mg) is aligned with the Healthier Choice Symbol Nutrient Guidelines for vegetables. 300mg is approximately one fifth (18%) of 1700mg average intake value for children 4-12 (see Annex III).

- **Saturated fats:** The threshold (1.5g/100g) is consistent with "low in saturated fat", as defined in Singapore labelling guidelines for nutrition and health claims made on foods. The guidelines

[16] Exemptions: 100% fruit and vegetables and their products, including 100% fruit and vegetable juices, as well as 100% nuts and seeds and mixes thereof (with no added salt, sugar or fat). These products, presented fresh, frozen, dried, or under any other form may be advertised to children without restrictions.

define 'low saturated fat' as 1.5g saturated fat per 100g, and 10% of kilocalories from saturated fat. Source: A Handbook on Nutrition Labelling, (Singapore), Health Promotion Board).

- **Total sugars**: The total sugar value is set at 15g/100g, which allows for the natural sugar content of products made solely with fruit.

- **Components to encourage**: These are based on the WHO dietary recommendation of ≥400g per day of fruits and vegetables (WHO 2003). The Health Promotion Board recommends that children aged 3-6 years old: 1 serving of fruit and 1 serving of vegetables per day and for those aged 7-12 years old: 2 servings of fruit and 2 servings of vegetables per day. Positive nutrients are delivered through the main ingredients of the fruit and vegetable preparation, as only products that contain ≥ 50g of fruits and vegetables per 100g of product qualify for this product group. One portion corresponds to 100g fresh fruit or vegetables (or equivalent in non-fresh format).

What's in and what's out?

- *The saturated fat threshold is challenging for e.g. cheese, cream, or meat containing products.*

- *The sugar cap will be challenging for preparations such as canned fruit as they may contain about 17g of sugars, of which 11g are coming from fruit. This threshold still allows some product innovations with high fruit content.*

Category 2: Fruits, vegetables and seeds, except oil					
Subcategory B: Potato & potato products, except dehydrated potato snack products: all potato based dishes (≥ 50g potato per 100g of finished products) that constitute a substantial component of the meal.					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Boiled, baked, fried, roasted and frozen potatoes and other potato preparations	**≤170**	**≤ 300**	**≤ 1.5**	**≤ 5**	**Nutrients delivered through main ingredient (potato)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is range from 75g to 135g.

- **Product group**: The product group includes all potato based dishes (≥ 50g potato per 100g of finished products) that constitute a substantial component of a meal. The minimum quantity required should be calculated on the basis of the ingredients entering into the recipe.

- **Energy:** The threshold (170kcal/portion) represents 10% of the average value of 1700kcal/d for children aged 4-12 years (see Annex I).

- **Sodium:** The sodium threshold (300mg) is aligned with the Healthier Choice Symbol Nutrient Guidelines for vegetables. Based on an average serving size of 105g, this equates to 315mg sodium per serving, which is approximately 19% of the 1700mg average DV for children 4-12 (see Annex III). Note – products must also provide positive nutrition and be relatively low in saturated fat, sugars and calories.

- **Saturated fats:** The threshold (1.5g/100g) is consistent with "low in saturated fat", as defined in Singapore labelling guidelines for nutrition and health claims made on foods. The guidelines define 'low saturated fat' as 1.5g saturated fat per 100g, and 10% of kilocalories from saturated fat. (Source: A Handbook of Nutrition Labelling (Singapore), Health Promotion Board).

- **Total sugars**: The threshold (5g/100g) is consistent with "low in sugars", as defined in Singapore labelling guidelines for nutrition and health claims made on foods. (Source: A Handbook on Nutrition Labelling Singapore), Health Promotion Board). This amount takes account of the intrinsic sugars in milk when used in these products.

- **Components to encourage**: Positive nutrients are delivered through the main ingredient of the preparation, as only products that contain ≥ 50g of potato per 100g of product qualify for this product group.

What's in and what's out?

- *The energy and saturated fat thresholds are challenging for potato preparations with high content of cream and/or cheese*

Category 2: Fruits, vegetables and seeds, except oil					
Subcategory C: Potato chips and potato based snacks, and similar products made with other vegetables (≥ 50g potato and/or other vegetable per 100g of finished products)**:**					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Potato based snacks (incl. dough based products)					
Potato chips/crisps and similar products made with other vegetables or legumes (e.g. banana chips) and Extruded snacks, pelleted snacks, stackable chips	**≤170**	**≤ 600**	**≤ 10% kcal from SAFA**	**≤ 10**	**Fibre: ≥3g per 100g or ≥3g per 100ml or ≥ 1.5g per 100kcal;** **and/or** **Fat type:** **> 40% total fat shall be polyunsaturated fatty acids, and < 20% total fat shall be saturated fatty acids and > 25% kilocalories shall be derived from fat** **and/or** **> 40% total fat shall be monounsaturated fatty acids, and < 20% total fat shall be saturated fatty acids and > 25% kilocalories shall be derived from fat**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 30g.

- **Product group**: The product group includes potato chips and other potato-based snacks, and similar products made with other vegetables (≥ 50g potato / other vegetable per 100g of finished products)**.** The reference portion is 30g.

- **Energy:** The threshold (170kcal/portion) represents 10% of the average value of 1700kcal/day for children aged 4-12 years (see Annex I).

- **Sodium:** For a typical, 30g serving, this equates to 180mg/serve which is 10% (one-tenth) of the sodium DV for children (see Annex III). The threshold for potato-based snacks takes into account the functional role of sodium in such products. This is a nutritionally acceptable level of contribution of a serving of snack to the diets of children, is challenging for snack manufacturers, and will encourage reformulation of suitable products (note – products must also provide positive nutrition and be relatively low in saturated fat, sugars and calories). Note - This level (600mg/100g) is not generally achievable for extruded products. This is because additional sodium is needed in these types of products for functional reasons to create the 'puffing' and hence lightness of products. However, it is recognised that the criteria need to be strict as their purpose is for advertising to children and the percentage contribution of sodium in one serving is an important consideration.

- **Saturated fats:** The saturated fat threshold (10% kcal from saturated fat) is consistent with international dietary guidelines for saturated fat intake and with "low in saturated fat", as defined in Singapore labelling guidelines for nutrition and health claims made on foods. The guidelines define 'low saturated fat' as 1.5g saturated fat per 100g, and 10% of kilocalories from saturated fat. (Source: A Handbook on Nutrition Labelling, (Singapore), Health Promotion Board).

- **Total sugars**: For a 30g serving of snacks, sugars content would be 3.3g or less. This is consistent with the international consensus that ≤10% energy should be derived from added sugars (Source: WHO 2003), as 3.3 grams sugars provides 13 kcal, which is less than 10% of 170 kcal (the specified limit per serving). Sugars are not discriminatory for this category; levels are usually low and are associated with seasoning applications.

- **Components to encourage**: Fibre level is consistent with Singapore requirements for "source of dietary fibre" claim and fat type conditions are consistent with Singapore requirements for "source of" polyunsaturated and monounsaturated fats claims (Source: A Handbook on Nutrition Labelling (Singapore), Health Promotion Board).

What's in and what's out?

- *The sodium thresholds are challenging and ensure that only products reformulated to have a smaller number or amounts of sodium containing ingredients and reduced topical application of salt can be compliant.*
- *The saturated fat threshold ensures that healthier oils with a reduced level of saturated fat have to be employed.*

Category 2: Fruits, vegetables and seeds, except oil					
Sub-category D: Seeds and nuts					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Salted or flavoured nuts (e.g. Peanuts, hazelnuts, cashew nuts, pistachios, almonds, walnuts), mixed nuts, nut-fruit mixes, nut/seed bars, peanut butter	**≤ 200**	**≤ 600**	**≤ 10**	**≤ 15**	**Nutrients delivered through ingredients (nuts and seeds)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 30g.

- **Product group**: The product group includes all seeds and nuts as well as coated nuts (excluding 100% seeds and nuts, i.e. without added salt, fat or sugar, which are exempted) and nut and/or seed bars in which nuts or seeds are listed as the main ingredient on the ingredient declaration.

- **Energy:** The relatively high energy cap is a reflection of the high nutrient density of these energy dense products. As well as being high in good fats, delivering calories, nuts are also an important source of a variety of micronutrients and other plant components thought to be beneficial for health like high-quality vegetable protein, fibre, minerals, tocopherols, phytosterols, and phenolic compounds. As such, nuts can have an important role to play in the diet.

- **Sodium:** For a typical reference portion of 30g, the sodium value (180mg/portion) is one tenth of 1700mg/day (See Annex III). The threshold for flavoured and salted seeds and nuts takes into account the functional role of sodium in such products.

- **Saturated fats:** The criterion for saturated fat will exclude both nuts which are naturally higher in saturated fats but also those which have been fried in oils which are higher in saturated fat. A typical serving of 30g would represent 16% of the WHO recommendation (2003) that is saturated fat intake should not contribute more than 10% of energy). Such value has been calculated as follows: 30g of seeds and nuts would contains 3g of saturated fats which

contribute 27kcal. 27kcal represent 16% of 170kcal (10% of the total daily energy intake of 1700kcal).

- **Total sugars**: The sugars criterion reflects the inclusion of dried fruit in fruit/nut mixes but will prohibit the use of thick sugary coatings on nuts. For a typical serving of 30g, it represents about 5% of the calculated sugar DV (See Annex IV).

- **Components to encourage**: Positive nutrients are delivered through the main ingredient (nuts, seeds), which are a natural source of micronutrients.

What's in and what's out?

