Nutrient profile model for the marketing of food and non-alcoholic beverages to children in the WHO Eastern Mediterranean Region
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Acknowledgements

This publication was prepared by the WHO Regional Office for the Eastern Mediterranean in collaboration with WHO headquarters. The work was coordinated by Ayoub Al Jawaldeh, Regional Adviser, Nutrition, WHO Regional Office for the Eastern Mediterranean. It builds on the nutrient profile model prepared by the WHO Regional Office for Europe.

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Further significant contributions, review and comments were provided throughout the development of this publication by Professor Mike Rayner of the University of Oxford.
1. Introduction

Noncommunicable diseases are the leading cause of death in the Eastern Mediterranean Region, claiming 2.2 million lives every year, a figure that is projected to increase to more than 3.8 million by 2030 (2,3). Childhood overweight and obesity in the Region has reached epidemic proportions and shows no sign of declining. This has added great pressure to the pre-existing burden of undernutrition experienced by many countries. While the levels of childhood overweight and obesity are highest in high-income countries, with more than 50% of children being overweight, middle-income countries are also reaching these levels.

WHO Member States at the Sixty-sixth World Health Assembly in 2013 agreed on a voluntary global noncommunicable disease target to halt the rise in diabetes and obesity. The cornerstone of the regional response remains the Framework for action to implement the United Nations Political Declaration on the Prevention and Control of Noncommunicable Diseases (4), which comprises a set of strategic interventions in four domains: governance; prevention and reduction of risk factors; surveillance, monitoring and evaluation; and health care. Originally adopted in October 2012 at the Fifty-ninth Session of the Regional Committee for the Eastern Mediterranean, the Framework was modified to include the four time-bound commitments of the 2014 Outcome Document of the High-level Meeting of the United Nations General Assembly on the Comprehensive Review and Assessment of the Progress Achieved in the Prevention and Control of Non-Communicable Diseases, and a set of progress indicators to measure the progress of Member States regarding their implementation of these commitments on a regular basis.

Nutrient profiling is “the science of classifying or ranking foods according to their nutritional composition for reasons related to preventing disease and promoting health” (5). Nutrient profiling has been recognized by WHO as a useful tool for a variety of applications and is considered to be a critical tool for the implementation of restrictions on the marketing of foods to children (6,7). Nutrient profiling provides a means of differentiating between foods and non-alcoholic beverages (henceforth “foods”) that are more likely to be part of a healthy diet from those that are less likely (notably those foods that may contribute to excess consumption of energy, saturated fats, trans fats, sugar or salt). Nutrient profiling is a tool to categorize foods, not diets, but can be used through policy to improve the overall nutritional quality of diets.
A key strategic intervention of the regional Framework for action is to “Ensure healthy nutrition in early life and childhood including ... regulating marketing of foods and non-alcoholic beverages to children”. A nutrient profile model can be used by national authorities to guide policy-making, and provide a single systematic method of regulation in a number of areas, including national dietary health campaigns, food labelling, health and nutrition claims by the food industry, and provision of food to public institutions, for example to schools, as well as marketing restrictions, for example, foods that should not be advertised to children.

A draft regional nutrient profiling model for the marketing of unhealthy food and non-alcoholic beverages to children was developed for the Eastern Mediterranean Region at a consultation of nutrition experts held in Tunisia in 2014. The draft was based on the model which has been developed by the WHO Regional Office for Europe (7,1). In light of this, teams originally involved in the development of the European model, with the addition of a team from South Africa, were also invited to participate in the 2014 consultation on development of a regional model, where they presented WHO Europe and individual country experiences in nutrient profile model development. Before the consultation, several countries of the Region tested the nutrient profiling model developed for the WHO European Region, making use of regional and national food composition databases and other related resources (8). The model was tested in Bahrain, Islamic Republic of Iran, Kuwait, Lebanon, Morocco, Oman, and Tunisia, which applied it to a nationally generated list of between 100 and 200 foods that are either: (i) frequently marketed to children, or (ii) commonly consumed (ideally a combination of both). Countries were asked to comment on the food categories, the nutrient thresholds, the proposed exclusions and prohibitions, and to confirm that the model categorized foods in line with national food-based dietary guidelines. Countries reporting on experiences in testing the model found the food categories and nutrient thresholds to be largely appropriate and only proposed minor modifications. After further in-country testing, these modifications were finalized and reflected in the regional model.
2. About the nutrient profile model for the Eastern Mediterranean Region

