



Public Health Nutrition in Thailand

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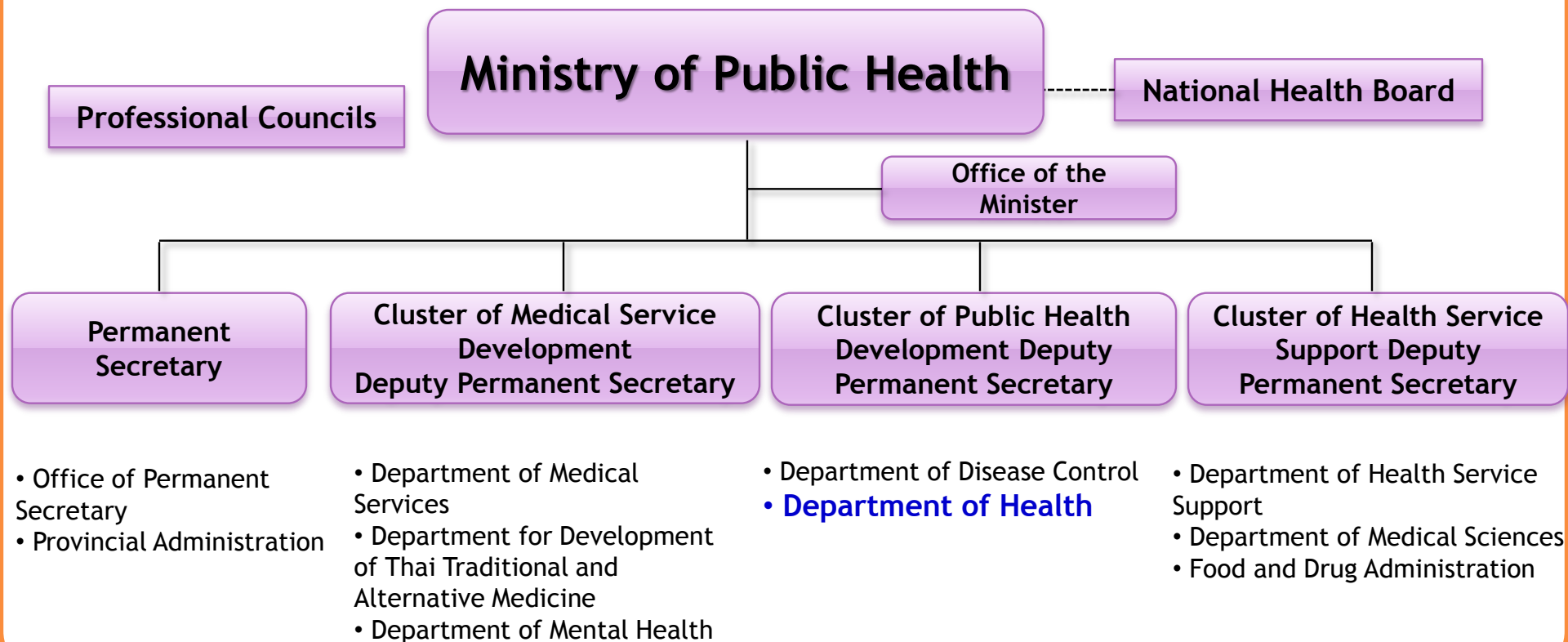
Vice President of Nutrition Association of Thailand

South East Asia Public Health Nutrition Network

Kuala Lumpur, Malaysia, 2 June 2014

SCOPE

- Nutrition Agencies in Thailand
- National Strategies in Thailand
- Nutrition Situation in Thailand
- Nutrition interventions in Thailand



Agencies under the Supervision of MOPH :

- Health Systems Research Institute
- National Health Insurance Office
- Institute of Emergency Medical Service
- National Institute of Health
- The Institute of Hospital Quality Improvement & Accreditation (HA-Thailand)

State Enterprise :

- The Government Pharmaceutical Organization

Public Organization :