- *The criteria will limit the inclusion of nut products whose nutrient composition has been adversely impacted by the addition of fat or sugar through frying, coating or inclusions.*

Category 2: Fruits, vegetables and seeds, except oil					
Sub-category E: Fruit/Vegetable based meal sauces: all fruit/vegetable based sauces (≥ 50g fruit and/or vegetable per 100g of finished products) that constitute a substantial component of the meal					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Tomato sauce, pasta sauce…	**≤ 100**	**≤ 500**	**≤ 1.5**	**≤ 10**	**Nutrients delivered through ingredients (fruits and/or vegetables)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 100ml.

- **Product group**: The product group includes all fruit/vegetable based sauces (≥ 50g fruit and/or vegetable per 100g of finished products) that constitute a substantial component of the meal.

- **Energy:** The threshold (100kcal/portion) is the same as applied in the International Choices Programme (Roodenburg et al. 2011). This value represents about 6% of children's daily reference value (1700kcal) per serving (reference serving: 100ml).

- **Sodium:** Meal sauces are normally added to unflavoured carbohydrates and vegetables acting as the main meal flavour provider. These products are consumed in smaller servings than soups (100ml vs. 200ml), for which a 350mg sodium value is defined. The sodium threshold (500mg) is challenging for various sauces. For a typical serving of 100ml, it would represent about 30% of the DV (see Annex III).

- **Saturated fats:** The threshold (1.5g) corresponds with "Low in saturated fat", as defined in Singapore Regulations on nutrition and health claims made on foods.

- **Total sugars**: The total sugar value is related to the fruit/vegetable content, as only meal sauces consisting of >50% fruits and/or vegetables are included in this product group. The threshold is set at 10 g to allow sauces prepared from high sugar containing vegetables (e.g. beet root, sweet pepper, corn, tomato) to comply, and to stimulate (and not penalize) innovations towards high vegetable content sauces. For a typical serving size of 100ml, it would represent 9% of the calculated DV (see Annex IV).

- **Components to encourage**: Positive nutrients are delivered through the main ingredients of the meal sauces, as only these sauces that contain ≥ 50g of fruits and vegetables per 100g product are classified in this product group.

What's in and what's out?

- *The energy and nutrient limits will exclude a number of cream, cheese and meat-containing sauces.*

Category 2: Fruits, vegetables and seeds, except oil					
Sub-category F: Fruit/Vegetable based condiments: all fruit/vegetable based condiments (≥ 50g fruit and/or vegetable per 100g of finished products) that constitute only a minor component of the meal.					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Tomato ketchup, chutney…	**≤ 85**	**≤ 750**	**≤ 1.5**	**≤ 25**	**Nutrients delivered through ingredients (fruit and/or vegetables)**

Serving size indicated by the manufacturer on pack applies. However typical serving size for this category is 14g.

- **Product group**: All fruit/vegetable based condiments (≥ 50g fruit and/or vegetable per 100g of finished products) that constitute only a minor component of the meal.
- **Energy:** The threshold (85kcal) is equivalent to 5% of children's daily reference value (1700kcal) per portion.

- **Sodium:** The sodium threshold is the same as applied in the Healthier Choice Symbol Nutrient Guidelines for tomato and chilli sauces. A relatively higher sodium level is set for this product group (compared to vegetable based meal sauces): as serving sizes for this product group are relatively small (15ml, 14g), sodium contribution is relatively low (about 105mg/serving), corresponding to 6% of the 4-12 years children (See Annex III).

- **Saturated fats:** The threshold (1.5g) corresponds with "Low in saturated fat", as defined in Singapore Regulations on nutrition and health claims made on foods.

- **Total sugars**: The total sugar value is related to the fruit/vegetable content, as only condiments consisting of >50% fruits and/or vegetables are included in this product group. Higher sugar levels are expected in these products due to concentration: ingredients are reduced in cooking (e.g. chutneys). Therefore, a relatively higher sugar level is set for this product group (compared to vegetable based meal sauces). As portion sizes for this product group are relatively small, sugar contribution is relatively low (3.5g/portion), representing about 3.5% of the calculated DV (see Annex IV).

- **Components to encourage**: Positive nutrients are delivered through the main ingredients of condiments, as only these condiments that contain ≥ 50g of fruits and vegetables per 100g product are classified in this product group.

What's in and what's out?

- *The sodium threshold is challenging for various ketchups and savoury condiments.*

3. Meat based products

Category 3: Meat based products: all kinds of processed meat/poultry, and meat products, consisting of minimally 50g of meat per 100g finished product					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Meatballs, meat nuggets, satay sticks, canned meat products, preserved and cured meats, chicken fillet, sausages	**≤ 170**	**≤ 450**	**≤ 6**	**≤ 5**	**Protein: ≥5g /100g**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 90g.

- **Product group**: The product group includes all kinds of processed meat/poultry, and meat products, consisting of minimally 50g of meat per 100g finished product (fresh and frozen meat is exempted, as defined in Singapore Food Regulations. Sale of Food Act (Chapter 283, Section 56(1)) Food Regulations Rg 1, G.N. No. S 264/2005, revised edition 2005 (30th November 2005)).

- **Energy:** The threshold (170kcal) is equivalent to 10% of children's daily reference value (1700kcal), which represents up to 1/3 of the energy content of a meal (510kcal).

- **Sodium:** Salt (sodium) is necessary for meat preservation. 450mg/100g is aligned with Healthier Choice Symbol Nutrient Guidelines. For a typical serving size of 90g, it would represent about 23% of the DV (See annex III).

- **Saturated fats:** In combination with the energy criterion, the SAFA threshold is a challenging cut-off. Meat is a natural source of fat and saturated fat (with SAFA levels up to 50% of total fat). The saturated fat criterion set will exclude meat products with a fat content >12% of total weight.

- **Total sugars**: For this product group, sugars are not considered to be relevant. The Singapore value for "low in sugar" as per A Handbook on Nutrition Labelling (Singapore) (5g/100g) is applied, to allow a margin for flavouring or for sauces based on e.g. herbs, vegetables, and fruit.

- **Components to encourage***:* Positive nutrients are delivered through the main ingredients of these products, as only products that contain ≥ 50g of meat per 100g product are classified in

this product group. Meat is an important contributor of protein and its content should be in line with the Singapore “protein” claim (NC14) (min 5g/100g of protein).

What’s in and what’s out?

- *The sodium and saturated fat thresholds will only allow reduced-salt versions of cured meats, exclude most sausages, and generally require all meat products to comply with a fat content < 12%*
- *Meat-based dishes will be challenged by the min p*rotein: ≥5g /100g *as well as the sodium value.*

4. Fishery products

Category 4: Fishery products: all kinds of processed fish, processed crustaceans and shellfish, consisting of min. 50g of fish, crustaceans, and/or molluscs per 100g of finished product.					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Cod, fried fillet of haddock, fish fingers, tinned tuna, fish-based dishes (>50% fish)	**≤ 170** **OR** **> 170 IF ≥ 25% of total fat is PUFA**	**≤ 450**	**≤ 33% total fat is SAFA (including max 0.5% TFA)**	**(≤ 5)**	**Protein: ≥5g /100g**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 90g.

- **Product group**: The product group includes all kinds of processed fish, processed crustaceans and shellfish, consisting of minimally 50g of fish, crustaceans, and/or molluscs per 100g of finished product, as well as ready dishes where fish is the main ingredient (>50%).

- **Energy:** The threshold (170kcal) is equivalent to 10% of children's daily reference value (1700kcal), which represents up to 1/3 of the energy content of a meal (510kcal). To stimulate the consumption of fatty fish containing high PUFA levels, fish products that contain PUFA levels over 25% of total fat are permitted to exceed this energy threshold.

- **Sodium:** The sodium threshold (450mg) is aligned with the Healthier Choice Symbol Nutrient Guidelines. For a typical serving size of 90g, it would represent about 23% of the DV (See annex III).

- **Saturated fats:** As for the fats and oils product group it is more relevant to express the SAFA threshold as % of total fat: to allow fatty fish (containing around 3-8g SAFA/100g) to comply, but to also provide an incentive for processed lean fish (e.g. fish fingers) to reformulate towards lower SAFA levels (e.g. through application of healthier oils). The level for TFA is in line with the requirement for Healthier Choice Symbol Programme Trans Fat Free logo.

- **Total sugars**: for this product group, sugars are not considered to be relevant. The value for "low in sugar" as per food Regulation (Source: A Handbook for Nutrition Labelling (Singapore), Health Promotion Board) is applied, to allow a margin for flavouring or for sauces based on ingredients such as herbs, vegetables, fruit.

- **Components to encourage**: Positive nutrients are delivered through the main ingredients of these products, as only products that contain ≥ 50g of fish per 100g product are classified in this

product group. Fish is an important contributor of protein and its content should be in line with Singapore claim “source of” (min 5g/100g of protein).

What’s in and what’s out?

- *The sodium threshold is challenging for various pickled, smoked and canned fish products.*
- *The saturated fats threshold is challenging for e.g. (deep) fried fish products*
- *Fish fillets will comply, some non-reformulated fried fish products, and various canned, pickled, and smoked products will often not.*

5. Dairy products

Category 5: Dairy products					
Sub-category A: Dairy Products other than cheeses: Must contain minimum 50% dairy					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Milks and milk substitutes; yoghurts; sweet based soft cheese, curd & quark; fermented milks; dairy desserts	**≤170**	**≤ 300**	**≤ 1.6**	**≤ 11**	**Protein: ≥5g /100g or ≥2.5g 100ml** **And/or** **At least source of Calcium or Vit. D** **(111mg/100g or 67mg/100ml of Calcium** **or 0.35µg/100g or 0.21µg/100ml of Vit D)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is between 150 and 250ml for liquid products and 80 to 150g for solid products.

