Quality Food Composition Data – Key for Health

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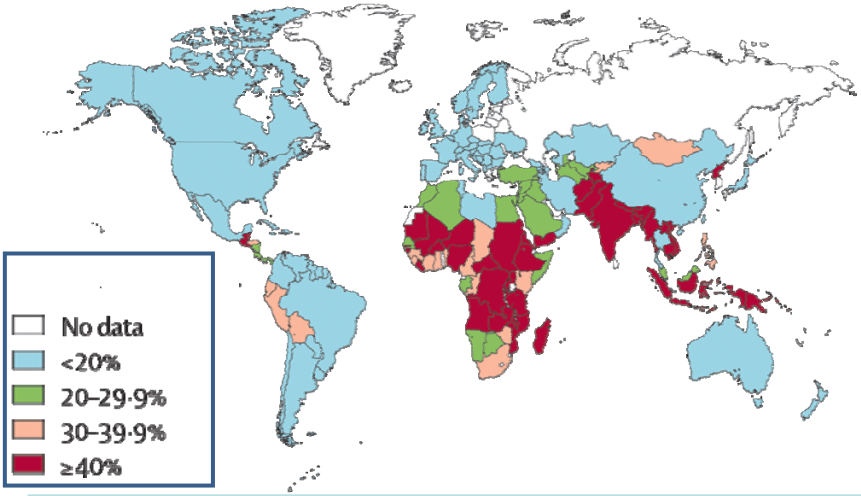
World Health Organization

178 million children under 5 are stunted



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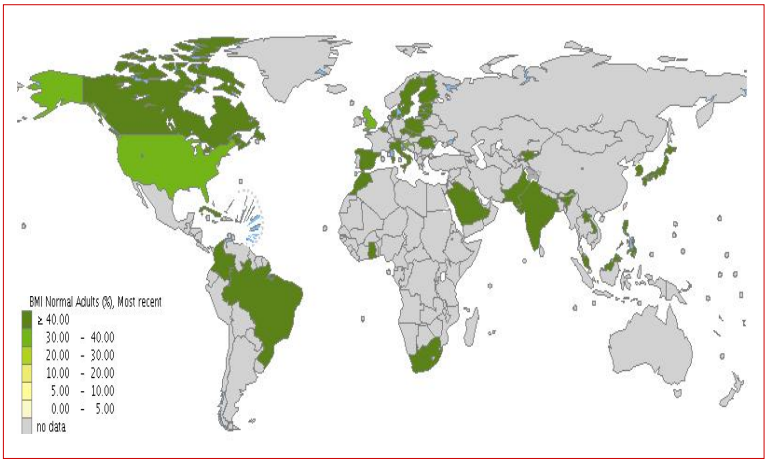
October 1-3, 2009

Bangkok, Thailand

Over 500 million adults are obese



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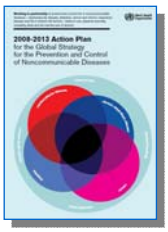

NCD action plan

(c) establish and implement food-based dietary guidelines and support the healthier composition of food by:

- reducing salt levels
- eliminating industrially produced *trans*-fatty acids
- decreasing saturated fats
- limiting free sugars

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What works? Interventions for maternal and child undernutrition and survival

Lancet 2008; 371: 417–40

Sufficient evidence for implementation in all 36 countries
Maternal and birth outcomes
Iron folate supplementation
Maternal supplements of multiple micronutrients
Maternal iodine through iodisation of salt
Maternal calcium supplementation
Interventions to reduce tobacco consumption or indoor air pollution
Newborn babies
Promotion of breastfeeding (individual and group counselling)
Infants and children
Promotion of breastfeeding (individual and group counselling)
Behaviour change communication for improved complementary feeding*
Zinc supplementation
Zinc in management of diarrhoea
Vitamin A fortification or supplementation
Universal salt iodisation
Handwashing or hygiene interventions
Treatment of severe acute malnutrition

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Monitoring and surveillance

Correct assessment of the adequacy of intakes is needed for the purpose of identifying and prioritizing key nutrition issues

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Establishment of dietary goals and monitoring their achievement

- Dietary indicators for nutrition surveillance should include at least the main nutrients that are associated to risk of chronic diseases, e.g. saturated and polyunsaturated fat, trans fatty acids, sugars and fibre.

