WHO Guidelines on Sugar and Salt

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Outline

• WHO’s work in Nutrition
• Guideline development process
• Salt guideline
• Sugars guideline
• Policy options
WHO’s work in nutrition

- Providing scientific advice and guidance on dietary goals and effective nutrition interventions

- Supporting adoption and adaptation of policies and guidelines for effective implementation

- Monitoring progress on the global nutrition-related targets and tracking implementation of policies and programmes
WHO Nutrition Guidelines available in different formats
WHO's (new) guideline development process

- Standard guideline development process guided by the WHO Handbook for Guideline Development

- Established the Guidelines Review Committee in 2007 to implement procedures to ensure that WHO guidelines are:
  - consistent with internationally accepted best practices
  - based on evidence
  - transparent
WHO nutrition guidelines and recommendations

WHO guidelines in standard reporting format

Purpose (Justification)
Background
Scope of the Guideline (Content and Questions)
Review Groups (Technical Consultation)
Recommendations
Summary of WHO Statement Development
Declaration of Interests
Plans for Update
Acknowledgments
References
WHO evidence-informed guideline development process

1. Establishing the WHO Steering Committee
   Determining the scope of the guideline

2. Identifying the guideline development group
   Identifying the external review group

3. Obtaining disclosures of interests and managing conflicts of interest

4. Formulating questions for the evidence reviews in PICOT format
   (Population, Intervention/Exposure, Comparator, Outcomes, Timing)
   Choosing important outcomes

5. Evidence retrieval, assessment, and synthesis

6. Formulation of recommendations and determination of their strength
   Plans for updating

7. Peer-review of draft guideline by external review group

8. Publication, dissemination, adaptation

9. Evaluation
Setting up groups

Guideline Steering Committee
- WHO Departments
- Directors or alternate appointee

WHO guideline development group
- Geographic representation
- Multi-disciplinary
- 17 members
  - 9 Female, 8 Male

External review group
- Stakeholders and experts
  - Invited experts
  - Open call for public comments
WHO Nutrition Guidelines Groups

• Members provide advice to WHO on:
  – The scope of the guidelines and priority questions for which systematic reviews of evidence will be commissioned
  – The choice of important outcomes for decision-making and developing recommendations
  – The interpretation of the evidence with explicit consideration of the overall balance of risks and benefits
  – The final drafting of formulating recommendations, taking into account existing evidence as well as diverse values and preferences
The *Grading of Recommendations Assessment, Development and Evaluation* approach

1) Quality of the evidence (high, moderate, low, very low)
   - methodological quality of evidence
   - likelihood of bias
   - by outcome

• Ideally, people who grade evidence should have available to them systematic reviews of the evidence regarding the benefits and risks of the alternative management strategies they are considering.

• Better research gives better confidence in the evidence (and the following decisions)
2) Two grades of recommendation: strong or conditional

- Quality of evidence only one factor
- Evidence alone is never sufficient to make a clinical or public health decision

- CONDITIONAL: the desirable effects of adherence probably outweigh the undesirable effects, although the trade-offs are uncertain
- STRONG: the desirable effects of adherence outweigh the undesirable effects
WHO Nutrition Guidance Expert Advisory Group (NUGAG) Launched in February 2010

- Membership of NUGAG is drawn from:
  - Experts from various WHO Expert Advisory Panels
  - Experts from larger roster from WHO roster??

- Meets twice a year to implement biannual programme of work

NUGAG Subgroups 2010 - 2011
- Micronutrients
- Diet and health
- Nutrition in life course and undernutrition
- Monitoring and evaluation

Renewed NUGAG Subgroups
- Diet and health (2012 – 2015)
### Ranges of population nutrient intake goals