- **Product group**:
  - **Milk and milk substitutes:** Plain/flavoured milk drinks as prepared (product values based on preparation instructions; criteria cut-off per 100ml) or other plain/flavoured powder preparations.
  - **Yoghurts:** Plain or fruit, skimmed, semi skimmed and whole milk yogurts, spoonable or drinkable
  - **Sweet based soft cheese-based**: Plain or fruit sweet cheeses/curd/quark or preparations with sweet ingredients (e.g. fruits, honey, chocolate) that may have added sugar; sweet cheese-based dip with e.g. cereal sticks
  - **Fermented milk drinks:** buttermilk, plain or fruit based or flavoured skimmed, semi-skimmed and whole fat yoghurt drinks
  - **Dairy desserts:** Puddings, mousse, crèmes, flans.

- **Energy**: Based on 10% of the children's reference value per portion (several servings of this basic food group recommended); kcal cut-off per portion without further portion size specification covers big variances in the portion sizes within this category (due to very different product types) and gives the opportunity to the manufacturer to modify it adjusting fat and sugar content, and portion size**.**

- **Sodium:** Fresh dairy products are not a major sodium contributor to the diet, but there is intrinsic sodium from milk + some added with fruit preparation; the threshold value includes a wide range of products such as sweet curd & quark products with higher density. For example, a yogurt of 125ml would contribute 22% of the DV (See Annex III). This is a very broad category which comprises products from plain milk and yogurts but also flavoured milks or dairy desserts. The mean and median values of sodium for the liquid milks and yogurt products available in Singapore supermarkets range between 625mg and 577mg and 660mg and 500mg respectively.

- **Saturated fats**: The value takes into consideration the natural saturated fat content of semi skimmed fat milk (60-70% of total milk fat is saturated fat, taking into account seasonal variations and variations due to cow feeding) plus the contribution from other ingredients. Full fat dairy products which have a saturated fat of about 2.3g/100ml are excluded.

- **Total sugars**: The threshold takes into account the diverse product types within this category; milk contains intrinsic lactose (5g/100ml) and often natural sugars from added fruit. For example, a yogurt of 125ml would contribute about 14% of the calculated DV (See Annex IV). This is a very broad category which comprises products from plain milk and yogurts but also flavoured milks or dairy desserts. The mean and median values of total sugars for the liquid milks and yogurt products available in Singapore supermarkets range between 9g and 11g and 10g and 13g respectively.

- **Components to encourage**: Positive nutrients are delivered through min. 50% dairy as a group definition. Dairy contains a substantial amount of positive nutrients (protein, minerals (e.g. calcium, phosphorus) and vitamins (A, B2, B12). Calcium is a very important nutrient to encourage since the contribution to intake from fresh dairy products is high and has been selected for its public health relevance. According to HPB's "Birth to Eighteen Years: Dietary Tips for Your Child's Wellbeing", calcium is the key building block for strong, healthy bones and teeth and calcium-rich food should be consumed during childhood and teenage years when bones grow longer and stronger. Additionally fortified Vitamin D is considered in the same document as positive contribution because it works together with calcium to increase calcium absorption from food, hence also contributing to bone health (Ref. SEANUTS, Br J Nutr. 2013 Sep; 110 Suppl 3:S2-10). Additionally fortified Vitamin D is considered as positive contribution because of the public health relevance in the region (reference SEANUTS). Protein min. ≥5g /100g or ≥2.5g 100ml as per Singapore Regulation (Source: A Handbook for Nutrition Labelling (Singapore), Health Promotion Board); Calcium or Vitamin D in significant amount as per Singapore Regulation: 1/6 of the Daily Allowance per reference quantity (Source: A Handbook for Nutrition Labelling (Singapore), Health Promotion Board). Daily Allowance for Calcium: 800mg. Daily Allowance for Vit D: 2.5µg. Reference quantity for liquid food: 200ml. Reference quantity for solid food: 120g. That is: Calcium: 111mg/100g or 67mg/100ml. Vitamin D: 0.35µg/100g or 0.21µg/100ml.

What's in and what's out?

- *Controlled fat and sugar milk/yoghurt drinks in appropriate portions will comply, as will plain or fruit, skimmed, semi skimmed and whole milk yoghurt, as well as controlled -fat / sugar sweet cheese-based dips*
- *Yoghurt in large serving sizes, indulgent yoghurts and non-fat/salt controlled dips will not*
- *Plain or fruit or flavoured drinking yoghurts prepared with skimmed, semi-skimmed or whole fat milk that are controlled for sugar & fat (150-200ml portion) will comply as long as they meet the energy and sugar thresholds.*
- *Desserts such as caramel Puddings, chocolate mousse or crème caramel will not comply, with a few strictly reformulated exceptions.*

Category 5: Dairy products					
Sub-category B: Cheese and savoury dairy based products: Must contain minimum 50% dairy					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Hard, semi-hard cheeses					
Gouda, Edam, blue cheese, gorgonzola	**≤ 85**	**≤ 600**	**≤ 15**	**≤ 5**	**Protein: ≥5g /100g or ≥2.5g 100ml and/or At least source of Calcium or Vit. D (111mg/100g or 67mg/100ml of Calcium or 0.35µg/100g or 0.21µg/100ml of Vit D)**
Other cheeses, curd & quark and savoury dairy-based products					
Cream cheese	**≤170**	**≤ 600**	**≤ 10**	**≤ 8**	
Processed cheese slices	**≤170**	**≤ 1250**	**≤ 10**	**≤ 8**	

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 30g.

Hard-/Semi-hard cheeses:

- **Product group** (Codex standard for Cheese 283-1978 definition). This group includes ripened cheese with different fat percentage in dry matter (20+/30+/45+ etc.)

- **Energy**: The threshold is based on 5% of children' s reference intake value; lower %- value for fat-reduced cheeses that have less variable and smaller serving sizes than the sweet dairy products. Note: SFA criterion is already limiting/defining the energy content of the product due to the proportional amount of fat/SFA in milk fat.

- **Sodium:** Sodium in hard/semi hard cheese is needed for the cheese making process and for conservation. A serving of cheese of 30g would contribute about 10% of the DV (See Annex III). The mean and median values of products including both hard/semi hard chesses and other chesses available in Singapore supermarkets are 658mg and 650mg respectively.

- **Saturated fats:** The value allows only fat-reduced 30+ Cheese to comply. A typical serving of hard cheese of 30g would represent 23% of the WHO recommendation (2003) that saturated fat intake should not represent more than 10% of energy. Such value has been calculated as follows: 30g of cheeses in this category would contains 4.5g of saturated fats which contribute 40.5kcal. 40.5kcal represent 24% of 170kcal (10% of the total daily energy intake of 1700kcal). The mean and median values of saturated fat for products including both hard/semi hard chesses and other cheeses available in Singapore supermarkets are 16g and 17g respectively.

- **Total sugars**: For this product group, sugars are not considered to be relevant, since no sugar is naturally present in cheese. The SG value for "low in sugar" as per Regulation (5g/100g) is stated (Source: A Handbook for Nutrition Labelling (Singapore), Health Promotion Board).

- **Components to encourage**: Positive nutrients are delivered through min. 50% dairy as a group definition. Dairy contains a substantial amount of positive nutrients (protein, minerals (e.g. calcium, phosphorus) and vitamins (A, B2, B12). Calcium is a very important nutrient to encourage since the contribution to intake from fresh dairy products is high and has been selected for its public health relevance. Additionally fortified Vitamin D is considered as positive contribution because of the public health relevance in the region (ref. SEANUTS, Br J Nutr. 2013 Sep; 110 Suppl 3:S2-10). Protein min. >5g /100g or >2.5g 100ml as per SG Regulation; Calcium or Vitamin D in significant amount as per SG Regulation: 1/6 of the Daily Allowance per reference quantity (Source: A Handbook for Nutrition Labelling (Singapore), Health Promotion Board). Daily Allowance for Calcium: 800mg. Daily Allowance for Vit D: 2.5µg. Reference quantity for liquid food: 200ml. Reference quantity for solid food: 120g. That is: Calcium: 111mg/100g or 67mg/100ml.Vitamin D: 0.35µg/100g or 0.21µg/100ml.

Other Cheeses, curd & quark and savoury dairy-based products:

- **Product group:**
    - Processed cheese: (Codex standard for processed cheese preparations A-8©-1978 definition): Products made of cheese subjected to a process of melting, grinding, mixing and emulsifying with the aid of heat that may have other ingredients added (e.g. other dairy ingredients/whey, emulsifiers, salt, ingredients to flavour), for example processed cheese slice, spread and preparations (e.g. with ham).
    - Fresh/Soft cheese (Codex standard for Cheese 283-1978 definition): Unripened cheese with different fat % in dry matter (20+/30+/45+ etc.), curd/quark, including plain,

flavoured and prepared with other ingredients (e.g. ham); savoury dairy-based products e.g. cheese dip with bread sticks/corn chips.

- **Energy**: The threshold is based on 10% of children's reference intake value. The key discriminating factor in this category is not energy but saturated fat content.

- **Sodium:** The value has been defined considering the technical feasibility of the category and in alignment with international pledges for sodium reduction. The value corresponds to the UK Responsibility Deal target for processed cheese slices, strings etc. For processed cheese, the value is aligned with that of the Australia National Salt Initiative Program (http://www.foodhealthdialogue.gov.au/internet/foodandhealth/publishing.nsf/Content/summary_food_categories) and the US National Salt Packaged Foods Reduction Initiative. A typical serving of 30g cream cheese would represent about 10% of the DV (See Annex III). The mean and median values of sodium for products including both hard/semi hard chesses and other chesses available in Singapore supermarkets are 658mg and 650mg respectively.

