

# PAHO/ WHO – FAO Pre-CCNSDDU technical workshop on sodium/salt and sugars

09:45 - 10:15: Overview of critical issues related to terminology, labeling and nutrient values in support of healthier food choices



**Dr Ricardo Uauy,  
INTA Institute of Nutrition U of Chile,  
member PAHO Expert group**



**Joint WHO/FAO expert consultation  
on diet, nutrition and the  
prevention of chronic diseases**



Geneva, Switzerland  
28 January – 1 February 2002

# **Diet, nutrition and the prevention of chronic diseases**

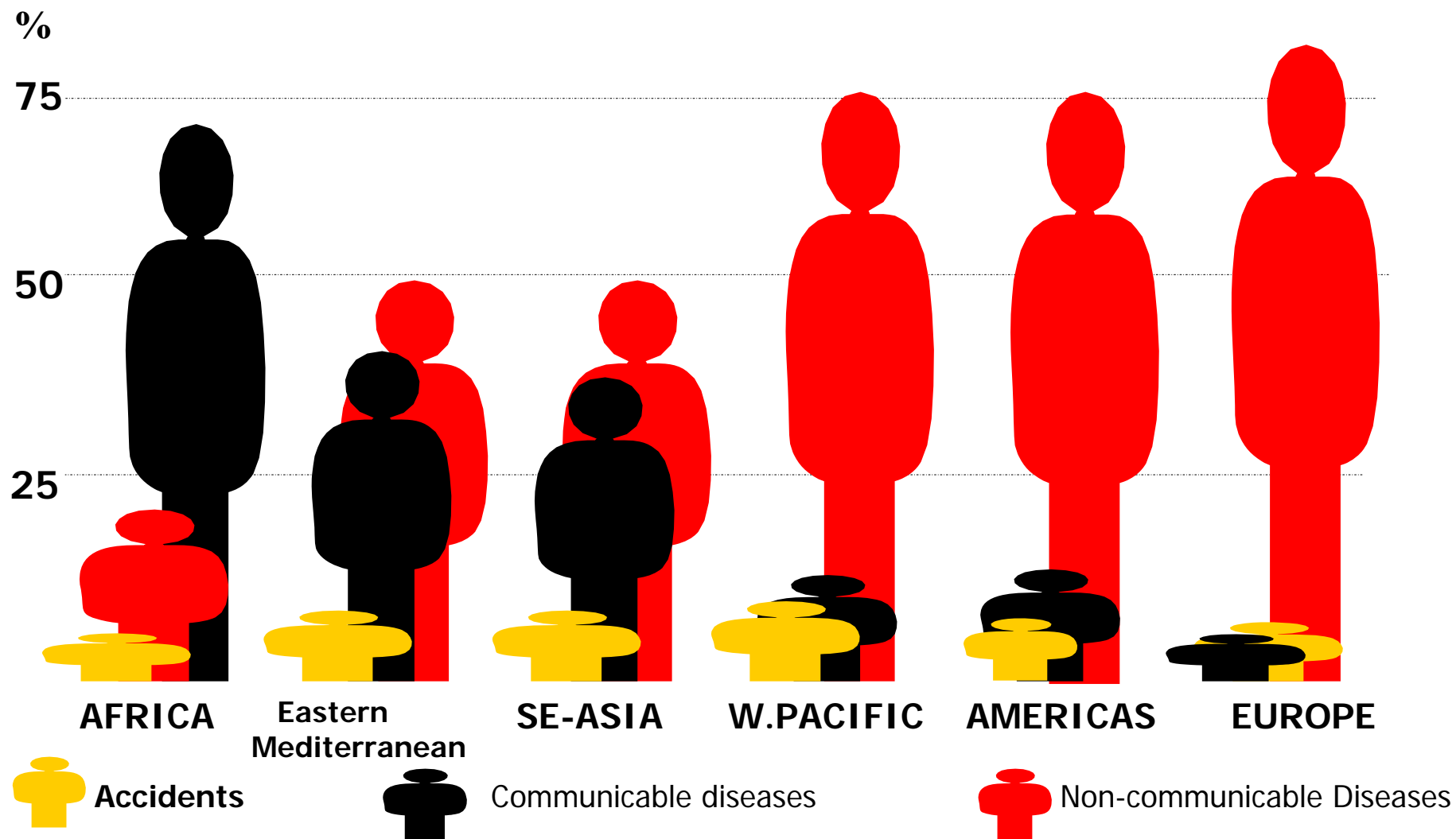
*Report of the Joint WHO/FAO expert consultation*



**Technical Report Series 916**

**[www.who.int/hpr/nutrition/ExpertConsultationGE.htm](http://www.who.int/hpr/nutrition/ExpertConsultationGE.htm)**

# Deaths by Regions of the World



Source: WHO, World Health Report 2004

# Principal nutrient/food changes

## Reduce

- Total fat
- Saturated Fats (C14,C16)
- Trans fatty acids
- Refined starches
- Free sugars
- Sodium/salt
- Preserved meats

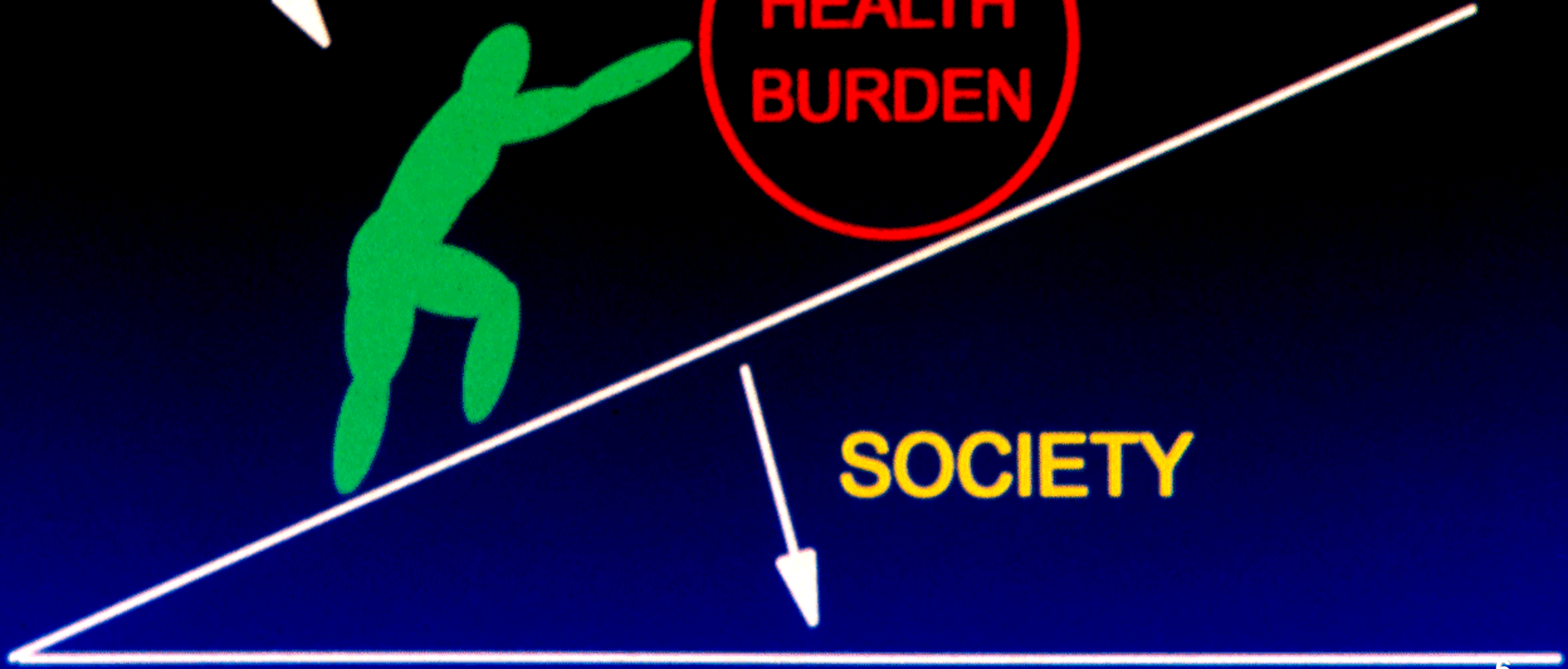
## Increase

- PHYSICAL ACTIVITY
- Vegetables
- Fruits, legumes
- Fibre/NSP
- $\omega$  - 3 fatty acids (EPA+DHA)
- Iron/iodine/Zinc
- Folate