<table>
<thead>
<tr>
<th>Dietary factor</th>
<th>Goal (% of total energy, unless otherwise stated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total fat</td>
<td>15-30%</td>
</tr>
<tr>
<td>Saturated fatty acids</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Polyunsaturated fatty acids (PUFAs)</td>
<td>6-10%</td>
</tr>
<tr>
<td>n-6 Polyunsaturated fatty acids (PUFAs)</td>
<td>5-8%</td>
</tr>
<tr>
<td>n-3 Polyunsaturated fatty acids (PUFAs)</td>
<td>1-2%</td>
</tr>
<tr>
<td>Trans fatty acids</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Monounsaturated fatty acids (MUFAs)</td>
<td>By difference&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Total carbohydrate</td>
<td>55-75%</td>
</tr>
<tr>
<td>Free sugars&lt;sup&gt;c&lt;/sup&gt;</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Protein</td>
<td>10-15%&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>&lt;300 mg per day</td>
</tr>
<tr>
<td>Sodium chloride (sodium)&lt;sup&gt;e&lt;/sup&gt;</td>
<td>&lt;5 g per day (&lt;2 g per day)</td>
</tr>
<tr>
<td>Fruits and vegetables</td>
<td>≥400 g per day</td>
</tr>
<tr>
<td>Total dietary fibre</td>
<td>From foods&lt;sup&gt;f&lt;/sup&gt;</td>
</tr>
<tr>
<td>Non-starch polysaccharides (NSP)</td>
<td>From foods&lt;sup&gt;f&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
Guidelines on dietary goals with impact on NCDs

- Sodium (2012)
- Potassium (2012)
- Free sugars (2015)
- Total fat (2015)
- SFA (2015)
- TFA (2015)
- CHO (starts in 2015)
- Fruits & vegetables (starts in 2015)
- Nutrient profile models:
  - Marketing (2015)
  - Food procurement in schools (2015)
  - Fiscal policy (2015)
  - Nutrition labelling
  - Health claims
Guidelines on dietary goals with impact on NCDs becoming more and more relevant

Changing food environments
Changing context:
Globalization, rapid urbanization and transformation of food systems
New, unsustainable and distorted food and eating systems
Easy access to calorie-rich, nutrient-poor food
HEALTHY CHOICES

- Beer Battered Crispy Fish Fillet: ₱195
- Creamy Mushroom Fish Fillet: ₱195
- Kaylan with Garlic: ₱175
- Polonchay with Garlic: ₱175
Nutrition Power for Kids

Shelves filled with various cereal brands such as Cheerios, Cocoa Pebbles, Froot Loops, Frosties, Milo, and cookie bars.
FREE DRAGON GLIDER or DRAGON STICKERS

HOW TO TRAIN YOUR DRAGON 2
ONLY IN CINEMAS
Salt (sodium) guideline
WHO Guideline: Sodium intake in adults and children

**Recommendations:**

WHO recommends a reduction in sodium intake to reduce blood pressure and risk of cardiovascular disease, stroke and coronary heart disease in adults (*strong recommendation*). WHO recommends a reduction to <2g/day sodium (5g/day salt) in adults (*strong recommendation*).

WHO recommends a reduction in sodium intake to reduce blood pressure in children (*strong recommendation*). The recommended maximum level <2g/day sodium in adults should be adjusted downward based on the energy requirements of children relative to those of adults.
Recommendations – Remarks:

- These recommendations apply to all individuals, with or without hypertension (including pregnant and lactating women), except for individuals with illnesses or taking drug therapy that may lead to hyponatremia or acute build up of body water, or require physician supervised diets (e.g. patients with heart failure and those with type 1 diabetes). In these subpopulations there may be a particular relation between sodium intake and the health outcomes of interest. (Hence these subpopulations were not considered in the review of the evidence and generation of the guidelines).

- For this recommendation “adults” includes individuals >= 16 years

- For this recommendation “children” includes individuals 2-15 years of age inclusive.

- The recommendation for children does not address the recommended period of exclusive breastfeeding (0-6 months) or the period of complementary feeding with continued breastfeeding (6-24 months)

- These recommendations complement the WHO guideline on potassium consumption and should not be interpreted to replace or supersede that guideline. Public Health interventions should aim to reduce sodium intake and simultaneously increase potassium intake through foods.
Sugars guideline
WHO Guideline: Sugars intake in adults and children

**Recommendations:**

WHO recommends a reduced intake of free sugars throughout the lifecourse (*strong recommendation*)

In both adults and children, WHO recommends reducing the intake of free sugars to less than 10% of total energy intake (*strong recommendation*)

WHO suggests a further reduction of the intake of free sugars to below 5% of total energy intake (*conditional recommendation*)
10% of total energy intake...?