- **Saturated fats:** The lower saturated fat limit than for natural cheese will only allow fat-reduced version of other cheeses to comply**.** A typical serving of 30g would represent about 16% of the WHO recommendation (less than 10% energy from saturated fat). Such value has been calculated as follows: 30g of cheeses in this category would contain 3.0g of saturated fats which contribute 27kcal. 27kcal represent 16% of 170kcal (10% of the total daily energy intake of 1700kcal).The mean and median values of saturated fat for products including both hard/semi hard chesses and other chesses available in Singapore supermarkets are 16g and 17g respectively.

- **Total sugars**: Allows limited addition of sugars, coming from flavour preparations and from other additional components (e.g. bread stick in the dip products). A typical serving of 30g would represent about 2.5% of the calculated DV (See Annex IV).

- **Components to encourage**: Positive nutrients are delivered through min. 50% dairy as a group definition. Dairy contains a substantial amount of positive nutrients (protein, minerals (e.g. calcium, phosphorus) and vitamins (A, B2, B12). Calcium is a very important nutrient to encourage since the contribution to intake from fresh dairy products is high and has been selected for its public health relevance. Additionally fortified Vitamin D is considered as positive contribution because of the public health relevance in the region (ref. SEANUTS, Br J Nutr. 2013 Sep;110 Suppl 3:S2-10). Protein min. >5g /100g or >2.5g 100ml as per SG Regulation; Calcium or Vitamin D in significant amount as per SG Regulation: 1/6 of the Daily Allowance per reference quantity (Source: A Handbook for Nutrition Labelling (Singapore), Health Promotion Board). Daily Allowance for Calcium: 800mg. Daily Allowance for Vit D: 2.5µg. Reference quantity for liquid food: 200ml. Reference quantity for solid food: 120g. That is: Calcium: 111mg/100g or 67mg/100ml. Vitamin D: 0.35µg/100g or 0.21µg/100ml.

What's in and what's out?

- *30% reduced-fat cheeses will meet the criteria with additional sodium cut-off; full-fat cheeses will not.*
- *Fat-reduced savoury fresh/cream/soft cheeses (if meeting sodium as well), other cheeses prepared with additional ingredients, e.g. ham, may fail the sugar criterion.*

- *Savoury dairy-based products, such as cheese dip with bread sticks will not meet criteria unless of the reduced-fat and salt variety.*

6. Cereal based products

Category 6: Cereal based products					
Sub-category A: <u>Sweet</u> biscuits, bakery and other cereal based products: cereal must be listed as the main ingredient on the ingredient declaration.					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
All kinds of biscuits and cakes, muffins, cereal bars, flapjacks, buns, steamed buns, rolls (filled with cream, jam, fruit, custard)	**≤ 170**	**< 450**	**≤ 10 (including max 0.5% FTA)**	**≤ 30**	**Fibre (≥3 g/100g) and/or whole grain (15% of total ingredients) and/or >25% energy from UFA and >40% UFA/total fat** **and/or at least source of Calcium *(>111mg/100g)***

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 40g.

- **Product group**: Category definition: cereal must be listed as the main ingredient on the ingredient declaration. Products included in this category can be consumed as snacks but also part of other meal occasions such as breakfast. Portions are defined by manufacturers on packs.

- **Energy**: The threshold is equivalent to 10% of children's reference intake value. Given that a typical breakfast accounts for 20% of daily energy intake, the 10% value for cereal-based products leaves sufficient room for other breakfast components, dairy and fruit (juice).

- **Sodium:** A serving of 40g of biscuits (Source: Health Promotion Board document – 'Birth to Eighteen Years: Dietary Tips for Your Child's Wellbeing' Page 5, Table 2) would contribute 180mg of sodium that is approximately one tenth (11%) of the DV (See Annex III). Sodium is not discriminatory for this category; levels are usually low and are associated with preservation of the product shelf life.

- **Saturated fats:** A serving of 40g would contribute about 2% of the daily energy intake and it would represent about 20% of the maximum intake recommended by WHO (2003) that is saturated fat intake should not contribute more than 10% of energy intake. The level for TFA is in line with the requirement for Healthier Choice Symbol Programme Trans Fat Free logo.

- **Total sugars**: This cereal category contains a wide range of products; some of these may contain fruit or milk, which are sources of naturally occurring sugars. The bulking effect of sugar requires substitution when reducing this nutrient with a risk of fat – and thus energy – increasing. A

typical serving of 40g would represent about 14% of the calculated DV (See Annex IV). The mean and median values including both sweet and salty biscuits are both 23g.

- **Components to encourage**: The 3g fibre, 140mg calcium and 100g are equivalent to the legal requirement for the "source of fibre" and "contain calcium" claims respectively under "A Handbook on Nutrition Labelling" published by the Singapore's Health Promotion Board and represents a significant amount. Significant amount for Calcium is 1/6 of the Daily Allowance per reference quantity. Daily Allowance for Calcium: 800mg. Reference quantity for solid food: 120g. That is: Calcium: 111mg/100g. The value for unsaturated fatty acids (UFA) is equivalent to the value used required for the "contains mono/polyunsaturated fat" claim under "A Handbook on Nutrition Labelling" published by the Singapore's Health Promotion Board.

What's in and what's out?

- *Biscuits and flaky crackers made with wholegrain and products with special focus on better fat composition are included.*
- *Some cereal bars and biscuits with fruity filling will not pass because of their sugar content.*
- *Most products with a fatty filling or chocolate covered will not pass because of saturated fat content.*
- *Many products based on refined flour will not fulfil the positive criteria for fibre/wholegrain*.

Category 6: Cereal based products					
Sub-category B: <u>Savoury</u> crackers and other cereal based products, including dough-based products: cereal must be listed as the main ingredient on the ingredient declaration.					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Savoury crackers, extruded snacks, pelleted snacks, pretzel products, popcorn & popcorn-based, snacks, savoury porridge, bread, pizza crusts, buns, steamed buns, rolls (unfilled) hamburger/hotdog type	**≤ 170**	**≤600**	**≤ 10**	**≤ 10**	**Fibre: ≥3 g/100g; and/or >25% energy from UFA and >40% UFA/total fat**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 40g.

- **Product group**: Category definition: cereal must be listed as the main ingredient on the ingredient declaration.

- **Energy**: These products are usually intended to be consumed as snacks; the 170kcal value corresponds to 10% of daily intake reference value for children.

- **Sodium:** 240mg per recommended serving size 40g (Source: Health Promotion Board document – 'Birth to Eighteen Years: Dietary Tips for Your Child's Wellbeing' Page 5, Table 2) is one fourth (14%) of the sodium DV. See Annex III. The value is also aligned with the Category 2C Potato chips and potato based snacks. The mean and median values for sodium of all crisps & salty snacks available in Singapore supermarkets is 585mg and 1115mg respectively.

- **Saturated fats:** A serving of 40g would contribute about 2% of the daily energy intake and it would represent about 21% of the maximum intake recommended by WHO (2003) that is saturated fat intake should not contribute more than 10% of energy intake. Such value has been calculated as follows: 40g of cereals in this category would contain 4.0g of saturated fats which contribute 36kcal. 36kcal represent 21% of 170kcal (10% of the total daily energy intake of 1700kcal).

- **Total sugars**: Levels of sugars in this category are usually low and are associated with seasoning applications. A typical serving of 40g would represent 4% of the calculated DV (See Annex IV).

- **Components to encourage**: The 3g fibre/100g is equivalent to the legal requirement for the "source of fibre claim" under A Handbook on Nutrition Labelling published by the Singapore's Health Promotion Board and represents a significant amount. The value for unsaturated fatty acids (UFA) is equivalent to the value used required for the "contains mono/polyunsaturated fat" claim under "A Handbook on Nutrition Labelling" published by the Singapore's Health Promotion Board.

What's in and what's out?

- *Sodium and saturated fat are the key discriminating values for this category. Many pretzel-type products, for instance, will not meet the set values.*

Category 6: Cereal based products					
Sub-category C: Breakfast Cereals including porridge					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Ready to eat breakfast cereals, e.g. cornflakes, puffed rice, porridge, instant oats, oatmeal…	**≤ 200**	**≤ 400**	**≤ 5**	**≤ 35**	**Fibre (≥3g/100g) and/or wholegrain (15% whole grain per total ingredients)** ***and/or source of Calcium (>222mg/100g)***

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 40g.

- **Product group**: Category definition: cereal must be listed as the main ingredient on the ingredient declaration. Products included in this category can be consumed as snacks but also part of other meal occasions such as breakfast. Portions are defined by manufacturers on packs. For porridges and similar products, values in this category apply to food as reconstituted, ready for consumption, following manufacturer's instructions.

- **Energy**: This threshold represents about 12% of children's reference intake value. This value is designed to enable products intended to be consumed as part of a balanced breakfast to be included. It is slightly higher than the threshold for sweet biscuits, cookies and other cereal based products (200 instead of 190kcal/portion) to enable the inclusion of porridge-based products that require reconstituting prior to consumption, usually with the addition of milk. For ready to eat cereals that do not need to be reconstituted, the values apply to the cereals as sold.

- **Sodium:** 160mg per reference portion 40g (Source: Health Promotion Board document – 'Birth to Eighteen Years: Dietary Tips for Your Child's Wellbeing' Page 5, Table 2) is about one tenth (9%) of the sodium DV. See Annex III. The mean and median values of children products available in Singapore supermarkets are 348mg and 390 mg respectively.

- **Saturated fats:** Below the level proposed in the International Choices Programme (Roodenburg et al. 2011). A serving of breakfast cereals would contribute about 11% of the intake recommended by WHO (2003) – less than 10% of energy from saturated fat. Such value has been calculated as follows: 40g of cereals in this category would contain 2g of saturated fats which contribute 18kcal. 18kcal represent 11% of 170kcal (10% of the total daily energy intake of 1700kcal).

- **Total sugars**: 35g is consistent with the Healthier Choice Symbol criteria for "Children Cereal" category. Source: Singapore Health Promotion Board document – 'Healthier Choice Symbol Nutrient Guidelines' Page 6. A serving of 40g would contribute about 14% of the calculated DV (See Annex IV).