- Health facilities

Department of Health

Bureau of
Technical advisors

Internal Audit Group

Cluster of Health Promotion

- Bureau of Health Promotion
- Bureau of Dental Health
- **Bureau of Nutrition**
- Bureau of Reproductive Health
- Physical Activity and Health Division

Cluster of Environmental Health

- Bureau of Environmental Health
- Bureau of Food and Water Sanitation
- Health Impact Assessment Division
- Public Health Law Administration Center
- Research and Laboratory Development Center

Cluster of Strategic Management for the Regional Level

- Regional Health Promotion Center 1-12
- Highland Health Development Center
- The Intercountry Centre for Oral Health

Cluster of Directive Administration

- Office of the Secretary
- Planning Division
- Personnel Division
- Finance Division
- Administrative System Development Group

BUREAU OF NUTRITION

Vision

Bureau of Nutrition is a core organization to enhance food and nutrition technology for better health and nutrition of all Thai people.



NUTRITION ASSOCIATION OF THAILAND

Under the Patronage of Her Royal Highness Princess Maha Chakri Sirindhorn

Vision

Promote, Support Thai Society to
be Healthy in Nutrition Status

Thailand National Food Committee Act, 2008

The 11th NESDP Thailand

National Health Development

Comprehensive Implementation Plan (2014-2025)

- Food and Nutrition for maternal infant and child Plan

Thailand Healthy Lifestyle Strategic Plan (2011-2020)

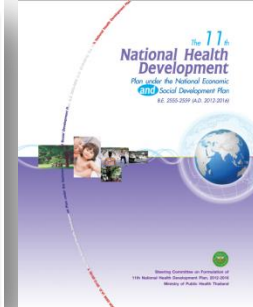
Strategic Framework of national nutrition plan in Thailand (2014-2015)

- IDD control and prevention program
- Obesity Prevention (Thai people flat belly)
- Optimum Growth Development of Thai Children

Nutrition Integration Program

- Obesity Control (Thai people Flat Belly Organization, Obesity Prevention among Thai School Children)
- Healthy Menu
- Hospitality Promotion of Food and Nutrients for Health Project
- IDD Surveillance Project

M&E System



Malnutrition in Thailand



← under - over →



- IDA →

← - IDD

- Ca

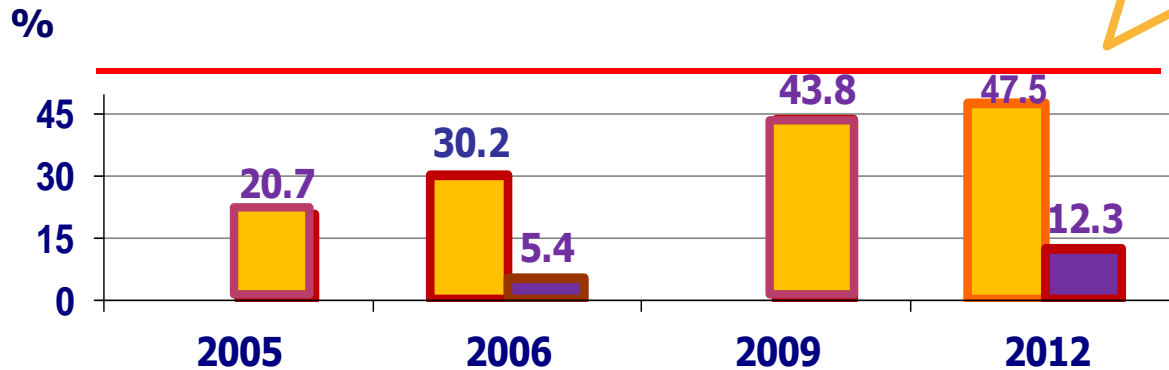
- Vit A →

← - B₁, B₂



Exclusive Breast Feeding 6 months in Thailand

Target 50 %



MICS

2005 : Bureau of Health Promotion

2006 : Survey of Reproductive Health NSO (BF 4 mo.), MICS3

2009 : Bureau of Health Promotion

2012 : MICS4

Code of Marketing of Breast Milk Substitutes (BMS) to be law :