Within the Region, the oversight of health laboratories is often fragmented within the health system. Ineffective donor coordination, lack of robust national laboratory policies and strategic plans, and diversity of funding sources have contributed to the development of uncoordinated health laboratory services in many countries. Many disease-specific programmes have been very effective in developing their laboratory component. These initiatives should definitely continue, and national health authorities should feel encouraged to expand them in a more cross-cutting manner, while trying to avoid detriment to existing national laboratory systems.

The regional model consists of a total of 18 food categories (with some subcategories) (Annex 1). In response to region-specific dietary culture and cuisine, several changes were made to the European model when formulating the model for the Region. Traditional/regional/local consumption patterns of some products such as bread, fish and yoghurt products differ from the European Region, with higher levels of consumption of these items. Taking into account that in most countries of the Region, daily salt intake levels are very high (current average levels are > 12 g per person per day) (9), and given that between 15 and 25% of regional daily salt intake comes from bread, permitted salt levels in bread products were reduced from 1.2 g per 100 g in the European model to 1 g per 100 g in the regional model, to reduce levels of salt in the diet. Similarly, permitted salt levels in yoghurt products (cheese and labneh (strained yoghurt)) were reduced from 0.2 g per 100g to 0.1 g per 100 g, as most cheeses in the Eastern Mediterranean Region contain high levels of salt, and salt levels in fresh and frozen meat, poultry, fish and similar products – a category for which marketing is always permitted in the European model – were specified as 0.1 g per 100 g. In response to the high regional consumption and availability of processed fish, and the WHO guidelines on the carcinogenicity of processed meat products, the European category of processed meat, poultry, fish and similar was divided. In the regional model, processed meat, poultry and similar products became a category for which marketing was not permitted, and a new category – Processed fish – was created, which retained the European model permissible salt levels of 1.7 g per 100g. Other changes in the formulation of the regional model were the further subdivision of the Juices subcategory; vegetable juices (the marketing of which was not permitted in the European model) were placed in a new subcategory, which set permitted levels of added sugars and salt at 0 g per 100 g and 0.1 g per 100 g respectively. The rationale for this change was that while all fruit juices are a significant source of free sugars and consequently their consumption should be limited, vegetable juices do not contain free sugars.
The list of food products included in the food categories was also modified to reflect products commonly consumed in the Region. For example, labneh, ayran and doogh were listed under: Yoghurts, sour milk and cream and other similar foods; regional cheeses such as kashkawan, lighvan, and nabulsi were listed under: Cheese; falafel and hummus were listed under: Ready-made and convenience foods and composite dishes; and tahini and harissa were included under: Sauces and dressings. Descriptions of the food products included or not included within the food categories comprise some examples only; the list is not exhaustive and may be added to when used nationally.

According to the regional model, marketing for seven categories is not permitted, meaning that no nutrient criteria are required. The same applies to the food category for which marketing is always permitted.

Marketing is prohibited if the product contains > 1 g per 100 g total fat in the form of industrially produced trans fatty acids\(^1\) or ≥ 0.5% of total energy in the form of alcohol.