- **Components to encourage**: The 3g fibre, 222mg calcium per 100g are equivalent to the legal requirement for the "source of fibre" and "contain calcium/iron" claims respectively under "A Handbook on Nutrition Labelling" published by the Singapore's Health Promotion Board *and represents a significant amount.* Significant amount for Calcium is 1/6 of the Daily Allowance per reference quantity. Daily Allowance for Calcium: 800mg. Reference quantity for breakfast cereals and porridge: 60g. That is: Calcium: 222mg/100g.

What's in and what's out?

- *Many chocolate and sugar-coated ready-to-eat products will not qualify. On the other hand, products such as porridge oats will.*
- *The sodium threshold is also discriminating: some extruded products with lower sugar will not qualify.*

Category 6: Cereal based products					
Sub-category D: Cereal and cereal products except breakfast cereals, biscuits, crackers and bakery products: cereal must be listed as the main ingredient.					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Bread, rusks, rice, brown rice, mixed rice, white flour, wholemeal flour, noodles, pasta, polenta	**≤ 300**	**≤ 450**	**≤ 5**	**≤ 5**	**Fibre (≥3 g/100 g) and/or wholegrain (15% of total ingredients)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 10 to 80g.

- **Product group**: Category definition: cereal must be listed as the main ingredient on the ingredient declaration. These products include staples such as bread, noodles, pasta polenta etc. Values in this category apply to food as reconstituted, ready for consumption, following manufacturer's instructions.

- **Energy**: The 300kcal threshold corresponds to 17% of children's daily reference intake value. These products usually constitute a significant part of a meal: based on reference intake values, the energy content of lunch of dinner is 510kcal, so that the 300kcal limit for these products leaves 210kcal for other meal components.

- **Sodium:** The sodium value, 450mg/100g, is aligned with the Healthier Choice Symbol Nutrient Guidelines. It is challenging for a range of products and should stimulate innovation. A typical portion of pasta of 80g would contribute about 21% of the DV (See annex III).

- **Saturated fats:** Below the level proposed in the International Choices Programme (Roodenburg et al. 2011). A typical portion of pasta of 80g would contribute 21% of the intake recommended by WHO (2003) - less than 10% of energy from saturated fat. Such value has been calculated as follows: 80g of cereals in this category would contain 4g of saturated fats which contribute 36kcal. 36kcal represent 21% of 170kcal (10% of the total daily energy intake of 1700kcal).The mean and median values for bread, dry pasta and dry rice range between 3mg and 340mg and 12mg and 340mg respectively.

- **Total sugars**: The 5g/100g sugar threshold reflects the fact that some of these products contain a certain amount of naturally occurring sugars. A typical portion of pasta of 80g would contribute about 4% of the calculated DV (See annex IV). The mean and median values for bread, dry pasta and dry rice range between 0.9g and 5.8g and 0.5g and 3.6g respectively.

- **Components to encourage**: The 3g fibre/100g is equivalent to the legal requirement for the "source of fibre claim" under A Handbook on Nutrition Labelling published by the Singapore's Health Promotion Board and represents a significant amount.

What's in and what's out?

- *Components to encourage (fibre and/or whole grain) criteria are challenging for most traditional wheat based products if not reformulated: instant noodles, pasta, semolina gnocchi*

- *Salt reduced versions of ready to eat polenta may comply as made from milled whole corn (maize).*

7. Soups, composite dishes, main courses and filled sandwiches

Category 7: Soups, composite dishes, main courses and filled sandwiches					
Sub-category A: Soups: all kinds of soups and broths containing min 1 of the following: 30g fruit, vegetables, cereals, meat, fish, milk or any combination of those (calculated as fresh equivalent) per portion. (Thresholds apply to food as reconstituted, ready for consumption, following manufacturer's instructions).					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Tinned tomato soup, instant vegetable soup, soup in stand-up pouches, savoury rice congee, concentrate herbal soup, fish soup…	**≤ 170**	**≤ 300**	**≤ 1.5**	**≤ 7.5**	**Nutrients delivered through ingredients (fruits and/or vegetables, cereals, meat, fish, milk)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 150ml.

- **Product group**: The product group includes all kinds of soups and broths containing min 1 of the following: 30g fruit, vegetables, cereals, meat, fish, milk or any combination of those (calculated as fresh equivalent) per portion.

- **Energy*:*** The threshold (170kcal) is equivalent to 10% of children's daily reference value (1700kcal) per portion.

- **Sodium**: The threshold of 300 mg/100ml represents a significant reduction of 32% from existing product database in Singapore (i.e. 2746 and 443 mg/100ml for mean and median respectively). On the basis of a portion size of 150ml, soup would contribute 26% DV.

- **Saturated fats:** The threshold (1.5g/100g or 0.75/100 ml) corresponds with "Low in saturated fat", as defined in Regulation (on nutrition and health claims made on foods (Source: A Handbook of Nutrition Labelling (Singapore), Health Promotion Board).

- **Total sugars**: The threshold is set at 7.5g to allow soups prepared from high sugar containing vegetables (e.g. beet root, sweet pepper, corn, tomato) to comply, and to stimulate (and not penalize) innovation towards high vegetable content soups. A typical serving size of 150ml would represent about 11% of the calculated DV (See Annex IV).

- **Components to encourage**: Positive nutrients are delivered through the main ingredients of the soups, as only soups that contain at least one of the following food groups: 30g fruit, vegetables, cereals, meat, fish, milk or any combination of those (calculated as fresh equivalent) per portion, are classified in this category. This is equivalent to ½ child's portion of the above. For many soup products, it is very challenging to comply with this.

What's in and what's out?

- *The saturated fats threshold is challenging for cheese, meat and cream containing soups*
- *For many soup products, it is very difficult to comply with the "components to encourage" criteria*

Category 7: Soups, composite dishes, main course and filled sandwiches					
Sub-category B: Composite dishes, main dishes, and filled sandwiches: all kinds of dishes and sandwiches containing min 2 of the following: 30g fruit, vegetables, cereals, meat, fish, milk or any combination of those (calculated as fresh equivalent) per portion. (Thresholds apply to food as reconstituted, ready for consumption, following manufacturer's instructions).					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fat (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Recipe mixes such as pasta salad with vegetables, stir—fry noodles with sauce, pizza, filled pancakes	**≤ 400**	**≤ 400**	**≤ 5**	**≤ 7.5**	**Nutrients delivered through ingredients (fruits and/or vegetables, cereals, meat, fish, milk)**

Serving size indicated by the manufacturer on pack applies. Given the variety of products included in this category, typical serving vary considerably.

- **Product group**: The product group includes all kinds of dishes and sandwiches containing min. 2 of the following: 30g fruit, vegetables, cereals, meat, fish, milk or any combination of those (calculated as fresh equivalent) per portion.

- **Energy:** Dishes should not contribute more than 25% (which corresponds to the threshold of 400kcal/portion) of daily reference intake value for children to allow 5% of energy intake from drink or other component to complete the meal (30%E). Reference portion as indicated by manufacturer.

- **Sodium:** The sodium threshold (400mg) is in line with Healthier Choice Symbol. A sandwich or dish would contribute about 23% of the DV (See annex III). Consumers will add salt when sodium content it is too low.

- **Saturated fats:** The threshold (5g) is suitable for this broad group of very different types of dishes. For a 400kcal dish this value would represent about 10% of energy coming from saturated fat.

- **Total sugars**: the threshold is set at 7.5g to allow dishes prepared from high sugar containing vegetables (e.g. beet root, sweet pepper, corn, tomato) to comply, and to stimulate (and not penalize) innovation towards high vegetable content dishes. For a 400kcal dish this value would represent about 7% of energy coming from sugars.

- **Components to encourage**: positive nutrients are delivered through the main ingredients of the dishes, as only these dishes that contain at least 2 of the following food groups: 30g fruit, vegetables, cereals, meat, fish, milk or any combination of those (calculated as fresh equivalent) per portion, are classified in this category. This is equivalent to ½ child's portion of the above.

What's in and what's out?

- *The sodium threshold is challenging for most composite dishes especially for those containing cheese such as pizza, pasta gratins and croque-monsieur (if not reformulated)*
- *The saturated fats threshold is challenging for cheese, meat and cream containing products*

8. Meals

Category 8: Meals: The combination of items served as meal (main dish, side item (s) and a beverage) for breakfast, lunch or dinner					
Examples	**Energy (kcal per meal*)**	**Sodium (mg per meal)**	**Saturated fats (g per meal*)**	**Total sugars (g per meal)**	**Components to encourage**
Meals	**≤ 510[a)]** **≤ 340[b)]**	**≤ 660**	**≤10% Kcal from saturated fat**	**≤ 20 (minus natural occurring sugar [c)] from 1 serving [d)] J/F/V/M/D)**	**Each meal must contain min. of:** **1 serving [d)] fruit/ vegetables** **or/and** **1 serving[d)] 100% juice** **or/and** **1 serving qualified [d,e)] dairy product or milk** **or/and** **1 serving [d)]of whole grain[f)]**

Notes:

[a)] For lunch/dinner (30% energy)

[b)] For breakfast (20% energy)

[c)] If sugar content is higher than 20g for a meal and contains more than 1 J/F/V/M/D.