Cabinet Approved on 07/08/2012

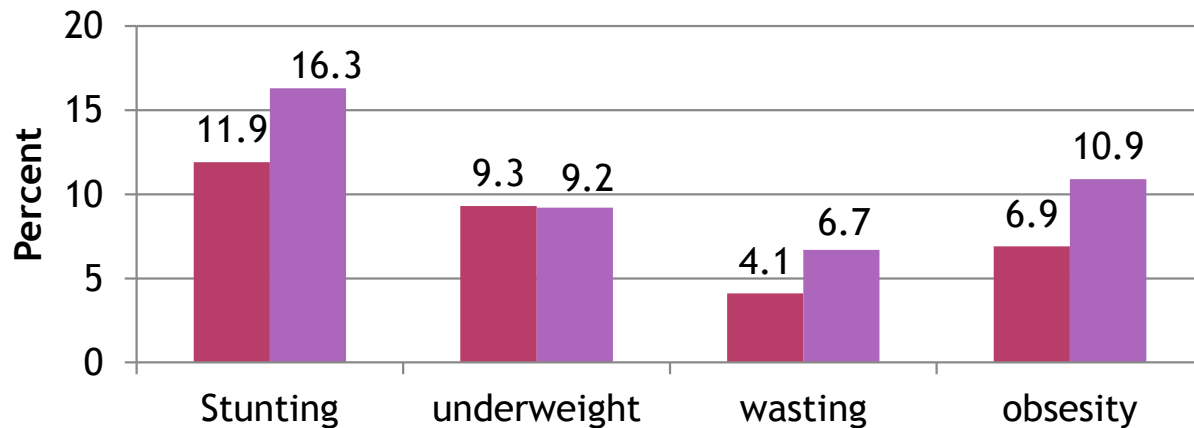
Maternity leave : 90 days

Daddy leave : 15 days

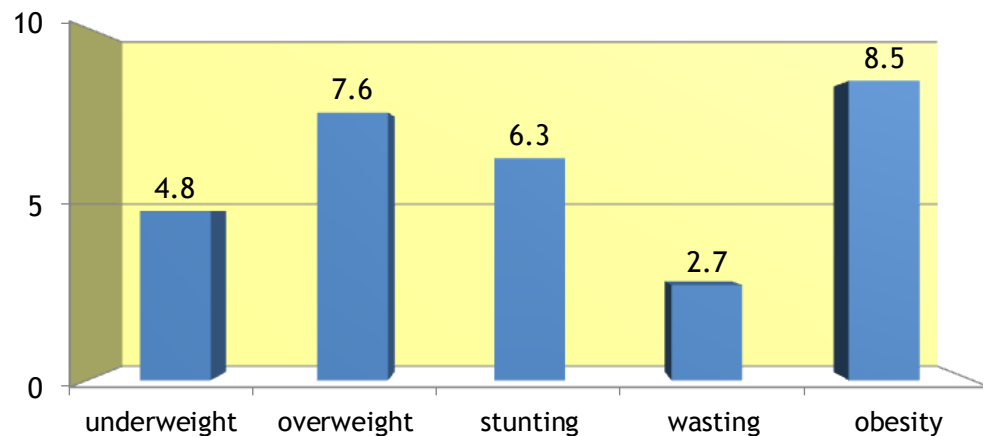


Nutrition situation in Thailand

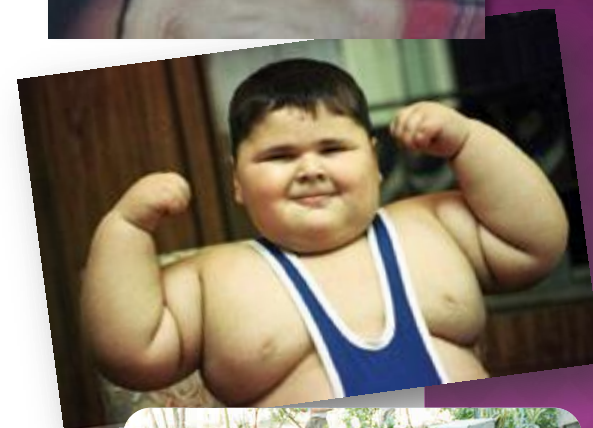
MICS ■ 2006 ■ 2011



Nutrition Situation among children 1-5 years



Source : 4th National Health Exam. Survey (2008-2009)



Nutritional Health Profile, Thailand

Life Style Disease, NCDs

↑ Hypertension, Diabetes Mellitus,
Heart Disease, Cancer etc.