Further indication of which food products fall within the food categories is provided by using international customs tariff codes. This approach was first used by Hungary for the implementation of its public health tax, and subsequently used in the (national) Norwegian nutrient profile model. The food tariff codes in the model for the Region were taken from the Harmonized Commodity Description and Coding System. Every food product can be categorized according to a specific tariff code. These codes are provided at two levels of detail in this model: four digits, which is the position number and broadly relates to food product categories, and (where possible) a six-digit subposition number, which provides more detail about the specific subcategory of food products. At the national level, tariff codes can be further specified to eight digits, or item numbers. When adopting or adapting the model for use in national contexts, Member States may consider using the eight-digit codes. Food companies should be familiar with the international tariff code system.

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\(^1\) This is in line with the WHO recommendation on trans fat intake. It is recognized that some countries have implemented legislation that bans or virtually eliminates trans-fats from the food supply, and these countries may choose to adopt a per 100 g figure in line with their statutory limits.
3. How to use this model

This model is designed for use by governments for the purposes of restricting food marketing to children. When determining whether a food product may or may not be marketed to children, a government (or food company) should take the following steps.

1. Identify which food category the product falls under. In some cases, this will be very clear according to the food category name (for example, breakfast cereals; yoghurts). In other cases, it may be necessary to reference the “included in category” or “not included in category” columns, and/or check the customs tariff code number.

2. Once the appropriate food category has been identified, the nutritional content of the food product must be cross-checked against the thresholds. A food product must not exceed on a per 100 g/ml basis any of the relevant thresholds for that food product category if marketing is to be permitted. For example, in the case of breakfast cereals, a product must not exceed the criteria for total fat, total sugars or salt.

3. The food products should, where possible, be assessed as sold or as reconstituted (if necessary) according to the manufacturer’s instructions.

4. If the marketing is for a restaurant meal, including a quick-service or takeaway meal of two or more menu items, all items must individually meet the relevant nutrient criteria.

5. If the product is a food that has a protected designation of origin, a protected geographical indication or is a guaranteed traditional speciality, marketing may be permitted according to national context.

2 The definition of marketing to children will need to be established as part of the policy development process, and may vary according to national context. WHO has defined marketing as “any form of commercial communication or message that is designed to, or has the effect of, increasing the recognition, appeal and/or consumption of particular products and services. It comprises anything that acts to advertise or otherwise promote a product or service” (10).
4. Definitions of terms used in this model

*Total fat* refers to the total fat content of the food product, which may be composed of different levels of fatty acids from the three broad groupings: saturated fatty acids, monounsaturated fatty acids and polyunsaturated fatty acids.

*Total sugars* refers to the total sugar content of the food product, which may be composed of: intrinsic sugars incorporated within the structure of intact fruit and vegetables; sugars from milk (lactose and galactose); and all additional monosaccharides and disaccharides added to foods by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups and fruit juices.

*Added sugar*. For the purpose of this nutrient profile model the term “added sugar” is used because available data in food composition tables refer to added sugar, defined here as all monosaccharides and disaccharides added to foods and beverages by the manufacturer, cook or consumer during processing or preparation. The WHO guidelines on sugars are for free sugars, covering monosaccharides (such as glucose or fructose) and disaccharides (such as sucrose or table sugar) added to foods by the manufacturer, cook or consumers in addition to sugars naturally present in honey, syrups, fruit juices and fruit concentrates (in this case, intrinsic sugars in, for example, fruits and vegetables are not considered free sugars).

*Non-sugar sweeteners* are food additives (other than a mono- or disaccharide sugar) which impart a sweet taste to a food. The technological purposes for this functional class include sweetener, intense sweetener and bulk sweetener. It should be noted that products such as sugars, honey and other food ingredients that can be used to sweeten are not associated with the term “sweetener”.

*Energy* refers to the total chemical energy available in food and its macronutrient constituents (carbohydrates, fats, proteins).

*Saturated fat* refers to the major saturated fatty acids in the diet, namely C14, C16 and C18, except in the case of milk and coconut oil where saturated fatty acids range from C4 to C18.