[d)] Servings are:

- Fruits (F)/Vegetables (V): 60-80g
- 100% juice (J): 250ml
- Dairy (D): e.g. 30g cheese/100-150g yoghurt
- Milk (M): 150-250ml

[e)] Meet individual category requirements

[f)] Product qualified for a reasonable source of fibre which contains ≥ 8g whole grain

- **Product group**: A Meal is defined as the combination of items served as a meal (main dish, side item (s) and a beverage) for breakfast, lunch or dinner. Although there is not a commonly agreed upon reference for "meal" in Singapore, the United States Food and Drug Administration (FDA) uses the following definition: a meal is a group of food that:

  (1) Makes a major contribution to the total diet by:
  (i) Weighing at least 10 ounces (oz) per labeled serving; and
  (ii) Containing not less than three 40-g servings of food, or combinations of foods, from two or more of the following four food groups, except as noted in paragraph (l)(1)(ii)(E) of this section:
  (A) Bread, cereal, rice, and pasta group;
  (B) Fruits and vegetables group;
  (C) Milk, yogurt, and cheese group;
  (D) Meat, poultry, fish, dry beans, eggs, and nuts group; except that;
  (E) These foods shall not be sauces (except for foods in the above four food groups that are in the sauces), gravies, condiments, relishes, pickles, olives, jams, jellies, syrups, breading or garnishes; and

2) Is represented as, or is in a form commonly understood to be, a breakfast, lunch, dinner, or meal.

- **Energy:** The thresholds of ≤510 kcal for a lunch or dinner meal and ≤340 kcal for a breakfast meal represent 30% of energy for lunch/dinner and 20% for breakfast of children's daily reference value (See Annex I).

- **Sodium:** According to WHO, a moderate low salt/sodium diet should have not more than 5g salt/day for adults and 3g for children. In the US, the IOM School Meals sodium recommendations are ≤ 640 mg for 5–9 year-olds and ≤ 710 mg for 10–13 year-olds for school lunches. Singapore dietary guideline for daily salt intake is 5g (=2000mg sodium) per day for 7-18 years and 2.5g (1000mg sodium) for 1-6 years old. Current EU Commission salt GDA for adults is 6g, while the recommended value for children is ≤660mg sodium/meal. *(This is based on calculation of SACN (UK) data and their rationale to take real consumption into consideration (SACN 2003), as well as sodium thresholds for different product categories, eg. 300-400 mg/100g for main dishes, fruits and vegetables, dairy products.)* As a meal is a combination of different items (main dish, side item(s) and beverage), including fruits, vegetables, dairy products and juices or low fat milk as a drink option, a combined threshold seems to have legitimacy and hence the chosen threshold of ≤660mg sodium/meal. A meal should represent about 38% of the DV (See Annex III).

- **Saturated fats:** Based on WHO recommendations for daily intake of total fat and SFA there is a common understanding and alignment in nearly all scientific publications, profiling systems and recommendations that the daily intake for SFA should be ≤10% of energy. There is no difference in recommendations for children or adults. This recommendation was taken as justification for the defined threshold ≤10% of energy (for the individual meal).

- **Total sugars:** total sugar daily intake for children 4-12 was calculated to be 98g (see Annex IV). The "Meal" category will work with a threshold of ≤20g of total sugars which would represent 20% of the calculated DV. However, excluded from this limit are sugars from food groups to encourage. This is in an effort to encourage the use of these food groups with beneficial nutrients to children. The naturally occurring sugars from **ONE** qualifying low-fat dairy, fruit without added sugars and fruit/vegetable juices or blends with no added sugars will not be counted toward the total sugar limit.

- **Components to encourage**: To be consistent with and to fully support dietary guidelines and qualitative recommendations for balanced diets for children, **each meal will contain minimum**: 1 serving fruit/vegetables or a mix of both and/or 1 serving 100% juice and/or 1 serving qualified (meet category requirements) low fat dairy product or low fat milk and/or 1 portion of whole grain product. The food groups to encourage will add essential vitamins, minerals and fibre, which are known to be lacking in many children's daily diets. <u>Rationales for serving sizes for food groups to encourage:</u>

- **Serving of fruit/vegetable:** It was agreed that 100% fruit and vegetable products are exempted from any category/threshold system and can be advertised to children 12 years old and under without restrictions. Following the recommendations for balanced diets for children, we feel it is necessary to have serving size guidance. There is a need for a minimum portion size. As fruits add sugar a recommendation of an upper limit is also given. The UK (FSA) 5 a day recommendation for adults indicates a portion size of 80g for fruit and vegetables. For children 0-6 years a portion size of 60g is recommended, for older children the same 80g as for adults. FDA/USDA definitions of serving size for fruit and vegetables are ½ cup. HPB examples of 1 serving of fruit ranges from 130g for apples, oranges, pineapple, etc. to 50g for grapes and 40g for dried fruit. The "Meal" category therefore defines a serving of fruit or vegetable 60-80g.
- **Serving of 100% juice:** It was agreed that 100% juices are exempted from any category/threshold system and can be advertised to children under 12 without restrictions. HPB examples of 1 serving of fruit juice is 250ml. The UK (FSA) 5 a day recommendation indicates a portion size of 150ml. FDA/USDA definitions of serving size for juice is 1 cup. The "Meal" category defines a serving of juice 250ml. These are also volumes offered as servings in glasses and "portion" bottles.
- **Serving of qualified dairy product or milk:** Qualified dairy products or milk products have to meet the individual category requirements. There is a need for a minimum serving size. For milk HPB recommends 500ml of milk or dairy equivalents/day. USDA recommendation is e.g. max 1oz of cheese, max 8oz of milk and max 6oz of yoghurt. The "Meal" category defines a portion of milk 150ml-250ml. For dairy products examples are: max 30g cheese or 100-150g yoghurt. *These are also volumes offered pre-packed.*
- **Serving of whole grain:** The work done by the US Whole Grains Council was taken as reference and provides an excellent overview on the existing definitions of whole grain and serving sizes. The "Meal" category defines a product qualified for a reasonable source of fibre which contains ≥ 8g whole grain. This is also supported by the My Healthy Plate guidelines http://hpb.gov.sg/HOPPortal/content/conn/HOPUCM/path/Contribution%20Folders/uploadedFiles/pdf/HPB_MyHealthyPlate_FactSheet_FA%28hires%29.pdf

What's in and what's out?

- *Only meals specifically designed for children will comply.*
- *Among them, these meal combinations will qualify, e.g. 4pc chicken Nuggets, apple slices/corn cup and 100% orange juice; hamburger, apple Slices/corn cup, 100% orange Juice.*
- *Any meal combination that includes cheeseburger, fries or soft drink will not qualify.*

9. Edible ices

Category 9: Edible ices: all kinds of edible ices (water ices and ice cream)					
Examples	Energy (kcal/portion*)	Sodium **(mg/100g or 100ml*)**	Saturated fats **(mg/100g or 100ml*)**	Total sugars **(mg/100g or 100ml*)**	Components to encourage
	**except where specified otherwise*				
Ice cream, water ice, ice lollies, sherbet ice	**≤ 110**	**≤ 120**	**≤ 5 (including max 0.5% FTA)**	**≤ 20**	-

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 100ml.

- **Product group:** The product group includes all kinds of edible ices (water ices and ice cream). An edible ice category was created on the grounds that compliant products are responsible treats with a controlled and suitable energy content. Portion sizes are limited through the energy criterion. These products are no alternatives for dairy or fruit, and therefore should not be classified as such.

- **Energy:** The threshold (110kcal/portion) is lower than the Healthier Choice Symbol Nutrient Guidelines. This value represents 6.5% of the reference daily intake for children (1700kcal). These are occasional products, with a low contribution to the daily energy intake. This 110kcal threshold is lower than the 10% (170kcal) energy cap used elsewhere, as for this product group no nutrients to encourage are defined. Portion size is limited by the energy threshold.

- **Sodium:** For this product group, sodium is not considered to be relevant. The SG value for "low sodium" is applied, to allow a margin for inclusions (Source: A Handbook for Nutrition Labelling (Singapore), Health Promotion Board).

- **Saturated fats:** Both SAFA and sugar are important for technological properties: creaminess, taste, physical stability, softness. Through innovation industry tries to maintain these properties while using less SAFA and sugar. Saturated fat is important for the creamy texture and the creation of the whipped structural network and plays a major role for structure stability: the setting point of the used fats dictates the crystallization process of the fat to obtain a stable ice cream. For a typical serving size of 100ml, 5g represent about 26% of the WHO recommendation (2003) that is saturated fats should not contribute more than 10% of energy intake. Such value has been calculated as follows: 100ml edible ices would contain 5g of saturated fats which contribute 45kcal. 45kcal represent 26% of 170kcal (10% of the total daily energy intake of 1700kcal). The level for TFA is in line with the requirement for Healthier Choice Symbol Programme Trans Fat Free logo.

- **Total sugars:** The sugar threshold (20g) is in line with the Healthier Choice Symbol Nutrient Guidelines. For a typical serving size of 100ml, 20g represent about 20% of the calculated DV

(see Annex IV). Such a sugar criterion prevents high sugar-content ices from qualifying. Sugar has technical properties that are essential for the structural characteristics of both water ices and ice creams. It is essential for the control of ice crystal formation and the lowering of freezing point.

- **Components to encourage:** Positive contribution is very challenging for the category as the presence of a main food group is low and serving sizes are small. These products have controlled levels of energy, SAFA and sugar.

What's in and what's out?

- Internal data from member companies show that only 10% of the total ice portfolios comply with the 110kcal threshold.
- For children's products, around 50% of the portfolio complies with the 110kcal threshold, as many products are currently being reformulated.

10. Beverages

Category 10: Beverages					
Sub-category A: Soy based beverages					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Soya bean milk, flavoured soya bean milk	**≤ 170**	**≤ 40**	**≤ 0.75**	**≤ 7**	**At least source of Calcium or Vit. D (67mg/100ml of Calcium)** **or 0.21µg/100ml of Vit D)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 250ml.

- **Product group**:
  - **Soya bean milk and flavoured soya bean milk:** The protein content of plain or flavoured soya bean milk shall not be less than 2% (w/v) based on Singapore Food Regulations 181, 182.