Thai Food Behavior Change

↑ Sugar, Fat, Sodium Intake
↓ Fruit and Vegetable Consumption

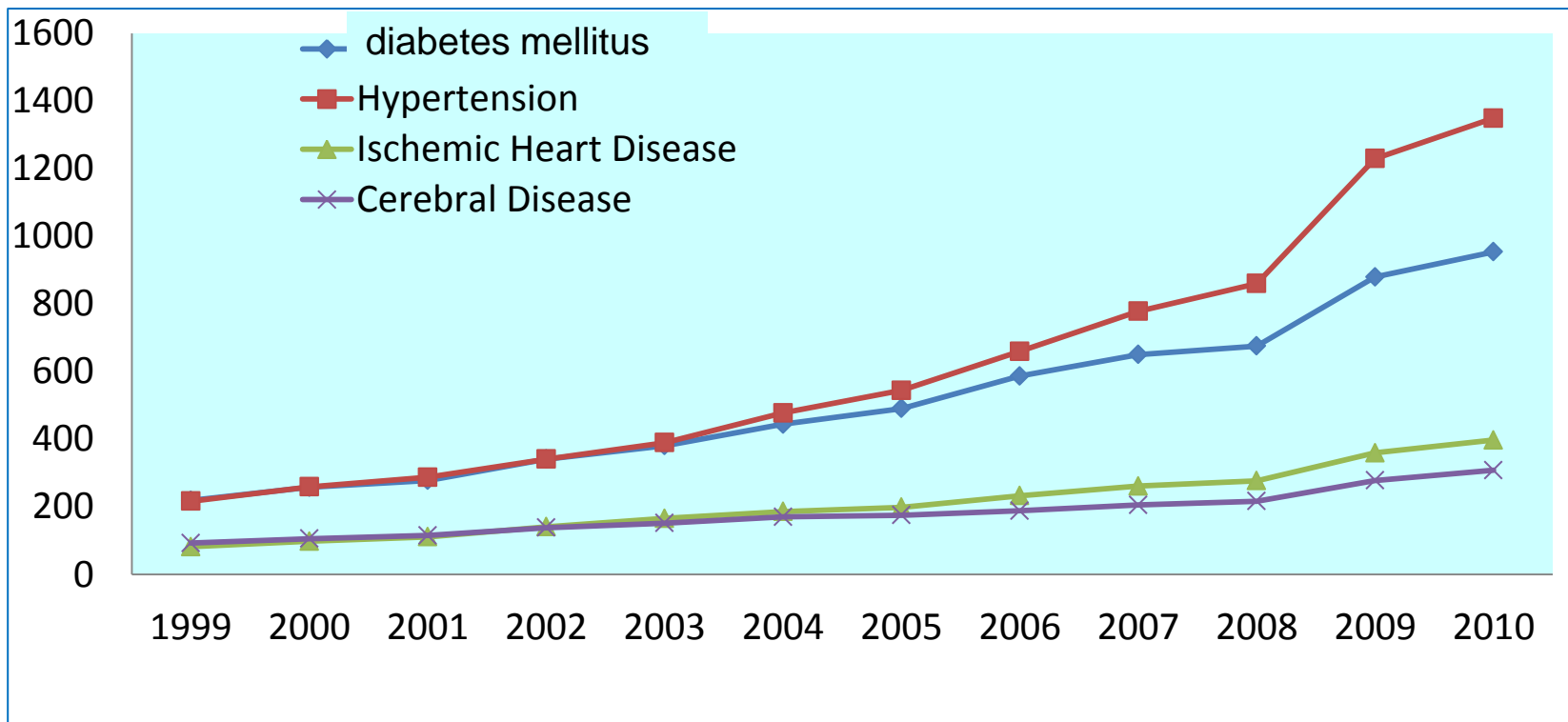


* The Survey Report of Behavioral Risk Factors of Non-communicable Diseases and Injuries in Thailand

Health Behavior in Thai (15-74 y)	2005	2007	2010
• Hypertension	8.3	9.4	9.1
• Diabetes Mellitus	3.7	3.9	4.2