*Industrially produced trans fatty acids* refers to the major trans fatty acids in the diet which are typically isomers of 18:1 trans derived from partial hydrogenation of vegetable oils, a technique that produces semi-solid fats for use in commercial baking and frying, margarines and food manufacturing.

*Salt*. 1 g of sodium is equivalent to about 2.5 g of salt.
## 5. Regional nutrient profile model

<table>
<thead>
<tr>
<th>Food category</th>
<th>Included in category (examples)</th>
<th>Not included in category (examples)</th>
<th>Customs tariff code (position and/or subposition number)$^a$</th>
<th>Marketing not permitted if exceeds, per 100 g$^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chocolate and sugar confectionery, energy bars, and sweet toppings and deserts</td>
<td>Chocolate and other products containing cocoa; white chocolate; jelly, sweets and boiled sweets; custards, puddings; chewing gum and bubblegum; caramels; liquorice sweets; spreadable chocolate and other sweet sandwich toppings; nut spreads, including peanut butter; cereal, granola and muesli bars; marzipan</td>
<td>Chocolate- flavoured breakfast cereals; cakes and pastries; biscuits and other baked goods covered in chocolate</td>
<td>17.04; 18.06; Some of 19.05; 19.04; 20.05; 20.06; Some of 20.08; Some of 21.06</td>
<td>Not permitted</td>
</tr>
<tr>
<td>2. Savoury snacks</td>
<td>Popcorn and maize corn; nuts and mixed nuts, including those with fruit content; savoury biscuits and pretzels; other snacks made from rice, maize, dough or potato; seeds, sesame</td>
<td></td>
<td>08.01; 08.02; 10.05; 19.04; 19.04.10, 19.04.20; Some of 19.05; 20.05.20; 20.08.11; 20.08.20; 20.08.99</td>
<td></td>
</tr>
<tr>
<td>3. Beverages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Fruit juices</td>
<td>100% fruit juices; juices reconstituted from concentrate, and smoothies</td>
<td>Some of 20.09</td>
<td>Not permitted$^d$</td>
<td></td>
</tr>
<tr>
<td>b) Vegetable juices</td>
<td>100% vegetable juices</td>
<td>Some of 20.09</td>
<td>0</td>
<td>0.1$^c$</td>
</tr>
<tr>
<td>c) Milk drinks$^a$</td>
<td>Milks and sweetened milks; almond, rice and oat milks</td>
<td>Cream</td>
<td>Some of 04.01; Some of 04.02; 22.02.90</td>
<td>2.5</td>
</tr>
<tr>
<td>d) Energy drinks$^d$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Other beverages</td>
<td>Cola, lemonade, orangeade; other soft (aerated/carbonated) drinks, sweetened beverages, mineral and flavoured waters with added sugars or sweeteners</td>
<td>100% fruit and vegetable juices; Milk drinks</td>
<td>22.01; Some of 22.02</td>
<td>0</td>
</tr>
<tr>
<td>4. Edible ices</td>
<td>Ice cream, iced lollies, sorbets; frozen yoghurt</td>
<td></td>
<td>21.05</td>
<td>Not permitted</td>
</tr>
</tbody>
</table>

$^a$ Customs tariff code and/or subposition number.

$^b$ Marketing not permitted if exceeds, per 100 g.

$^c$ This may be reduced if an appropriate amount of sodium or potassium is provided.