Fatty acids

nization # / Database	Energy		Proximates				Carbohydrate						Fat and Related Compounds								
	Energy as Kcal	Energy as kJ	Water	Alcohol	Ash	Protein	Method for Total Carb*	Total carbohydrate	Total sugars	Total dietary fiber	Insoluble fiber	Soluble fiber	Total fat	Cholesterol	Phytosterol	Total saturated	Total monounsaturated	Total polyunsaturated	Total trans	Total Omega-3 (n-3)	Total Omega-6 (n-6)
	Percentage of food items for which a value is reported																				
1																					
Databases																					
Food Composition Tables	100	0	100	0	99	98	ns	94	0	57	0	0	67	0	0	0	0	0	0	0	0
n Nutrient File, 2005	100	100	98	98	98	100	bd	100	77	92	0	0	100	98	0	92	90	90	7	0	0
ood Composition 2004	100	100	100	100	0	0	bd	100	0	50	0	100	100	100		100	100	100	0	0	0
Egyptian Food CompositionTables	100	100	100	0	100	98	ns	97	0	80	0	80	98	0	0	98	98	98	100	98	98
Food Composition DB	0	100	100	100	99	100	ac	100	100	100	76	83	100	99	94	96	96	96	95	89	89
od Composition Tables	93	0	99	0	93	91	ns	92	13	49	0	0	94	23	0	17	0	0	0	0	0
latll Nutrient DB for SR	100	100	100	58	100	100	bd	100	65	90	0	0	100	97	8	96	92	92	11	62	10

Source : 2006 International Nutrient Databank Directory

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Vitamins and minerals

Organization # / Database	Vitamin A, Retinol & Carotenoids										Tocopherols, Vitamins D & C							Folate & Folic Acid				
	Vitamin A IU	Vitamin A RE [1]	Vitamin A RAE [1]	Retinol mcg	Alpha-carotene	Beta-carotene	Beta-cryptoxanthin	Lutein/Zeaxanthin	Lycopene	Other carotenoids	Vitamin E IU	Alpha tocopherol equivalents (ATE)	Alpha tocopherol	Beta tocopherol	Gamma tocopherol	Delta tocopherol	Vitamin D3	Vitamin C	Folate, total	Food folate	Folic acid (added)	Dietary Folate Equivalents (DFE)
	Percentage of food items for which a value is reported																					
TION 2																						
ence Databases																						
SEAN Food Composition Tables	0	71	0	79	0	68	0	0	0	0	0	0	0	0	0	0	0	71	0	0	0	0
anadian Nutrient File, 2005	0	0	94	93	44	93	43	42	42	0	0	0	46	0	0	0	89	97	90	87	95	87
hina Food Composition 2004	0	100	0	0	0	100	0	0	0	0	0	0	100	100	100	100	0	100	0	0	0	0
oncise Egyptian Food CompositionTables	0	50	0	85	0	80	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0
innish Food Composition DB	0	100	100	100	57	99	27	87	18	100	0	99	99	89	89	89	99	98	98	0	0	0
hai Food Composition Tables	0	23	0	65	0	23	0	0	0	0	0	0	0	0	0	0	0	37	0	0	0	0
SDA Nat'l Nutrient DB for SR	96	85	86	85	55	56	55	53	54	0	0	0	57	14	14	14	7	96	91	88	86	86

Source : 2006 International Nutrient Databank Directory

1 **WHO Nutrition Databases**
- Who Database on Child Growth and Malnutrition
- Who Global Data Bank on Infant and Young Child Feeding
- Vitamin and Mineral Nutrition Information System
- WHO Global Database on Body Mass Index
- National Nutrition Policies and Programmers

2 **UN Databases**
- UNDP
- UNICEF
- UN Statistics Division
- UNICEF
- Food and Agriculture Organization (FAO)

3 **Other International Data sources**
- World Bank
- Democratic and Health Surveys (DHS)
- IFPRI

4 **Country Level Databases**

5 **WHO Database**
- WHO Core Health Indicators

Description: The above diagram presents the variety of data sources being integrated into the NLIS system to create a multisource overview of key indicators that relate to Nutrition for Health and Development

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Interventions

•food based dietary guidelines
•nutrition profiles
•design of foods
•product labelling