**INDIVIDUAL**



**SOCIETY**

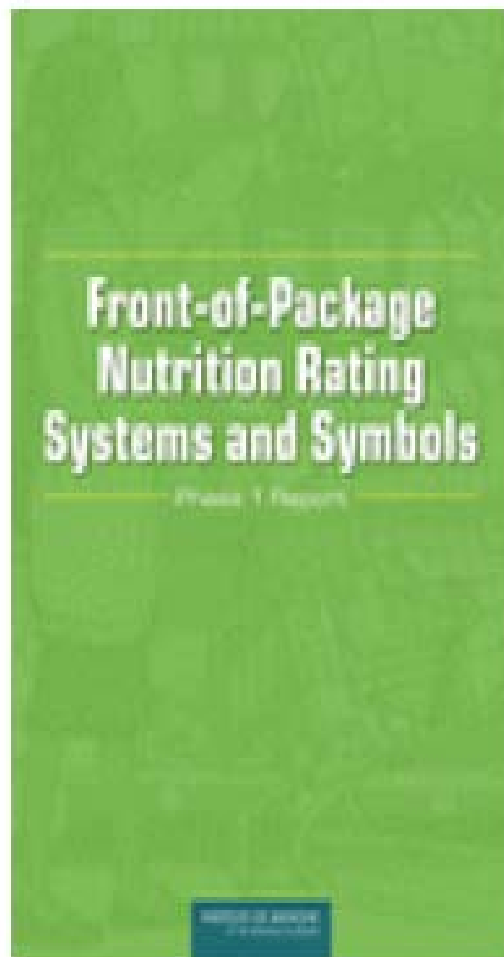


# WHO Global Strategy 2004

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## *Specific recommendations to the food industry:*

- **Limit the levels of saturated fats, trans-fatty acids, free sugars, and salt in existing products**
- **Provide consumers with adequate and understandable product and nutrition information**
- **Issue simple, clear and consistent food labels and evidence-based health claims**



## **Examination of Front-of-Package Nutrition Rating Systems and Symbols: Phase I Report**

Ellen A. Wartella, Alice H. Lichtenstein, and Caitlin S. Boon, Editors; Committee on Examination of Front-of-Package Nutrition Ratings Systems and Symbols; Institute of Medicine

ISBN: 0-309-15828-1, 200 pages, 6 x 9, (2010)

**This free PDF was downloaded from:**

**<http://www.nap.edu/catalog/12957.html>**

# Terminology:

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- **Nutrient Reference Values** numeric representation of nutrient intakes associated with life long promotion of good health
- **Labeling information**
- **Front-of-package systems** focus on nutrients or food components that are most strongly associated with the diet-related health risks affecting the greatest number of people



# **Terminology:**

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- **The information highlighted in front-of-package systems should be consistent with the Nutrition Information on back of pack panel.**
- **Front-of-package systems should apply to as many foods as possible, specially those foods that are the largest contributors to the population intake of the given critical nutrient .**
- **Reference nutrient values should be supported by evidence of impact on long term health and prevention of NCDs.**

# Terminology:

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- **Nutrition Labeling**, informs consumers on nutritional properties of food, short and long term
- **Nutrient Reference Value** numeric representation of nutrient content associated with promotion of good health short and long term
- **Most commonly NRV** is expressed as Max or a min, or as % of max or min.
- **NCD outcomes** are not single nutrient dependent or rarely provide clear dose response.

- **Nutrient-Specific Systems:** symbols display the amount per serving of select nutrients from the panel on the front of the food package or use symbols based on claim criteria.  
“low fat,” “high fiber,”
- **A declaration of calories per serving should also be used in the front of the food pack label**
- **Percent daily values (%DV) or guideline daily amounts (%GDA) appear on the front of pack, may also include traffic light colors or words to indicate that a product contains “high,” “medium,” or “low” amounts of given nutrients.**

- **Numeric score (i.e., 1–100) or symbols (i.e., 0, 1, 2, 3) to indicate the nutritional quality of product.**
- **Food Group Information Systems: Systems in which symbols are awarded to a food product based on presence of a food group or ingredient.**
- **Some symbols indicate the presence of a serving (or partial serving) of a particular food group; other symbols indicate the presence of ingredients considered to be important dietary components, such as whole grains.**
- **Nutrient-specific systems have been developed largely by food manufacturers and retailers**

### BOX 7-1

#### Nutrient-Specific Information Option 1: Nutrient Amounts per Serving

Declaration of:

- Calories
- Saturated fat + *trans* fat (g)
- Sodium (mg)
- Serving size

### BOX 7-2




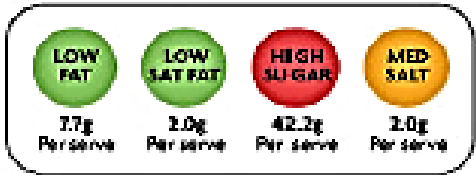
#### Nutrient-Specific Information Option 2: Nutrient Amounts Within the Context of a Daily Diet

Declaration of:

- %DV of calories based on a 2000-calorie/day diet
- %DV of saturated fat + *trans* fat (*using DV for saturated fat as basis for calculation*)
- %DV of sodium
- Serving size

\*Calories, grams of saturated + *trans* fats, and milligrams of sodium could also be displayed.

**TABLE S-1 Overview of Existing Front-of-Package Programs**

System Icon	Program Name	System Developer	Criteria Publicly Available	Basis for Nutrient Criteria
<b>Nutrient-Specific Systems</b>				
	General Mills Nutrition Highlights <sup>a</sup>	Food manufacturer	Yes	FDA %DVs
	General Mills Goodness Corner <sup>b</sup>	Food manufacturer	Yes	FDA regulations for nutrient content claims
[Image withheld at the request of the retailer]	Harris Teeter Wellness Keys <sup>c</sup>	Retailer	Yes	FDA regulations for nutrient content claims
 <small>Each serving provides these percentages of the CDA based on a 2,000 calorie diet. See side panel for additional information.</small>	Kellogg's Nutrition at a Glance <sup>d</sup>	Food manufacturer	Yes	FDA %DVs presented as %GDAs
	UK Traffic Light <sup>e</sup>	Government agency	Yes	EC regulation No. 1924/2006 for green/amber boundaries; COMA and SACN advice for amber/red boundaries



Choices (EU)<sup>§</sup>

Non-industry  
experts

Yes

WHO guidelines  
for saturated and  
*trans* fats,  
sodium, sugars;  
dietary guidelines  
from 21 countries



Guiding Stars<sup>b</sup>

Retailer

No

Proprietary  
algorithm based  
upon FDA,  
USDA,  
USDHHS, IOM,  
and WHO  
recommendations  
and regulations



Canada's  
Health Check<sup>c</sup>

Nonprofit  
organization

Yes

Canada's Food  
Guide

Reprint  
permission  
pending

Giant Food  
Healthy Ideas<sup>d</sup>

Retailer

Yes

Dietary  
Guidelines for  
Americans,  
implied nutrient  
content claims,  
and health claims



AHA  
Heart Check<sup>e</sup>

Nonprofit  
organization

Yes

FDA %DVs,  
implied nutrient  
content claims,  
coronary heart  
disease health  
claims

<sup>§</sup> Front-of-Pack device of the Choices Programme. Exact wording on the logo varies with the local languages. Images provided by Choices International Foundation.