- **1600 kcal**
  - 10% of 1600 kcal = 160 kcal = **40g of sugar**
    (10 teaspoons)
- **2000 kcal**
  - 10% of 2000 kcal = 200 kcal = **50g of sugar**
    (12 teaspoons)
- **2500 kcal**
  - 10% of 2500 kcal = 250 kcal = **62.5g of sugar**
    (16 teaspoons)
WHO Guideline: Sugars intake in adults and children

Recommendations – Remarks:

- Free sugars include monosaccharides and disaccharides added to foods and beverages by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates.

- For countries with a low intake of free sugars, levels should not be increased. Higher intakes of free sugars threaten the nutrient quality of diets by providing significant energy without specific nutrients.

- These recommendations were based on the totality of evidence reviewed regarding the relationship between free sugars intake and body weight (low and moderate quality evidence) and dental caries (very low and moderate quality evidence).

- Increasing or decreasing free sugars is associated with parallel changes in body weight, and the relationship is present regardless of the level of intake of free sugars. The excess body weight associated with free sugars intake results from excess energy intake.

- The recommendation to limit free sugars intake to less than 10% of total energy intake is based on moderate quality evidence from observational studies of dental caries.

- The recommendation to further limit free sugars intake to less than 5% of total energy intake is based on very low quality evidence from ecological studies in which a positive dose–response relationship between free sugars intake and dental caries was observed at free sugars intake of less than 5% of total energy intake.
Recommendations – Remarks (continued):

- The recommendation to further limit free sugars intake to less than 5% of total energy intake, which is also supported by other recent analyses, is based on the recognition that the negative health effects of dental caries are cumulative, tracking from childhood to adulthood. Because dental caries is the result of lifelong exposure to a dietary risk factor (i.e. free sugars), even a small reduction in the risk of dental caries in childhood is of significance in later life; therefore, to minimize lifelong risk of dental caries, the free sugars intake should be as low as possible.

- No evidence for harm associated with reducing the intake of free sugars to less than 5% of total energy intake was identified.

- Although exposure to fluoride reduces dental caries at a given age, and delays the onset of the cavitation process, it does not completely prevent dental caries, and dental caries still progresses in populations exposed to fluoride.

- Intake of free sugars is not considered an appropriate strategy for increasing caloric intake in individuals with inadequate energy intake if other options are available.

- These recommendations do not apply to individuals in need of therapeutic diets, including for the management of severe and moderate acute malnutrition. Specific guidelines for the management of severe and moderate acute malnutrition are being developed separately.
Policy Options included in the:

Action Plan to Reduce the Double Burden of Malnutrition in the Western Pacific Region, 2015-2020
Why focus on the double burden?

- All countries in the WPR are beset by the double burden of malnutrition
- Current food systems are being increasingly challenged to provide adequate, safe, diversified, nutrient-rich foods
- Addressing the “double burden” forces us to think outside of the typical programme silos
- Need to reach out within the Ministry of Health; to other Ministries and partners

Artist: Denise Grisi
2012
Resolution Regional Committee Meeting (RCM)

2013
Regional Member State consultation - drafting

2014
RCM approves

2015
Implementation and monitoring
5 objectives, all related to childhood overweight and obesity:

1. Elevate nutrition in the national development agenda.
2. Protect, promote and support optimal breastfeeding and complementary feeding practices.
3. Strengthen and enforce legal frameworks that protect, promote and support healthy diets.
4. Improve accessibility, quality and implementation of nutrition services across public health programmes and settings.
5. Use financing mechanisms to reinforce healthy diets and ensure delivery and use of nutrition services.
Policy Options related to reducing intake of salt and sugars
Objective 3

Strengthen and enforce legal frameworks that protect, promote and support healthy diets.

- Ensure the following are fully incorporated into effective national measures:
  - WHO Set of Recommendations on the Marketing of FNABs
  - Standards for foods and drinks sold in schools
  - Health claims / labelling based on Codex Guidelines
  - Salt reduction strategies
Set of Recommendations on Marketing

- Legal/technical support
- Operational research (Mongolia and PHL)
- Nutrient profiling for WPR (adapting the WHO model)
- Developing an online tool (PEARL)
Standards for schools

• Legal support (drafting of regulations)
• Technical support defining stand (nutrient profiling)
• Advocacy
Nutrient profiling

- Nutrient profiling is “the science of classifying or ranking foods according to their nutritional composition for reasons related to preventing disease and promoting health.”
- This model is designed for use by governments for the purposes of restricting food marketing to children.
Reformulation of foods (salt)

Study: Mongolia

The average salt intake of Mongolians is 11.1 g, which is 2x higher than the WHO recommended level.