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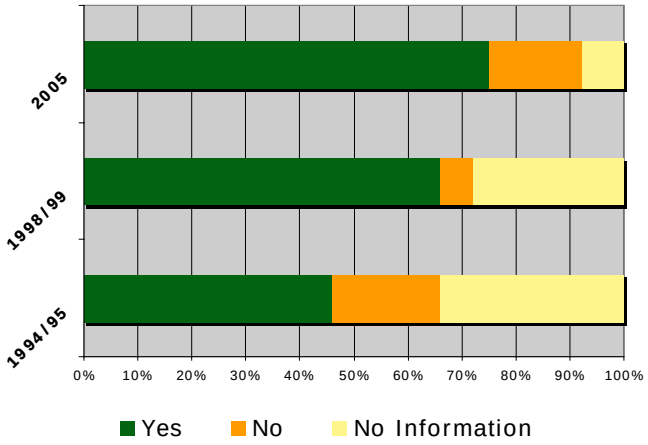
FBDG in the European Region



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Examples of nutrient profiles

only negative nutrients

Both negative + positive nutrients

Many nutrients, plus sometimes food groups (ex fruits and vegetables)

Selected nutrients	USA FDA Health Claim 1993	Australia NFI Gazibarich 1998	UK FSA a little a lot 2002	Nether-lands Vovo 2005	Sweden Key-hole 1989	UK, FSA scoring children 2005	USA, CSPI Guidelines Marketing children 2005
Fat	X	X	X		X		X
Saturated Fatty Acids	X		X	X		X	X
Trans Fatty Acids				X			
Sugars / added sugars		X	X	X	X	X	X
Sodium	X	X	X			X	X
Cholesterol	X	X					
Fibre	X			X	X	X	X
Vitamin(s)	X			X			X
Mineral(s)	X			X			X
protein	X					X	X
Fruits & vegetables						X	X
Energy				X		X	

Signposting

	Per serving	GDA
FAT	7.7g	70g
SATURATES	2.0g	20g
SUGAR	42.4g	40g
SALT	2.0g	6g

HIGH MEDIUM LOW

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Advertising

Product labelling

Availability of composition information is also an element to decide whether the presence of a nutrient on a label should be optional or mandatory.

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Nutritional improvement of food products

- Good composition data are needed to benchmark different categories of products and to map the progress towards product specific targets
- Ready made meals ?

Reducing salt intake to <5 g in 5 years

	Current (12 g)	Target (< 5 g)
Table/cooking	1.8 g (15%)	50% reduction 0.9 g
Natural	0.6 g (5%)	No reduction
Food industry	9.6 g (80%)	60% reduction 3.8 g

≈ 10% reduction per year

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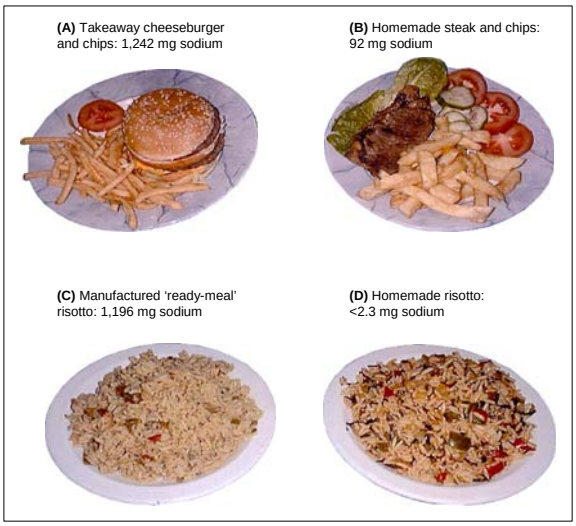
Sodium content of manufactured (A,C) & homemade (B,D) meals



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Research

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Relationship between diet and health

- trans fats and cardiovascular disease, obesity and diabetes.
- cardiovascular impact of coconut oil
- health aspects of palm oil
- conflicting effects of dairy products on children's growth and LDL cholesterol
- optimum n-3 intake from α-linolenic acid and fish
- Health effects of bioactive compounds
- risk benefit assessment of fish intake

A new strategic focus in WHO

1. Development and operationalization of integrated food and nutrition policies
2. Intelligence of needs and response
3. Development of evidence based programme guidance
4. Country level advocacy and technical assistance