NuVal<sup>†</sup>

Non-industry  
experts

No

Proprietary  
algorithm based  
upon Dietary  
Guidelines for  
Americans and  
DRIs, as well as  
established data in  
scientific  
literature

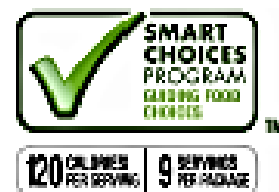


Kraft  
Sensible  
Solution<sup>™</sup>

Food  
manufacturer

Yes

Dietary  
Guidelines for  
Americans, and  
authoritative  
statements from  
NAS and FDA



Smart  
Choices<sup>™</sup>

Industry and  
non-industry  
consortium

Yes

Dietary  
Guidelines for  
Americans, and  
authoritative  
statements from  
NAS and FDA

Reprint  
permission  
pending

PepsiCo  
Smart Spot<sup>®</sup>

Food  
manufacturer

Yes

Authoritative  
statements from  
FDA and NAS



Sweden  
National Food  
Administration  
Keyhole<sup>®</sup>

Government  
agency

Yes

National Food  
Administration  
Regulation  
LIVSFS 2005:9

<sup>†</sup> Reprinted with permission of NuVal, LLC.



System Icon	Program Name	System Developer	Criteria Publicly Available	Basis for Nutrient Criteria
Reprint permission pending	Australia/New Zealand Tick Programme <sup>9</sup>	Industry and non-industry working group	Yes	Working-group determined values

**Food Group Information Systems**



ConAgra Start Making Choices<sup>r</sup>

Food manufacturer

Yes

USDA's MyPyramid



Whole Grain Council Whole Grain Stamp<sup>s</sup>

Industry and non-industry consortium

Yes

USDA's MyPyramid

<sup>9</sup> Reprint permission pending.

<sup>r</sup> START MAKING CHOICES<sup>®</sup> is a registered trademark of ConAgra Foods RDM, Inc.

<sup>s</sup> Courtesy Oldways and the Whole Grains Council, wholegrainscouncil.org.

**120** CALORIES  
PER SERVING

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**9** SERVINGS  
PER PACKAGE

# BASIC PRODUCT GROUP I

<b>Fresh or fresh frozen fruit, vegetables &amp; Legumes</b>	<b>All types of fresh fruit, vegetables, and legumes without additives, including freshly frozen and/or sliced fruit &amp; vegetables. <i>E.g.: pre-cut leek, pre-sliced melon, cucumber, broccoli, deep-frozen spinach (without added cream), and raspberries.</i></b>
<b>Processed fruit &amp; vegetables</b>	<b>All types of processed fruit &amp; vegetables, with the exception of fruit juices and frozen or pre-sliced fruit &amp; vegetables without further processing. <i>E.g.: tinned tomatoes, tinned carrots, tinned kidney beans, deep-frozen spinach à la crème, deep-frozen vegetables, tomato juice, dried lentils, pickles, mixed vegetable juices, dried apricots or figs, pine on juice, fruit cocktail in own juice or syrup, apple sauce, candied dates, strawberry purée, olives, mixed fruit &amp; vegetable purées or juices.</i></b>
<b>Fruit juices</b>	<b>All kinds of fruit juices with a minimum of 98% own juice. <i>E.g.: orange juice, apple juice, multi-fruit juice.</i></b>
<b>Water (plain)</b>	<b>Includes natural (mineral) waters and other bottled waters, whether non-carbonated or carbonated.</b>

## BASIC PRODUCT GROUP II

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<b>Potatoes (unprocessed)</b>	<b>All unprocessed uncooked potatoes, without additives, including peeled, sliced and/or chilled potatoes</b>
<b>Potatoes (processed), Pasta/ noodles</b>	<b>All kinds of potato products, pasta and similar grain products, used for a main course. <i>E.g.: boiled/fried potatoes, mashed potato, (wholemeal) pasta.</i></b>
<b>Bread</b>	<b>All kinds of bread or substitutes for bread with the exception of breakfast cereals. <i>E.g.: wheat bread, wholemeal bread, crisp bread, croissants, rye bread, specialty rolls, and crackers.</i></b>
<b>Rice</b>	<b>All kinds of rice, used for a main course. <i>E.g.: boiled, dried unpolished rice, white rice, whole grain rice.</i></b>

## BASIC PRODUCT GROUP III

<b>Grains and cereal products</b>	<b>All kinds of grains and cereal products (other than bread and breakfast cereals). <i>E.g.: flour, breadcrumbs, binding agents, pancake mixes.</i></b>
<b>Breakfast cereal products</b>	<b>All kinds of breakfast cereal products. <i>E.g.: muesli, cruesli, oats, cornflakes, rice crispies.</i></b>
<b>Meat, poultry, eggs (unprocessed)</b>	<b>All kinds of unprocessed meat, poultry and eggs (including deep-frozen meat without further processing). <i>E.g.: beef, pork, turkey, egg.</i></b>
<b>Processed meat, meat products and meat substitutes</b>	<b>All kinds of processed meat/poultry, meat products and (vegetable) meat substitutes. <i>E.g.: ready-to-eat meatballs, spiced or salted meat (fresh or deep-frozen), salami, smoke-dried beef, grilled ham, tempeh, tofu, dairy-based meat substitute, fungus-based meat substitute.</i></b>

# BASIC PRODUCT GROUP IV

<b>Fresh or fresh frozen fish, shellfish and crustaceans</b>	<b>All kinds of unprocessed fish, crustaceans and shellfish (including deep-frozen, steamed or smoked fish without further processing). <i>E.g.: uncooked herring, cod (fresh or deep-frozen), fresh eel, lobster crab, mussel, and shrimp.</i></b>
<b>Processed fish or fish products</b>	<b>All kinds of processed fish, processed crustaceans and processed shellfish. <i>E.g.: cod parings, fried fillet of haddock, deep-fried octopus/ squid (cephalopod), pickled mussels, herring in tomato sauce, tinned sardines, tinned tuna, spiced or salted fish (fresh or deep-frozen).</i></b>
<b>Milk (products)</b>	<b>All kinds of milk and milk products. <i>E.g.: low fat milk, buttermilk semi-skimmed milk, full-cream milk, low fat yoghurt, semi-skimmed yoghurt, yoghurt drink, low fat custard, low fat fruit yoghurt, evaporated milk, coffee cream, cream (for culinary use), milk substitutes like soymilk.</i></b>
<b>Cheese /products</b>	<b>All kinds of cheese and cheese products. <i>E.g.:20+ cheese, 30+ cheese, Edam, Brie 50+, 48+ Gouda cheese, blue cheese, gorgonzola, gruyere, soft herb cheese.</i></b>