$^d$ Some of 20.08.
<table>
<thead>
<tr>
<th>Food category</th>
<th>Included in category (examples)</th>
<th>Not included in category (examples)</th>
<th>Customs tariff code (position and/or subposition number)*</th>
<th>Marketing not permitted if exceeds, per 100 g²</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Breakfast cereals³</td>
<td>Oatmeal; cornflakes; chocolate breakfast cereals; mueslis; granola</td>
<td>19.04.10; 19.04.20</td>
<td>10 15</td>
<td>1.6</td>
</tr>
<tr>
<td>6. Cakes, sweet biscuits and pastries; other sweet baked goods, and dried mixes for making such goods</td>
<td>Pastries; croissants; cookies; sponge cakes; wafers; fruit pies; sweet buns; chocolate-covered biscuits; cake mixes and batters</td>
<td>Bread and bread products</td>
<td>19.01.20; 19.05.20; 19.05.31; 19.05.32</td>
<td>Not permitted</td>
</tr>
<tr>
<td>7. Yoghurts, sour milk, cream and other similar foods</td>
<td>Yoghurt; kephir; buttermilk; flavoured sour, fermented milk and drinking yoghurt (e.g. labneh, ayran, doogh); fromage frais; yoghurt substitutes; yoghurt products containing additional ingredients (e.g. muesli); cream; fruit-flavoured yoghurts</td>
<td>Milks and sweetened milks; almond, rice, and oat milks</td>
<td>Some of 04.02; 04.03; 04.04; Some of 04.06.10; 19.01.10; 19.01.90; Some of 21.06</td>
<td>2.5 10</td>
</tr>
<tr>
<td>8. Ready-made and convenience foods and composite dishes</td>
<td>Pizzas; filled pastas; pastas with sauce; lasagne; quiches; ready meals (including traditional composite dishes); ready-made sandwiches; canned or packaged soups and stews (whether from powder, packaged or tinned); rice dishes; mixes and dough; falafel; hummus</td>
<td>Some of 16; Some of 19.01.20; 19.02.19; 19.02.20; Some of 19.05; Some of 20.05; 21.04</td>
<td>10 10</td>
<td>225 4</td>
</tr>
<tr>
<td>9. Cheese</td>
<td>Medium-hard and hard cheeses (e.g. feta, halloumi, kashkawan, ackawi, nabulsi, majdoule, lighvan); soft cheeses; fresh cheese (e.g. ricotta, mozzarella); grated or powdered cheese; cottage cheese; cheese spreads; processed cheese</td>
<td>04.06</td>
<td>20</td>
<td>1.3</td>
</tr>
<tr>
<td>10. Butter, and other fats and oils</td>
<td>Butter; vegetable oils, margarines and spreads</td>
<td>04.05; 15</td>
<td>20</td>
<td>1.3</td>
</tr>
<tr>
<td>11. Bread, bread products and crispbreads⁴</td>
<td>Ordinary bread (containing cereal, leavens and salt); gluten-free bread; unleavened bread; crispbreads (e.g. buqsumat); rusks and toasted breads</td>
<td>Sweet biscuits; pastries; cakes</td>
<td>19.05.10; 19.05.40; 19.05.90</td>
<td>10 10</td>
</tr>
</tbody>
</table>

* Customs tariff codes are based on the Harmonized System of classification of goods (HS) and may vary slightly depending on the country.

² The limits for nutrients are maximum levels that should not be exceeded per 100 grams of ready-to-eat food.

³ Includes muesli.