• Overweight & Obesity	16.1	15.4	21.3
• Exercise 30 min, 3 times/wk.	30.9	37.5	34.3
• Alcohol Consumption	37.4	36.1	29.5
• Tobacco Consumption	22.5	21.5	18.7
• Fruit & Vegetable Consumption (≥ 5 standard portions a day)	17.3	22.5	21.7

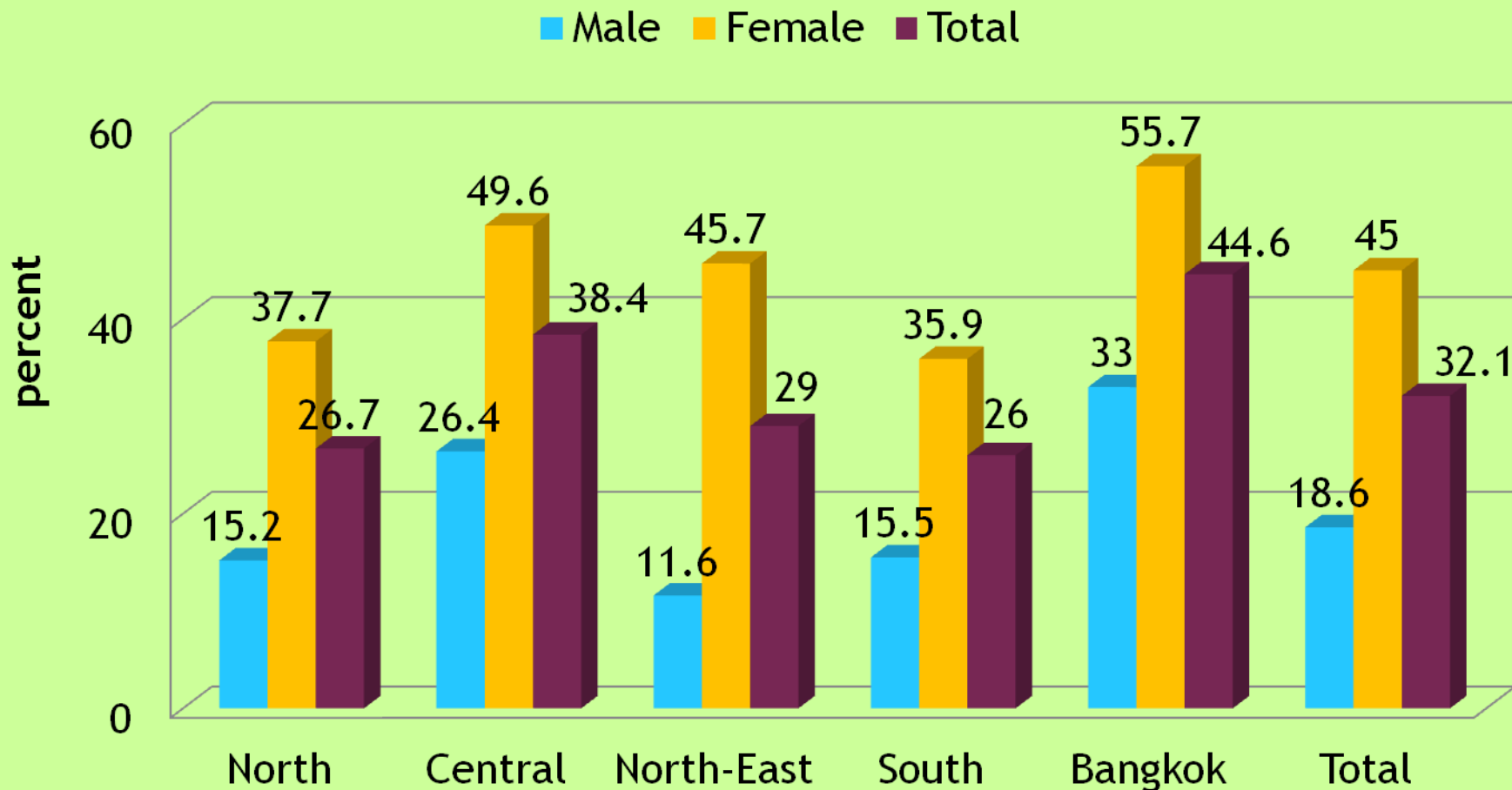
Incidence Rate of Chronic Disease among Thai people in 1999-2010