# BASIC PRODUCT GROUPS V

<b>Oils, fats and fat containing spreads</b>	<b>All fats and oils used as spreads on bread and/or the preparation of food. <i>E.g.: oil (all types), low-fat margarine, margarine, butter, oil/fat products for roasting and frying (solid or liquid).</i></b>
<b>Main course</b>	<b>All ready-to-cook meals intended to be eaten as a main dish during lunch or dinner. <i>E.g.: meals for steaming, ready-to-cook meals, pizza, deep-frozen meals</i></b>
<b>Sandwiches/rolls</b>	<b>All ready-to-eat filled sandwiches/rolls</b>

# NON BASIC PRODUCT GROUP    NON-BASIC PRODUCT GROUPS I

<b>Soups</b>	All kinds of soups and broths. <i>E.g.: tinned soup, deep-frozen soup, soup in stand-up pouches, soup served by the catering industry.</i>
<b>Meal sauces</b>	All sauces that constitute a substantial component of the meal (portion size > 35 g). <i>E.g.: pasta sauce, béchamel sauce, vegetable sauce, meat sauce, fish sauce, cheese sauce, mustard sauce, gravy.</i>
<b>Other sauces (non-water basis)</b>	All sauces that constitute only a minor component of the meal (portion size < 35 g) without added emulsifying agent AND have a fat content < 10% w/w. <i>E.g.: ketchup, soy sauce, chocolate sauce, fruit sauce, barbecue sauce.</i>
<b>Other sauces (emulsions)</b>	All sauces that constitute only a minor component of the meal (portion size < 35 g) to which an emulsifying agent is added OR have a fat content ≥ 10% w/w. <i>E.g.: mayonnaise, salad dressing, dip sauce, marinade, mustard, vinaigrette.</i>
<b>Snacks (pastry, edible ice cream, sweet snacks savoury snacks)</b>	All kinds of sweet, savoury, and sweet baked products intended to be eaten as a small snack between meals or as a minor component of a meal. <i>E.g.:</i> <ul style="list-style-type: none"><li>• <i>Savoury products: potato crisps, popcorn.</i></li><li>• <i>Sweet products: sweets, all types of chocolate, candy bars.</i></li><li>• <i>Sweet baked products: biscuits, cookies, all types of cake and pastries. Ice cream: ice cream, yoghurt ice, sorbet i milkshake.</i></li></ul>



# NON BASIC PRODUCT GROUP    NON-BASIC PRODUCT GROUPS II

<b>Beverages</b>	<b>Liquid food products that are normally consumed from a cup, mug or glass (incl. products packed in portions in packaging, bottles, etc.), with the exception of plain water, dairy products and fruit juices. <i>E.g.: coffee, tea, (light) soft drinks, fruit drinks.</i></b>
<b>Bread toppings including hummus-like products</b>	<b>All kinds of food product that are meant to be put on bread or toast and not fall under earlier mentioned product groups. <i>E.g.: jam, peanut butter, tuna salad, hummus, tahini.</i></b>
<b>All other products</b>	<b>All kinds of food products that do not fall within any of the above mentioned groups. <i>E.g.: baking product, seasonings, vinegar.</i></b>

## **Objectives:**

- **Determine a baseline on the nature and extent to which commercial food processors are reformulating food products to reduce their sodium content or are formulating new product lines with low/no sodium.**
- **To identify the leaders in (re)formulation.**

## **Target group:**

- **Food processing industry**

## **Questionnaire piloting**

- **Food industry participants at the Partners Forum**



**1. For each food product category identified in 1 above, describe the plan to reduce sodium content**

**a. Does not exist**

**i. Describe the issues/barriers**

**b. Is under development**

**c. Is developed and will be implemented within**

**i. the next 6 months**

**ii. the next 12 months**

**iii. the next 24 months**

**d. Is implemented and active**

**Where a sodium reduction plan exists for a food category, the goal is to**

**Reduce the salt/sodium content of all products in the category**

**Produce a line of “lower” salt/sodium” or “reduced” salt/sodium products**

**Produce a line of “low” salt/sodium products**

**Produce a line of “salt-free” or “sodium-free” products**

**For each sodium reduction plan described in 3 above, indicate**

**The gradual percentage reduction in sodium that is planned and over what period of time**

**The ultimate target for sodium content intended in the plan in terms of mg Na/1 Kcalorie**

**1) For the food products in each category in 1 above, the sodium content of the same brand products available in different national markets is**

**a) Equivalent across markets in different countries**

**b) Different across markets in different countries**

**2) Commitments to national public health or food regulatory bodies to lower the sodium content of food products**

**a. Have not been made**

**b. Have been made to the UK Food Standards Agency**

**c. Have been made to other national public health or food regulatory bodies (identify all) \_\_\_\_\_**

## **C PARTNERSHIP POTENTIAL**

In aid of population-wide dietary salt reduction, on what projects is the organization willing to become a partner with government?