⁴ Includes baked goods and bread products.
| Food category | Included in category (examples) | Not included in category (examples) | Customs tariff code (position and/or subposition number)
* | Marketing not permitted if exceeds, per 100 g
* |
<table>
<thead>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total fat (g)</td>
<td>Total sugars (g)</td>
</tr>
<tr>
<td>12. Fresh, dried or cooked pasta, rice and grains</td>
<td>Filled pasta and pasta in sauce; flour and ground grains</td>
<td>10; Some of 11; 19.02 excluding 19.02.20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>13. Fresh and frozen meat, poultry, fish and similar</td>
<td>Eggs</td>
<td>02 excluding 02.10; Some of 03 excluding 03.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Processed meat, poultry and similar</td>
<td>Sausage; ham; bacon; tinned meats and poultry; chicken nuggets</td>
<td>Pepperoni pizza</td>
<td>02.10; Some of 16</td>
<td>Not permitted</td>
</tr>
<tr>
<td>15. Processed fish</td>
<td>Smoked, tinned and pickled fish; fish fingers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Fresh and frozen fruit, vegetables and legumes</td>
<td>Fruit and vegetables; legumes; starchy vegetables, roots and tubers</td>
<td>Tinned fruits, vegetables and legumes; fruit in syrup; dried fruit; frozen fruit with added sugar</td>
<td>07 excluding 07.10, 07.11, 07.12, 07.13; Some of 08 excluding 08.01; 08.02; 08.11; 08.12; 08.13; 08.14</td>
<td>Permitted</td>
</tr>
<tr>
<td>17. Processed fruit, vegetables and legumes</td>
<td>Tinned fruit, vegetables and legumes; dried fruit; dried vegetables and legumes; marmalade; jams; pickled vegetables and fruit; stewed fruits; fruit peel</td>
<td>Fruit juice</td>
<td>07.10; 07.11; 07.12; 07.13; Some of 08.03; Some of 08.05; Some of 08.06; 08.11, 08.12, 08.13 and 08.14 20.01; 20.02; 20.03; 20.04; 20.05; 20.06; 20.07; 20.08.20, 20.08.30, 20.08.40, 20.08.50, 20.08.60, 20.08.70, 20.08.80; 20.08.93; 20.08.97; 20.08.99</td>
<td>5</td>
</tr>
<tr>
<td>18. Sauces and dressings</td>
<td>Salad dressings; tomato ketchup; mayonnaise; ready-to-use dips; soya sauce; mustard and mustard flour; tahini; harissa</td>
<td></td>
<td>21.03</td>
<td>10</td>
</tr>
</tbody>
</table>
Where appropriate, a four-digit position number has been given. Where “some of” is indicated, this means that most (but not all) food products in this position number are covered. In some instances a six-digit subposition is provided so as to pinpoint specific products more easily.

The food products should, where possible, be assessed as sold or as reconstituted (if necessary) according to the manufacturer’s instructions.

Salt equivalent

This is in line with the WHO guidelines on sugars intake for children and adults (11), as fruits juices are a significant source of free sugars for children. However, it is recognized that countries, according to national context and national food-based dietary guidelines, may take the decision to permit the marketing of 100% fruit juices in small portions.

Follow-up formulas and growing up milks are not covered by this model. It should be noted that World Health Assembly Resolution WHA39.28, adopted in 1986, states that the practice of providing infants with specially formulated milks (so-called “follow-up milks”) is not necessary. Further, any food or drink given before complementary feeding is nutritionally required may interfere with the initiation or maintenance of breastfeeding and should, therefore, be neither promoted nor encouraged for use by infants during this period.

There is no agreement on a definition of energy drinks. However, such a category of drinks includes a variety of non-alcoholic beverages. While caffeine is considered the main ingredient, a number of other substances are often present. The most common of these include guarana, taurine, glucuronolactone and vitamins. A common feature is that these beverages are marketed for their actual or perceived effects as stimulants, energizers and performance enhancers.

For this category, countries may choose to include a threshold for minimum dietary fibre content, for example ≥ 6 g dietary fibre.

This is in line with the WHO Guidelines on Sugars intake for Children and Adults (1), as dried fruits are a significant source of concentrated sugars for children. However, it is recognized that countries, according to national context and national food-based dietary guidelines, may take the decision to permit the marketing of some dried fruits in small portions.
References

1. WHO Regional Office for Europe nutrient profile model. Copenhagen: WHO Regional Office for Europe; 2015.


9. Policy statement and recommended actions to lower national salt intakes and lower death rates from high blood pressure and strokes in the Eastern Mediterranean

Nutrient profiling entails the classification of foods according to nutritional composition for reasons related to health. It is a critical tool for the implementation of restrictions on the marketing of unhealthy foods to children. This nutrient profile model is designed for use by policy-makers in countries of the Eastern Mediterranean Region for the purposes of restricting food marketing to children.