Salt Intake of the Population. Survey Report 2011
Salt Reduction in Mongolia

• Involvement of key stakeholders
• Baseline monitoring completed in 2011: Information for Action
• Pilot intervention implemented
  – 2012-2014
  – advocacy, public consultation
• Monitoring of impact
• Development of ‘National Strategy for Reduction of Salt Intake’
Main factory in Mongolia reduced salt content in its bread by 12%
SALT Toolkit

Surveillance, evaluation & monitoring

Awareness

Labeling, legislation and industry commitments

Acknowledging fortification

World Health Organization
Salt reduction has been identified as one of the most cost-effective interventions for the avoidance and control of CVDs. The costs of implementing strategies to reduce salt consumption in today’s complex and evolving society are substantial but small in comparison to the benefits. Reducing salt intake can lead to significant health benefits and savings in health care costs.
Reducing salt intake to less than 5 grams per day (about 1 teaspoon) will save around 2.5 million lives every year.

#LessSalt
How WHO guidelines and scientific advice are used by the Codex

GUIDELINES ON NUTRITION LABELLING

PURPOSE OF THE GUIDELINES
To ensure that nutrition labelling is effective:

• In providing the consumer with information about the nutrient composition of food;
• In providing a means for conveying information about the nutritional quality of food;

To ensure that nutrition labelling is not misleading, deceptive or insignificant in any manner.

2.5 *Nutrient* means any substance normally consumed as a constituent of food:

(a) which provides energy; or
(b) which is needed for growth, development and maintenance of life; or
(c) a deficit of which will cause characteristic bio-chemical or physiological changes to occur.

2.6 *Nutrient Reference Values (NRVs)*\(^1\) are a set of numerical values that are based on scientific data for purposes of nutrition labelling and relevant claims. They comprise the following two types of NRVs:

*Nutrient Reference Values - Requirements (NRVs-R)* refer to NRVs that are based on levels of nutrients associated with nutrient requirements.

*Nutrient Reference Values - Noncommunicable Disease (NRVs-NCD)* refer to NRVs that are based on levels of nutrients associated with the reduction in the risk of diet-related noncommunicable diseases not including nutrient deficiency diseases or disorders.

2.7 *Sugars* means all mono-saccharides and di-saccharides present in food.

2.8 *Dietary fibre* means carbohydrate polymers\(^2\) with ten or more monomeric units\(^3\), which are not hydrolysed by the endogenous enzymes in the small intestine of humans and belong to the following categories:
How WHO guidelines and scientific advice are used by the Codex

Updated in 2013

GUIDELINES ON NUTRITION LABELLING
CAC/GL 2-1985

3. NUTRIENT DECLARATION

3.1 Application of nutrient declaration
3.1.1 Nutrient declaration should be mandatory for all prepackaged foods for which nutrition or health claims, as defined in the Guidelines for Use of Nutrition and Health Claims (CAC/GL 23-1997), are made.

3.1.2 Nutrient declaration should be mandatory for all other prepackaged foods except where national circumstances would not support such declarations. Certain foods may be exempted for example, on the basis of nutritional or dietary insignificance or small packaging.

3.2 Listing of nutrients
3.2.1 Where nutrient declaration is applied, the declaration of the following should be mandatory:

3.2.1.1 Energy value; and

3.2.1.2 The amounts of protein, available carbohydrate (i.e. dietary carbohydrate excluding dietary fibre), fat, saturated fat, sodium and total sugars; and