Population level sodium intake studies

Consumer research

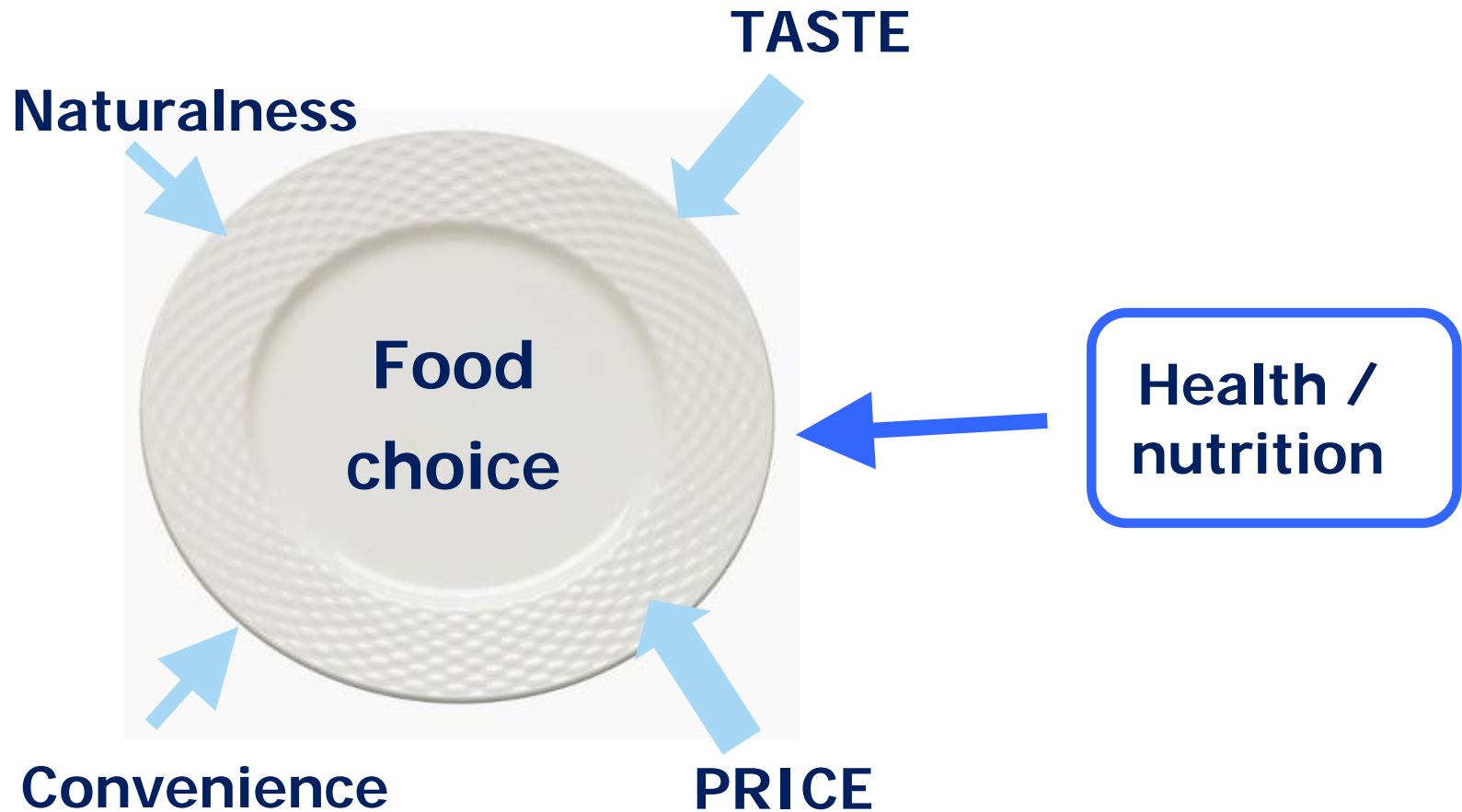
Consumer awareness raising campaigns

Other (specify)

None of the above

# Determinants of food choice

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# Method

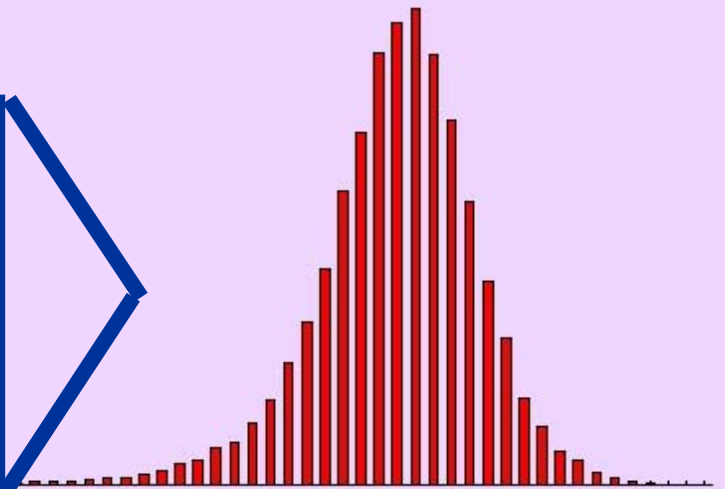
Input: food intake data  
from national  
consumption survey

Output: distribution of usual nutrient  
intake in the population

Monte Carlo Risk  
assessment model

Input: Food composition  
data

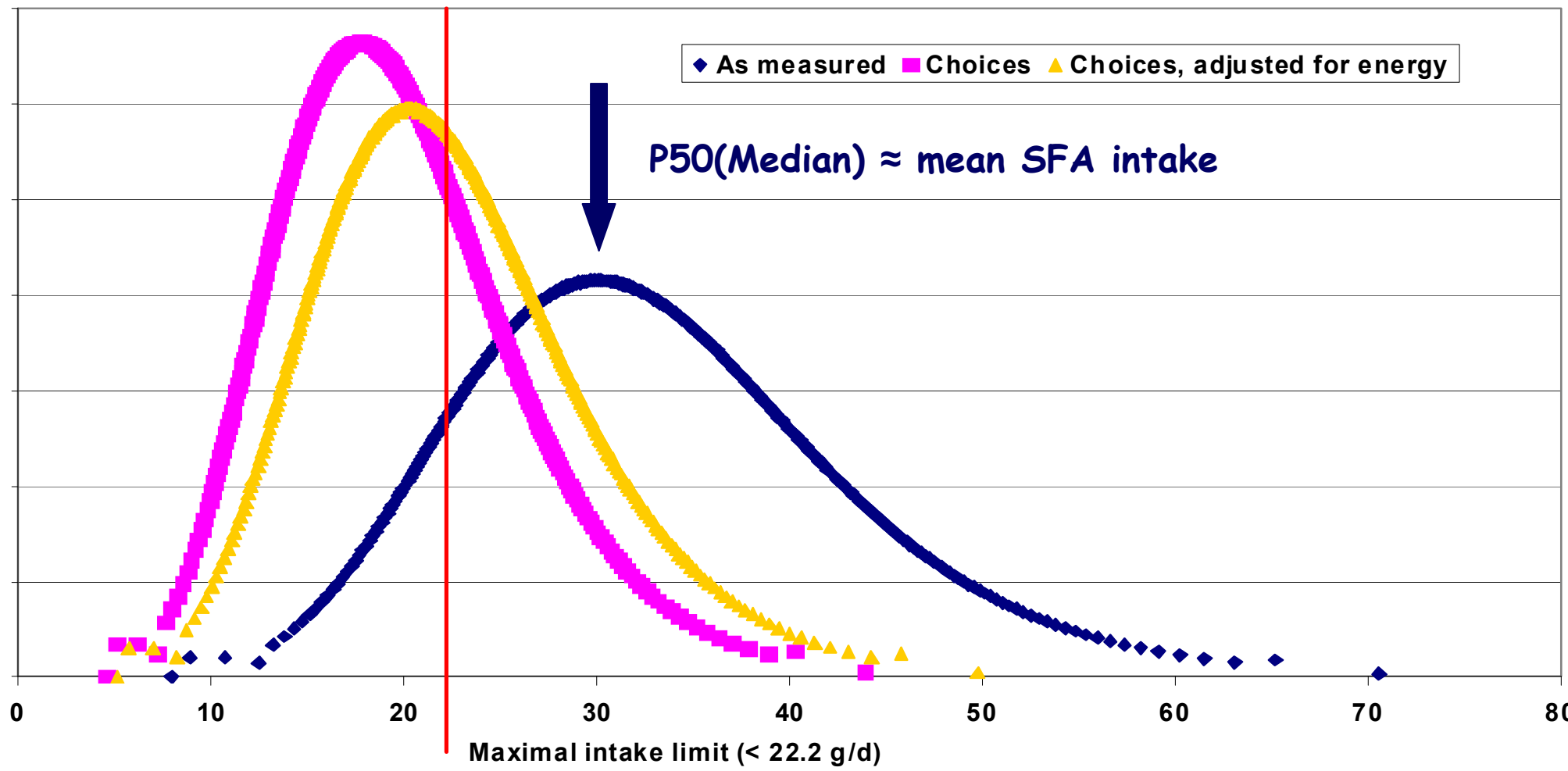
Statistical procedure to calculate usual (nutrient,  
chemical) intakes based on the consumption  
survey, by multiple sampling (100 000 times).  
Developed for food safety assessments.