Incidence rate / 100,000 population



source : Bureau of Policy and Strategy ,MOPH, Thailand

Prevalence of Metabolic Syndrome (waist circumference) among Thai people (≥ 15 years old) by region



Source : 4th Health Exam. Survey (2008-2009)

Percent of Thai People (≥ 15 years old) by BMI , Sex and Age groups

Age							
BMI (kg/m ²) Male	15-29	30-44	45-59	60-69	70-79	80+	Total
< 18.5	17.0	4.6	6.6	11.2	18.9	30.9	9.4
18.5 - <25	64.5	63.3	59.7	62.4	62.6	57.8	62.2
25 – 30	12.0	25.7	27.4	22.1	16.1	10.0	22.3
≥ 30	6.5	6.5	6.3	4.3	2.4	1.3	6.0
BMI (kg/m ²) Female							
< 18.5	17.2	3.4	3.4	10.1	16.8	27.6	7.6
18.5 - <25	62.2	52.4	46.0	46.9	52.0	58.5	51.7
25 – 30	13.6	31.6	36.0	31.9	25.4	9.8	29.1
≥ 30	7.0	12.6	14.7	11.1	5.9	4.1	11.6

source : National Health Exam. Survey (2008-2009)

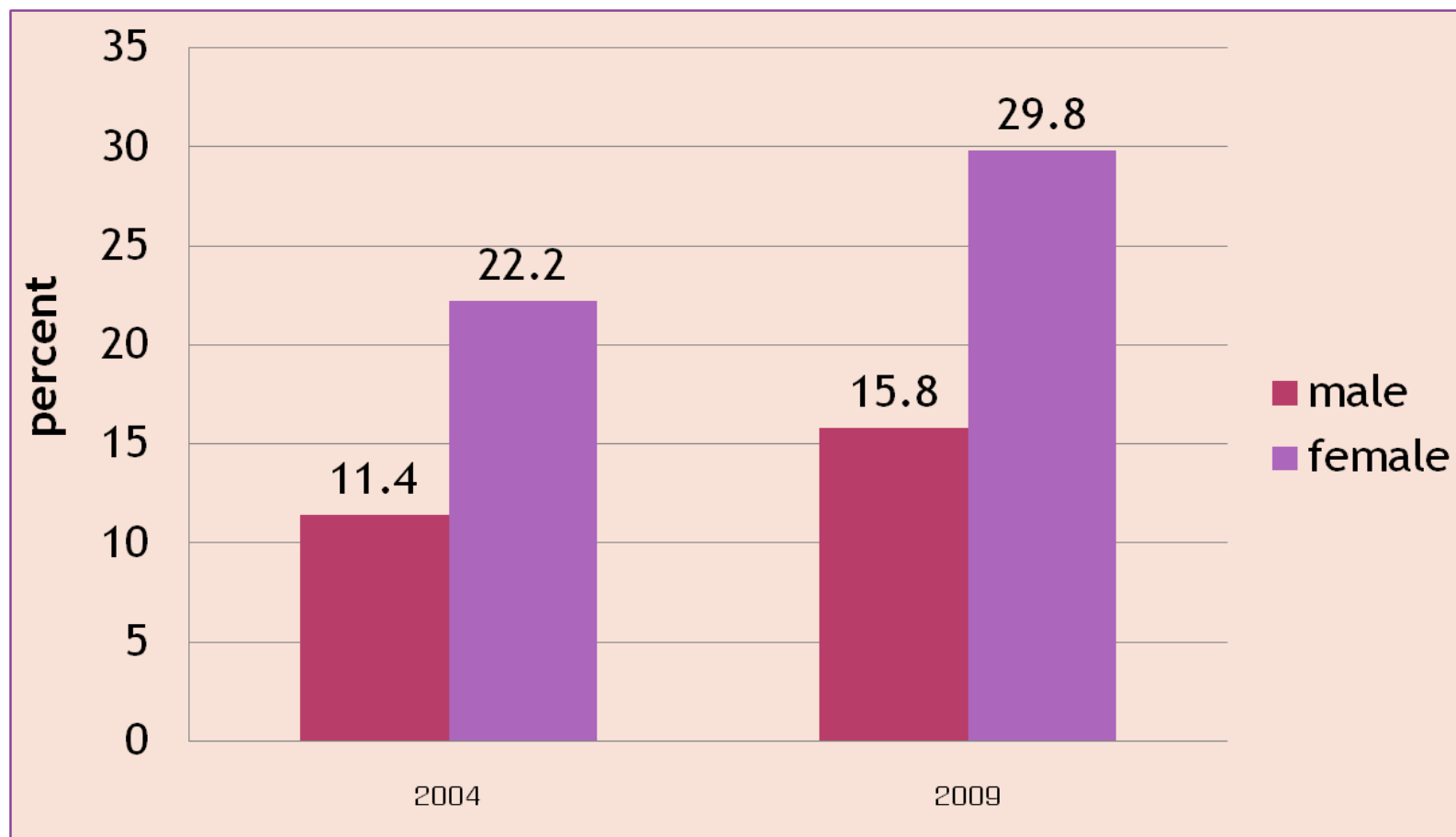
Obesity Situation in Thai People (15+ yr. old)

	SEX	2003	2008
BMI \geq 25 kg/m²	Female	34.4	40.7
	male	26.5	28.4

Excess waist circumference	Female	36.1	45.0
	male	15.4	18.6

Source : 4th Health Exam. Survey (2008-2009)

Prevalence of anemia in Thai ≥ 15 y.



Source : 4th Health Exam. Survey (2008-2009)