- **Energy**: The threshold is based on 10% of the children's reference intake value. The key discriminating factor in this category is not energy but sugar content.

- **Sodium:** Soya based beverages are not a major sodium contributor to the diet, but there is intrinsic sodium from soya beans and sometimes added food additives used in production. A typical serving size would represent about 6% of the DV (See Annex III).

- **Saturated fats:** The threshold (0.75g/100ml) correspond with "Low in saturated fat", as defined in The Handbook of Nutrition Labelling. A typical serving of 250ml would contribute 1.75g of saturated fats which represents 10% of the WHO recommendation (2003) that is saturated fats should not contribute more than 10% of energy intake. Such value has been calculated as follows: 250ml soy based beverages would contain 1.9g of saturated fats which contribute 17.1kcal. 40.5kcal represent 10% of 170kcal (10% of the total daily energy intake of 1700kcal).

- **Total sugars**: The total sugar is set at ≤7g/100ml, which is consistent with the Healthier Choice Symbol Programme. A typical serving size would represent about 18% of the calculated DV (See Annex IV).

- **Components to encourage:** In the Asian context, soya based beverages are commonly used as an alternative to dairy beverages. Calcium and vitamin D are very important nutrients to encourage because of public health relevance in the region. Calcium or Vitamin D in significant amounts as per SG Regulation: 1/6 of the Daily Allowance per reference quantity. Daily Allowance for Calcium: 800mg. Daily Allowance for Vit. D: 2.5µg. Reference quantity for liquid food: 200ml. Reference quantity for solid food: 120g. That is: Calcium: 111mg/100g or 67mg/100ml.Vitamin D: 035µg/100g or 0.21µg/100ml.

What's in and what's out?
- Soya milk from food services may not meet sugar and energy thresholds due to serving sizes - Soya milk with sugar content > 7g/100 ml will not qualify

Sub-category B: Cereal beverages: cereal must be listed as the main ingredient.					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Cereal beverages include instant etc…	**≤ 170**	**≤ 80**	**≤ 1.5**	**≤ 8**	**Fibre (>3 g/100ml) and/or whole grain (15% of total ingredients)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 250ml.

- **Product group**: Category definition: cereal must be listed as the main ingredient on the ingredient declaration. It includes all kind of beverage preparations (in powder or liquid format) made of cereal ingredients. Values in this category apply to food as reconstituted, ready for consumption, following manufacturer's instructions.

- **Energy**: The 170kcal threshold corresponds to 10% of children's daily reference intake value. These products should not constitute a significant part of a diet, usually consumed as a snack in between-meals.

- **Sodium:** Levels of sodium in this sub-group category are typically very low. The 80mg threshold is in-line with general nutrient content claims for "low in sodium" and it would represent about 11% of the DV (See Annex III).

- **Saturated fats:** Sub-group category not expected to be a relevant carrier of SFA, although some amount is justified by the potential addition of ingredients other than cereals (e.g. milk). A typical serving is about 2% of the daily energy intake and it would represent about 20% of the maximum intake recommended by WHO (2003) that is saturated fat intake should not contribute more than 10% of energy intake. Such value has been calculated as follows: 250ml of cereal beverages would contains 3.75g of saturated fats which contribute 33.8kcal. 33.8kcal represent 20% of 170kcal (10% of the total daily energy intake of 1700kcal).The mean and median values including both cereal and malt based drinks are respectively 5.0 and 4.8g.

- **Total sugars**: This category is an expected carrier of total sugars. A typical serving size would contribute to a maximum of the 20% of the calculated DV for total sugars (See Annex IV).

- **Components to encourage***:* Fibre is selected as component to encourage since it is an intrinsic component of cereal products and should contribute substantially to the daily intake.

What's in and what's out

- *All products with low amount of cereals or excessive addition of sugars and/or creamers would not meet the criteria.*

Sub-category C: Malt based beverages - Definition: beverages with a relevant amount of malt extract in the composition					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Malt based beverages in powder format or ready-to-drink	**≤ 170**	**≤ 80**	**≤ 1.5**	**≤ 8**	-

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 250ml.

- **Product group**: Category definition: It includes all kind of beverage preparations (in powder or liquid format) made of malt ingredients. Products under this category should contain a significant amount of malt extract (>12.5% dry matter). Values in this category apply to food as reconstituted, ready for consumption, following manufacturer's instructions.

- **Energy**: The 170kcal threshold corresponds to 10% of children's daily reference intake value. These products should not constitute a significant part of a diet, usually consumed as snack in between-meals.

- **Sodium:** Sub-group category not expected carrier of sodium. The 80mg threshold is in-line with general nutrient content claims for "low in sodium" and it would represent about 11% of the DV (See Annex III). The mean and median values including both cereal and malt based drinks are respectively 300mg and 350mg.

- **Saturated fats:** Sub-group category not expected to be a relevant carrier of SFA, although some amount is justified by the potential addition of ingredients other than cereals (e.g. milk). A typical serving is about 2% of the daily energy intake and it would represent about 20% of the maximum intake recommended by WHO (2003) that is saturated fat intake should not contribute more than 10% of energy intake. Such value has been calculated as follows: 250ml of malt based beverages would contain 3.75g of saturated fats which contribute 33.8kcal. 33.8kcal represent 20% of 170kcal (10% of the total daily energy intake of 1700kcal).

- **Total sugars**: This category is an expected carrier of total sugars. A typical serving size would contribute to a maximum of the 20% of the calculated DV for total sugars (See Annex IV).

- **Components to encourage***:* Malt extract intrinsically has low amount of dietary fibre. These products have controlled levels of energy, SAFA and sugar.

What's in and what's out

- All products with inadequate portion size and excessive addition of sugars and/or creamers would not meet the criteria.

Sub-category D: Fruit juice drinks - Definition: fruit juice drinks with a least 50% juice and no added sugar					
Examples	**Energy (kcal/portion*)**	**Sodium (mg/100g or 100ml*)**	**Saturated fats (g/100g or 100ml*)**	**Total sugars (g/100g or 100ml*)**	**Components to encourage**
	**except where specified otherwise*				
Fruit juice drinks with a least 50% juice and no added sugar	**≤ 170**	**≤ 80**	**0**	**No added sugar**	**Min. ½ serving of fruit and/or vegetables. Components to encourage delivered through ingredients (fruits and/or vegetables)**

Serving size indicated by the manufacturer on pack applies. However typical serving size is for this category is 250ml.

- **Product group**: This group includes fruit-based combination beverages and fruit juice drinks.
- **Energy**: The threshold is based on 10% of the children's reference intake value. The key discriminating factor in this category is not energy but sugar content.
- **Sodium:** Sub-group category not expected carrier of sodium. The 80mg threshold is lower than the requirement of the nutrient content claims for "low in sodium".
- **Saturated fats:** saturated fats are not relevant for this group.
- **Total sugars**: The requirement is no added sugar.
- **Components to encourage:** Positive nutrients are delivered through the main ingredients of the fruit and vegetable preparation.

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Annex I: Energy values

Energy values used in the Common Nutrition Criteria are calculated as a percentage of reference intake values.

The Health Promotion Board has recently published Recommended Daily Allowance values[17] including Summary of Average Requirements for Energy (kcal/day) by Life Stage Group. These values were used to calculate the energy requirements for children 4 to 12 years old.

For Children and Adolescents different energy values are provided according to the level of physical activity. Energy values are provided for children who practice light physical activity, moderate physical activity and vigorous physical activity.

Examples of different activity levels are provided as follows:

Category	Description
Light physical activity	▪ Individuals who spend several hours at school or in sedentary occupations ▪ Individuals who do not practise physical sports regularly ▪ Individuals who generally use motor vehicles for transportation ▪ Individuals who spend most leisure time in activities that require little physical effort (e.g. watching TV, reading, using computers)
Moderate physical activity	▪ More strenuous than described for a light lifestyle, but not as demanding as a vigorous lifestyle as described below (e.g. individuals who work as kitchen staff or cleaners) ▪ Individuals who participate in regular leisure time activity, such as walking, cycling or gardening, for several hours each week
Vigorous physical activity	▪ Individuals who walk or ride bicycles every day over long distances ▪ Individuals who practise sports or exercise that demand a high level of physical effort for several hours, several days of the week ▪ Individuals who engage in energy-demanding occupations or perform energy-demanding chores for several hours each day(e.g. heavy industrial work, construction work or farming)

[17] See http://www.hpb.gov.sg/HOPPortal/health-article/2652

Singapore has been promoting healthy lifestyles for more than 20 years. Significant progress has been made. With regards children, the Health Promotion Board recommends at least 180 minutes of physical activity (of any intensity) spread throughout each day for children below 7 years of age; and at least 60 minutes of moderate-intensity physical activity every day for children 7-18 years of age. Moderate-intensity physical activity causes a noticeable increase in breathing and heart rate. School activities such as Physical Education time count towards the 60 minutes[18]

Calculation of the mean energy values for moderate physical activity level for boys and girls:

	Boys (kcal/day)	Girls (kcal/day)
4 yrs old	1310	1190
5 yrs old	1440	1320
6 yrs old	1550	1420
7 yrs old	1600	1500
8 yrs old	1740	1620
9 yrs old	1940	1760
10 yrs old	2110	1910
11 yrs old	2280	2070
12 yrs old	2530	2230

Mean value for boys is 1833 kcal/day and for girls is 1669 kcal/day. The mean value for boys and girls age 4 to 12 is 1751kcal/day. The number was rounded up to 1700 kcal/day.

This value is consistent with energy requirement reported by other countries, notably US and Europe.

The average value of 1700 kcal/d for children aged 4-12 years, based on the Summary of Average Requirements for Energy (kcal/day) by Life Stage Group issued by Health Promotion Board appears legitimate.