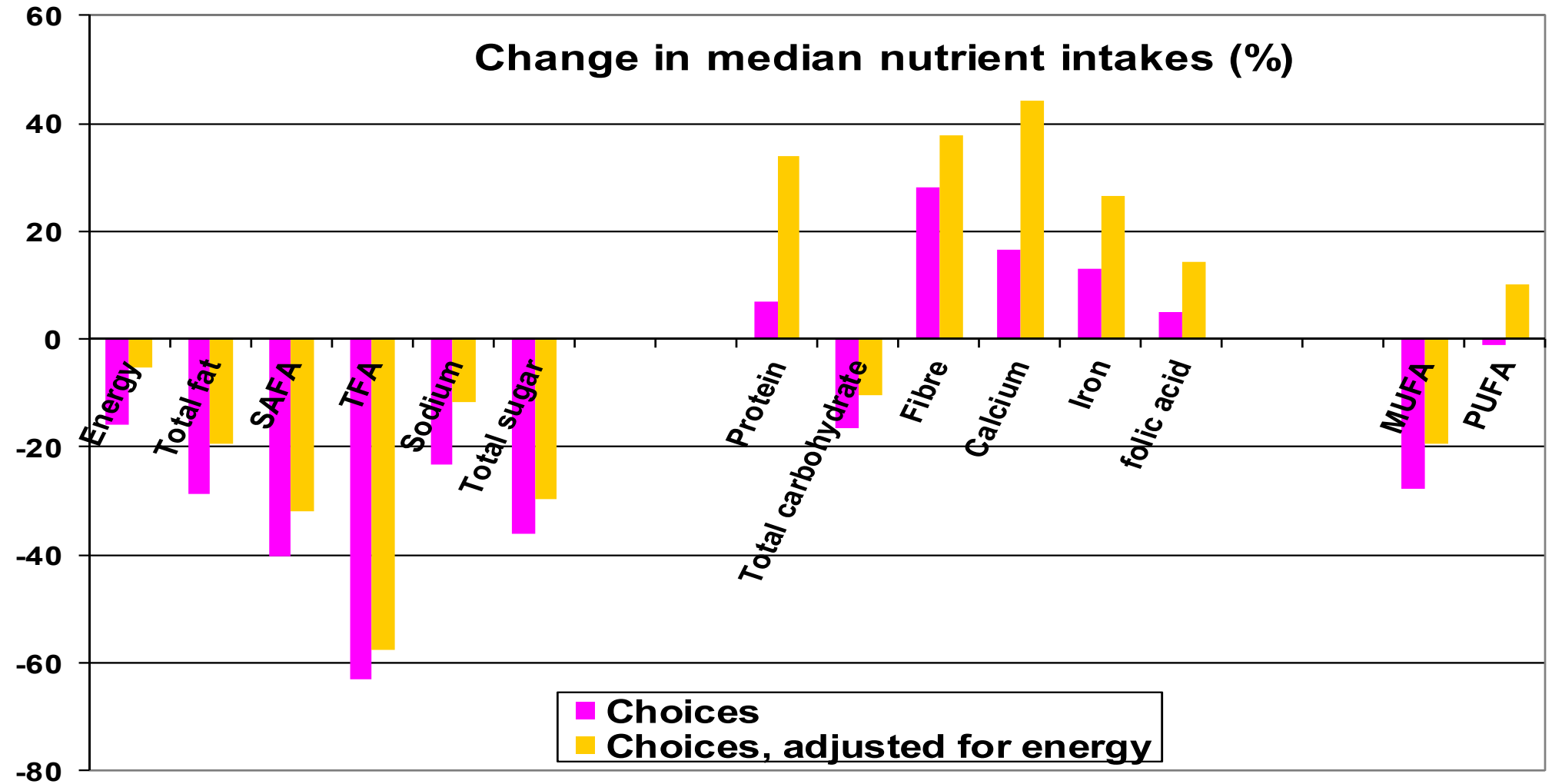


# Saturated fatty acids: intake data

Distributions of saturated fatty acid intake (g/d)



# % Change in median nutrient intakes



- Energy intakes reduce (15%)
- Intakes of nutrients with maximal intake limits reduce
- Intakes of nutrients with minimal intake limits increase except for MUFA, PUFA