3.2.1.3 The amount of any other nutrient for which a nutrition or health claim is made; and
<table>
<thead>
<tr>
<th>Serving</th>
<th>Sodium</th>
<th>Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 g (15 chips)</td>
<td>170 mg</td>
<td>425 mg</td>
</tr>
<tr>
<td>30 g + 125 ml milk</td>
<td>118 mg</td>
<td>295 mg</td>
</tr>
<tr>
<td>55 g</td>
<td>400</td>
<td>1 g</td>
</tr>
<tr>
<td>50 g (1 pc)</td>
<td>349 mg</td>
<td>873 mg</td>
</tr>
<tr>
<td>32 g (2 tbsp)</td>
<td>150 mg</td>
<td>375 g</td>
</tr>
<tr>
<td>68 g (2 slices)</td>
<td>260 mg</td>
<td>650 g</td>
</tr>
<tr>
<td>54.5 g (2 slices)</td>
<td>520 mg</td>
<td>1.3 g</td>
</tr>
</tbody>
</table>
Objective 5

Use financing mechanisms to reinforce healthy diets and ensure delivery and use of nutrition services.

- Consider food pricing schemes / policies that favour healthier decisions, where applicable
  - Provide economic incentives for local production, processing and distribution or importation, and marketing of healthier food options;
  - Impose tax increases on unhealthy foods (foods high in fat, sugar and salt) and consider allocating a percentage of this to promoting healthier food options
<table>
<thead>
<tr>
<th>Country</th>
<th>Type of taxation</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>French Polynesia</td>
<td>Excise and import tax on sugar-sweetened drinks, confectionaries, and ice cream</td>
<td>40 CFP*/litre local tax; 60 CFP*/litre imported tax</td>
</tr>
<tr>
<td>Nauru</td>
<td>Sugar levy on all high-sugar foods and drinks and removal of a levy on bottled water</td>
<td>30%</td>
</tr>
<tr>
<td>Cook Islands</td>
<td>Import duty on sugar-sweetened drinks</td>
<td>15% with a subsequent 2% rise per year</td>
</tr>
<tr>
<td>Fiji</td>
<td>Import duty and local excise duty</td>
<td>5% import duty; 5cents/liter local excise duty</td>
</tr>
<tr>
<td>Fiji</td>
<td>Excise on raw materials</td>
<td>3%</td>
</tr>
<tr>
<td>Fiji</td>
<td>Import duty on palm oil and monosodium glutamate</td>
<td>32%</td>
</tr>
<tr>
<td>Fiji</td>
<td>Import duty on fruits and vegetables not grown locally</td>
<td>Removal of existing taxes, which were 5–32%</td>
</tr>
</tbody>
</table>
Summary of policy options

• Marketing restrictions
• Setting food standards (schools)
• Labelling
• Food reformulation (salt)
• Taxation
Electronic Library of Essential Nutrition Actions

e-Library of Evidence for Nutrition Actions (eLENA)

Welcome to eLENA

The WHO e-Library of Evidence for Nutrition Actions is an online library of evidence-informed guidance and interventions. It is a single point of reference for nutrition guidelines, recommendations and related including supporting materials such as scientific background materials and commentaries from eLENA. eLENA aims to help countries successfully implement scale-up nutrition interventions by informing policy development and programme design.

Abnormalities

Anemia: insecticide-treated nets to reduce the risk of malaria in pregnant
woman
Anemia: optimal timing of cord clamping for the prevention of iron deficiency
anemia in infants

A

B

Biofortification of staple crops
Breastfeeding: education for increased breastfeeding duration
Breastfeeding: continued breastfeeding
Breastfeeding: early initiation
Breastfeeding: exclusive breastfeeding
Breastfeeding: implementation of the Baby-friendly Hospital Initiative
Breastfeeding: regulation of marketing breast-milk substitutes

C

Calcium supplementation during pregnancy for the prevention of pre-eclampsia
Complementary feeding
Conditional cash transfer programmes and nutritional status

Interventions by Category

Interventions are placed into one of three categories depending on the level of guidance and supporting evidence.

Category 1 interventions are interventions for which there are guidelines that have been recently approved by the WHO Guidelines Review Committee (GRC). Category 1 interventions also include those supported by recommendations and other forms of guidance that have been adopted or endorsed by the World Health Assembly.

Category 2 interventions are programs for which systematic review(s) have been conducted but no recent guidelines are yet available that have been approved by the WHO Guidelines Review Committee.

Category 3 interventions are for which available evidence is limited and systematic reviews have not yet been conducted.

WHO recommendations include both Category 1 and Category 2 interventions.
Thank you for your attention