[18] http://www.hpb.gov.sg/HOPPortal/health-article/508

Annex II: Portion sizes

Energy thresholds in the Common Nutrition Criteria are expressed on a portion basis. This ensures that the absolute energy value of a product would need to be below a specific cap to be eligible for advertising to children 12 years old and under.

The scheme under development refers to single portion products which are pre-packed and promoted and sold in specific portion sizes as well as to multi portion products for which serving size are suggested on pack.

Single portion packs

They are packs designed for single consumption occasion. The portion should refer to the entire amount contained in the single pack.

Multi portion packs

Given that standardised reference portion sizes do not exist in Asia, it was agreed to refer to the portion indicated by the manufacturer on pack.

However, to ensure consistency some principles are proposed as follows:

We can identify 3 types of multi packs:

1. Multi portion packs for which portion unit is not obvious from pack or food format.
2. Multi portion packs with recognisable portion units; and
3. Multi portion packs which are designed to be consumed by a set number of people

1. Multi portion packs for which portion unit is not obvious from pack or food format

   A reference portion (g/ml), should be provided on pack by the manufacturer, depending on product/category. The reference amount should be meaningful, practical and easily understood by consumers and it should be consistent with dietary recommendations. It should be appropriate, reasonable and should not mislead the consumer; and it should be related to the food format, presentation, packaging and consumption habits.

2. Multi portion packs with recognisable portion units, e.g. pre-sliced bread.

   Portion should refer to pre-portioned unit or multiple of, e.g. a slice bread or pre sliced salami. The portion should be appropriate, reasonable and should not mislead the consumer; and it should be related to the food format, presentation, packaging and consumption habits.

3. Multi portion packs which are designed to be consumed by a set number of people

   Portion amount should refer to a proportion of the pack, depending on number of people the product should serve, according to manufacturer's instruction. If a cake is meant to serve 4 people, then the portion amount should be equal to $\frac{1}{4}$ of the entire cake. The portion should be

appropriate, reasonable and should not mislead the consumer; and it should be related to the food format, presentation, packaging and consumption habits.

Anne III: Sodium Daily Value

The Health Promotion Board document "Birth to Eighteen Years: Dietary Tips for Your Child's Wellbeing" includes two recommendations regarding sodium daily intake:

- For children 1 to 6, they recommend 1000mg/day
- For children 7 to 18, they recommend 2000mg/day

Given the age group 4 to 12 years which is the scope of this initiative, it would be relevant to calculate the mean between the 2 groups, that is:

Age (yrs)	Recommendation (mg/day)
4	1000
5	1000
6	1000
7	2000
8	2000
9	2000
10	2000
11	2000
12	2000

The mean value is 1666mg/day.

The WHO recommendation (2012)[19] for adults is 2000mg. For children the recommendation is to adjust the level downward based on energy requirements for children relative to those of adults.

Given we calculated the energy requirement for the age group in question (4 to 12 years) to be 1700kcal/day, the estimate daily sodium recommendation for children in this age group is 1700mg/day. This equates to 1mg per kcal per day.

As the two values are very close, we decided to set the daily value for children 4 to 12 yrs old at 1700mg/day.

[19] Guideline: Sodium intake for adults and children, WHO (2012)

Annex IV: Total sugars Daily Value

The following principles and calculation methodology are proposed to derive the reference daily value for total sugars:

Dietary Guidance

- Children are encouraged to eat a balanced diet that contains fruit and vegetables and sufficient dairy products to ensure an adequate calcium intake.
- HPB specific daily dietary guidance includes:
    - 1 servings for age group 3 to 6 and 2 servings for age group 7 to 12 of fruits and 1 serving for age group 3 to 6 and 2 servings for age group 7 to 12 of vegetables
    - 1 serving of dairy foods or calcium-rich foods for age group 3-12 years
    - Added sugars:
        - For age group 6 months to 12 months: 5 tea spoons of sugar
        - Age group 1 to 2 yrs: 7 teaspoons of sugar
        - Age group 3 to 6 yrs: 9 teaspoons of sugar
        - Age group 7 to 18 yrs: 11 teaspoons of sugar

Fruit & Vegetables

- The most common fruits in the diet are: watermelon, honeydew, pawpaw, pineapple, grapes, pears, apples, oranges, bananas, kiwi, mango and cantaloupe. The average sugar content of these fruits is 10.4% (Average from USDA National Nutrient Database for Standard Reference (Release 269))
- The most common vegetables in the diet are: spinach, Chinese kale, Chinese cabbage, carrots, tomatoes, broccoli, cauliflower, peas, corn, lettuce, eggplant and French beans. The average sugar content of these vegetables is 3.5% (Average from USDA National Nutrient Database for Standard Reference (Release 269)).
- The average recommendation for age group 4 to 12 is calculated to be 1.6 servings of fruits and 1.6 servings of vegetables. Assuming an average serving of fruit and vegetable to be 100g, it equates to a daily sugars intake from fruit and vegetables of 22.24g.

Dairy Products

- HPB recommends 1 serving of dairy foods (or calcium-rich foods) for age group 3-12 years. .
- The recommendation of 500ml of milk (1 serving of dairy food) is used.
- Milk contains 5% sugars. Hence the overall sugars intake from dairy products will be 25g.

Added sugar

The Health Promotion Board document “Birth to Eighteen Years: Dietary Tips for Your Child’s Wellbeing” includes recommendations regarding added sugar daily intake:

- For age group 6 months to 12 months: 5 teaspoons of sugar
- Age group 1 to 2 yrs: 7 teaspoons of sugar
- Age group 3 to 6 yrs: 9 teaspoons of sugar

- Age group 7 to 18 yrs: 11 teaspoons of sugar

One teaspoon corresponds to 5 g of sugar

Given the age group 4 to 12 years which is the scope of this initiative, it would be relevant to calculate the mean between the recommendation for age group 3 to 6 and 7 to 18, that is:

Age (yrs)	Recommendation (mg/day)
4	9 teaspoons = 45g
5	9 teaspoons = 45g
6	9 teaspoons = 45g
7	11 teaspoons = 55g
8	11 teaspoons = 55g
9	11 teaspoons = 55g
10	11 teaspoons = 55g
11	11 teaspoons = 55g
12	11 teaspoons = 55g

The mean value is 51.67g/day of added sugar (about 12% of Energy)

Totals

Summing all the above:

Fruit and vegetables: 22.24g
Dairy products: 25g
Added sugars: 51.67g

= 98.90g rounded to 99g (about 23% of energy)

Reference

USDA National Nutrient Database for Standard Reference (Release 269)

Annex V: Food Regulation Reference Quantity

A Guide to Food Labelling and Advertising. A Publication of the Agri-Food & Veterinary Authority, Singapore. AVA (2013).

TABLE II

Food	Reference Quantity
Bread	240 g
Breakfast cereals	60 g
Extracts of meat or vegetables or yeast (modified or not)	10 g
Fruit and vegetable juices	200 ml
Fruit juice concentrates (diluted according to directions on the label)	200 ml
Fruit juice cordials (diluted according to directions on the label)	200 ml
Flavoured cordials or syrups (diluted according to directions on the label)	200 ml
Malted milk powder	30 g
Condensed milk	180 g
Milk powder (full cream or skimmed) and food containing not less than 51% of milk powder	60 g
Other concentrated liquid food including powdered beverage above (diluted according to directions on the label)	200mL
Liquid food not specified above	200mL
Solid food not specified above	120g

Annex VI: Key reference documents

(The following sources are not necessarily referenced in the White Paper, but were consulted for the purposes of the informing the work of the Nutrition Working Group):

- Agudo, A (2004) Measuring intake of fruit and vegetables. Background paper for the joint FAO/WHO workshop on fruit and vegetables for health. WHO (2005)

- EU Pledge Nutrition Criteria White Paper (2012). http://www.eu-pledge.eu/

- Get Your Child Up and Going, Health promotion Board (2013). http://www.hpb.gov.sg/HOPPortal/health-article/508

- Harika RK, Cosgrove MC, Osendarp SJ, Verhoef P, Zock PL. Fatty acid intakes of children and adolescents are not in line with the dietary intake recommendations for future cardiovascular health: a systematic review of dietary intake data from thirty countries. Br J Nutr (2011) Aug; 106(3):307-16

- ICBA Marketing to Children Guidelines (2008). http://www.icba-net.org/files/resources/icba-marketing-to-children-guidelines.pdf).

- National Health Survey 2010 Singapore. Epidemiology and Disease Control Division. Ministry of Health (2010). http://www.moh.gov.sg/content/dam/moh_web/Publications/Reports/2011/NHS2010%20-%20low%20res.pdf

- Recommended Dietary Allowances, Health Promotion Board (2014). http://www.hpb.gov.sg/HOPPortal/health-article/2652

- Sample Healthy Workplace Catering Policy. Health Promotion Board (2013). http://www.hpb.gov.sg/HOPPortal/article?id=HPBSUEXTAPP1_4021950

- Scientific Advisory Committee on Nutrition. Dietary Reference Values for Energy, SACN (2011).

- Scientific Opinion of the Panel on Dietetic Products, Nutrition and Allergies, on The setting of nutrient profiles for foods bearing nutrition and health claims pursuant to Article 4 of the Regulation (EC) No 1924/2006, EFSA (2008).

- Technical Report 916 on Diet, Nutrition and the Prevention of Chronic Diseases, WHO (2003).

- UK Public Health Responsibility Deal: http://responsibilitydeal.dh.gov.uk/

- US Children's Food & Beverage Advertising Initiative White Paper on Uniform Nutrition Criteria, Better Business Bureau (July 2011)

- Working Document on the Setting of Nutrient Profiles, unofficial draft. European Commission (March 2009).