# Product reformulation & innovation

**N = 47 companies (response 39.5%)**

**Newly developed, reformulated or already complying  
821 products**

**SAFA**

**TFA**

**Added sugar**

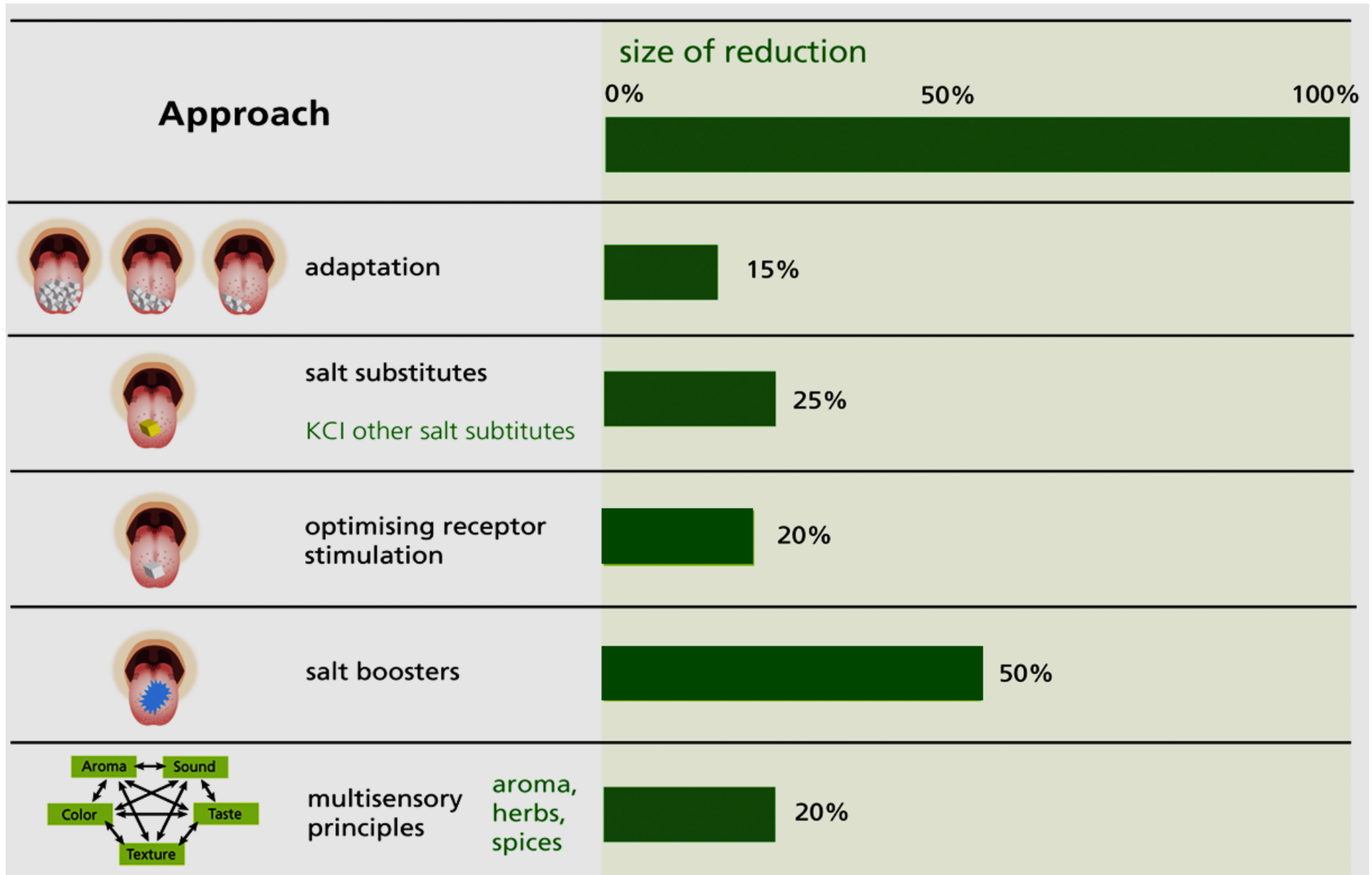
**Sodium**

**Fiber**

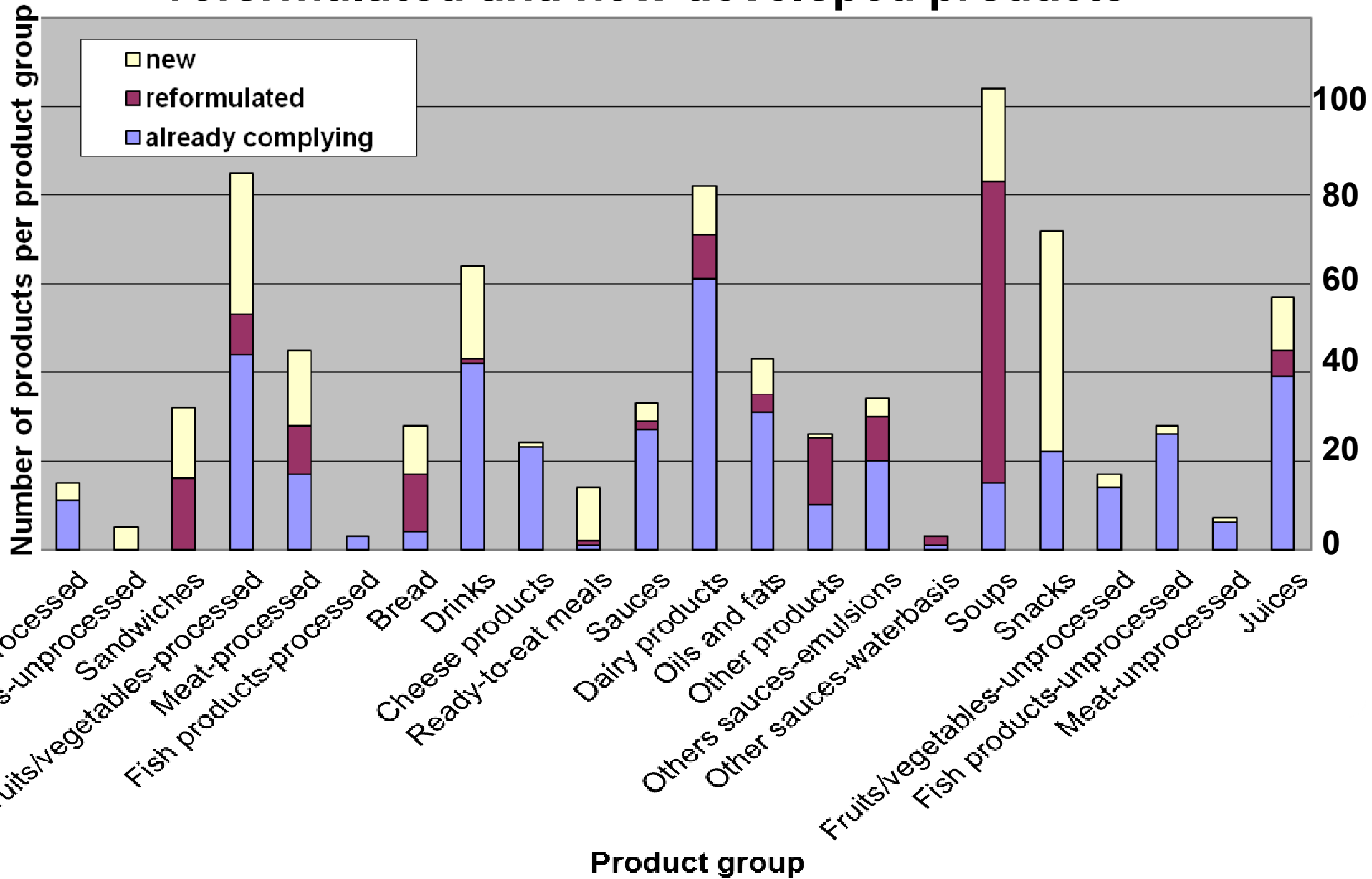
**Energy**



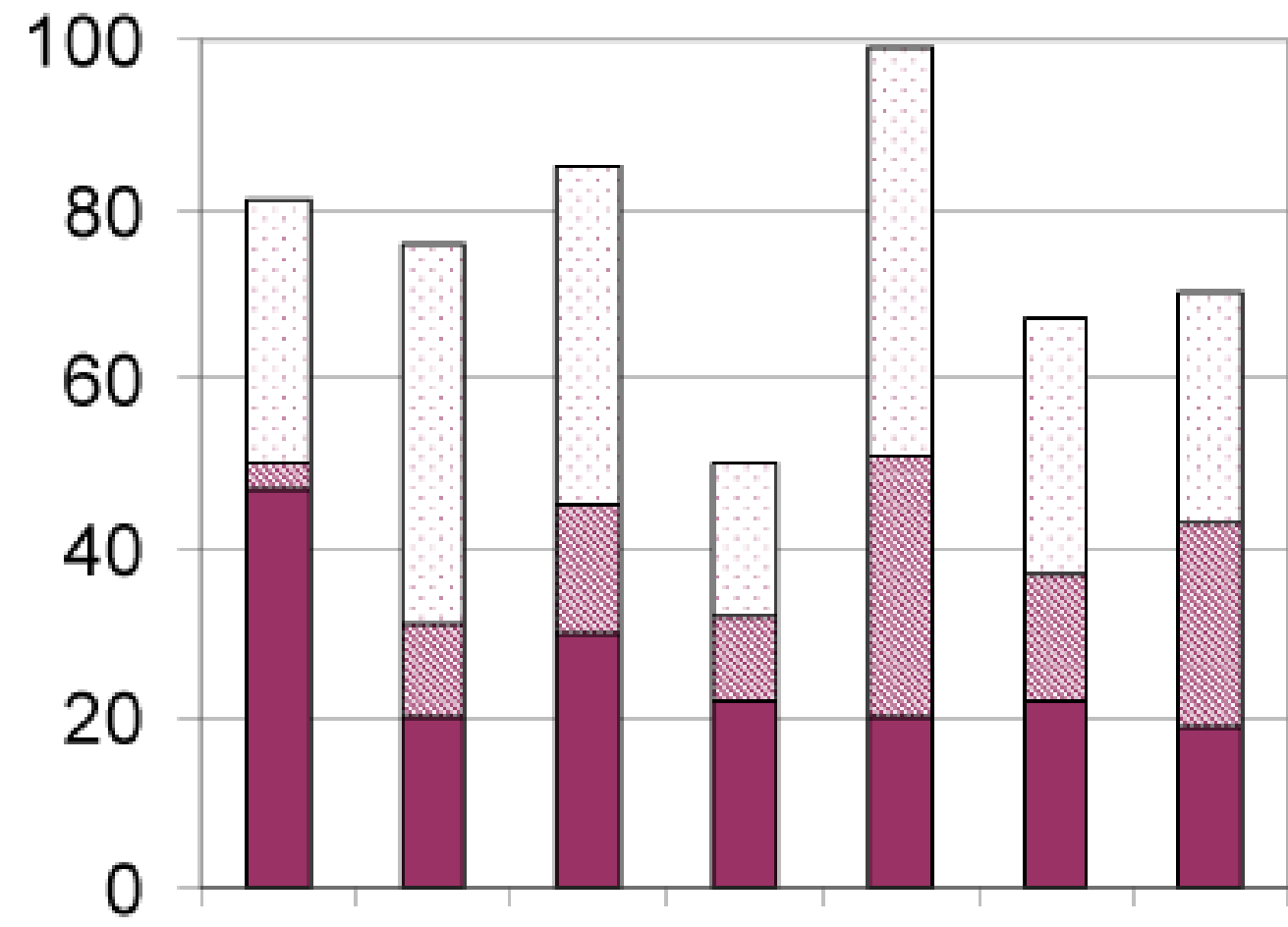
# How can we lower sodium?



# Products per food category: already complying, reformulated and new developed products



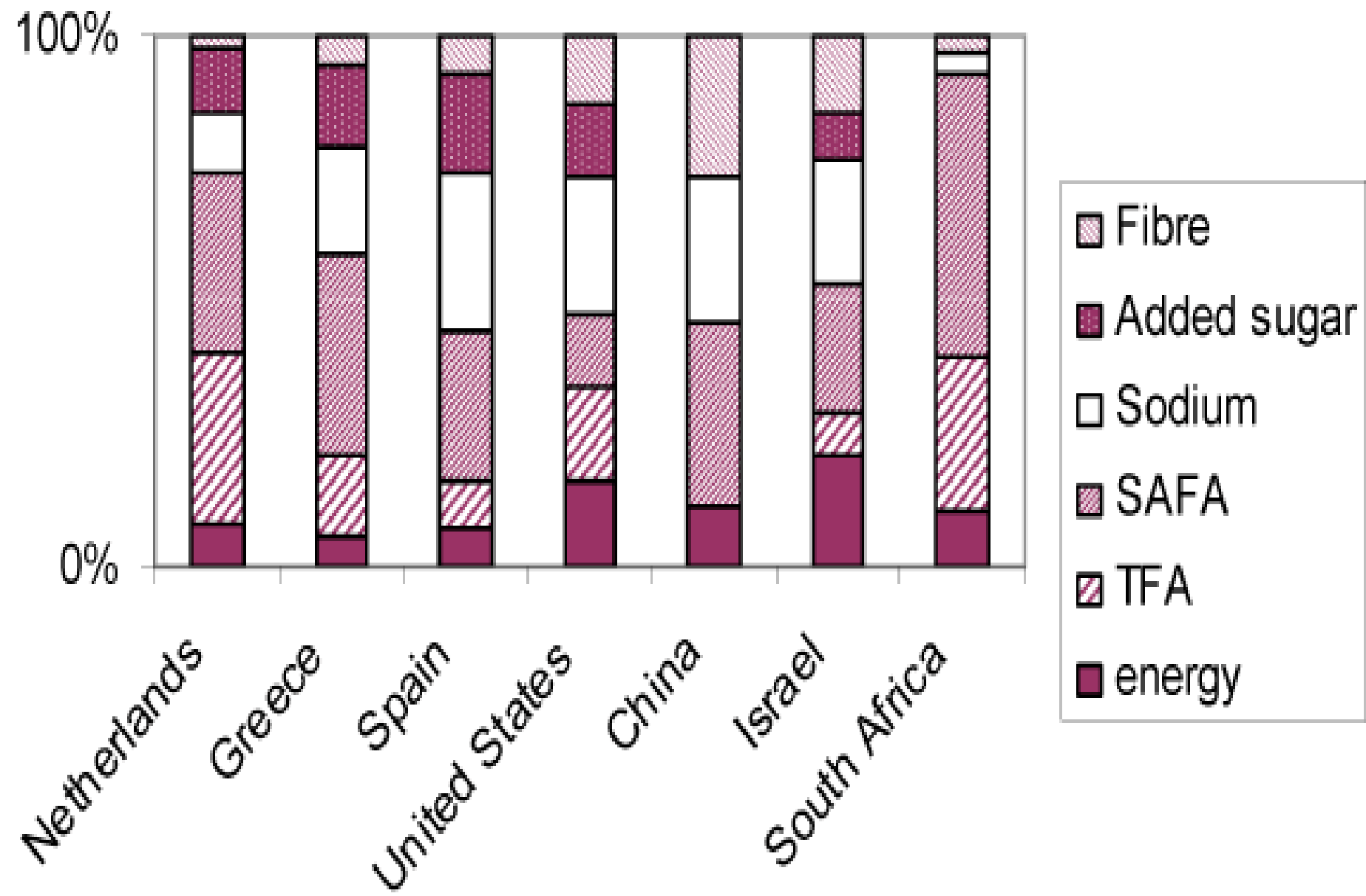
Amount of foods



Netherlands  
Greece  
Spain  
United States  
China  
Israel  
South Africa

Figure 6

Relative importance of non-complying nutrients





*Kellogg's*



**MARS**  
incorporated



**PEPSICO**

*The Coca-Cola Company*



Unilever

13 May 2008

Her Excellency  
Dr. Margaret Chan  
Director General  
World Health Organization  
20 Avenue Appia  
Geneva, Switzerland

Dear Dr. Chan:

**RE: A Global Commitment to Action on the Global Strategy on Diet, Physical Activity and Health**

As the CEOs of major international food and non-alcoholic beverage companies, we would like to take this opportunity ahead of the World Health Assembly in May to set out our global commitment to further action in support of continuing efforts to implement the 2004 WHO Global Strategy on Diet, Physical Activity and Health.



We fully recognise that experts agree that significant increases in non-communicable diseases (such as cardiovascular disease, hypertension and diabetes) are directly linked to increasing prevalence of obesity resulting from a number of factors including poor diets, less physical activity and changes in lifestyle in both developed and developing countries around the world.

The WHO Strategy acknowledges that efforts to help people improve their diet and health require actions by all stakeholders – including the private sector. As companies, we take this responsibility seriously and have already taken concrete steps to:

- Reformulate our existing products and develop innovations that offer healthier options to our consumers;
- Provide our consumers with more and clearer information about the nutritional composition of their foods and beverages;
- Adopt voluntary measures on the marketing and advertising of food and beverages, particularly to children; and
- Promote greater physical activity, sports and healthier lifestyles, including in the workplace.



We look forward to meeting with you and our team in the coming months to inform you in greater detail of the progress we are making and to solicit your views.

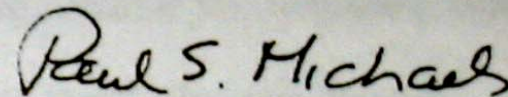
Yours sincerely,



David Mackay  
President and  
Chief Executive Officer  
Kellogg Company



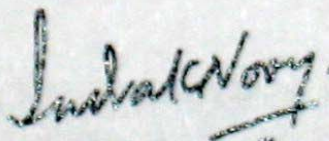
Irene Rosenfeld  
Chairman and  
Chief Executive Officer  
Kraft Foods Inc.



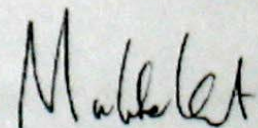
Paul Michaels  
President  
Mars Incorporated



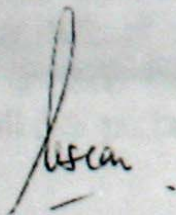
Paul Bulcke  
Chief Executive Officer  
Nestlé S.A.



Indra Nooyi  
Chairman and  
Chief Executive Officer  
PepsiCo, Inc.



Mr. Muhtar Kent  
President &  
Chief Operating Officer  
The Coca-Cola Company



Patrick Cescau  
Group Chief Executive  
Unilever

Cada porción de 1 vaso (200 ml) contiene:



% de la Recomendación Diaria para un Adulto

Un adulto puede consumir al día un máximo de:

<b>Calorías</b> <b>2000</b>	<b>Azúcares</b> <b>90g</b>	<b>Grasa</b> <b>55g</b>	<b>Grasa sat.</b> <b>22g</b>	<b>Sodio</b> <b>2,4g</b>
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Valores referenciales promedios de las marcas más representativas de este producto.