โครงการพระราชดำริ

การควบคุมและป้องกันโรคขาดสารไอโอดีน

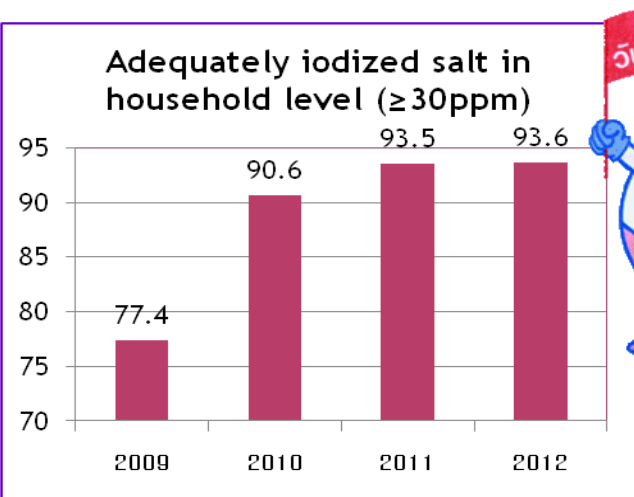
เพิ่มความแข็งแรง ความฉลาด

ต้องไม่ขาดไอโอดีน





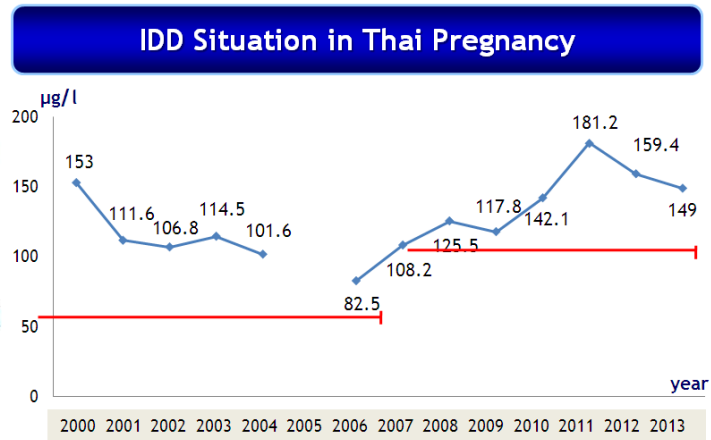
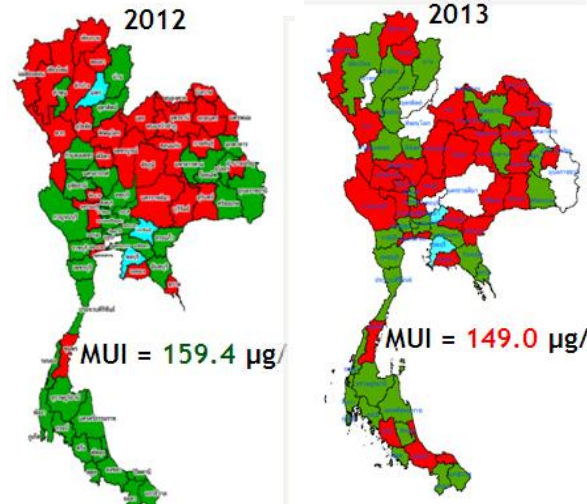
สำนักงานสาธารณสุขจังหวัดเพชรบุรี และ เทศบาลเมืองเพชรบุรี



วันที่ 25 มิถุนายน
วันไอโอดีนแห่งชาติ



IDD Control and prevention Program in Thailand



Main : USI
Add. : Supplementation in pregnancy

Source : Bureau of Nutrition

Median of urinary iodine

- Deficiency < 150 $\mu\text{g/l}$
- Adequate 150 - 249 $\mu\text{g/l}$
- Excess 250 - 499 $\mu\text{g/l}$
- Over Excess $\geq 500 \mu\text{g/l}$
- On Process

Source : Bureau of Nutrition

South East Asia Public Health Nutrition Network
Kuala Lumpur, Malaysia, 2 June 2014

IDD Situation among children and elderly

year	Median UI ($\mu\text{g/L}$)		%HH coverage iodized salt		
	Children (3-5 yrs.)	elderly	≥ 30 ppm	20-40 ppm	≥ 20 ppm
2011	229.2	129.0	72.6	-	-
2012	212.6	108.3	-	60.3	84.6
2013	226.6	113.8	-	82.5	91.9

Target %HH coverage iodized salt > 90

■ deficiency
 ■ more than adequate
■ adequate
 ■ excessive

Source : Bureau of Nutrition

Food Fortification in Thailand

“National food Fortification Committee” (appointed 1993 by MoPH)

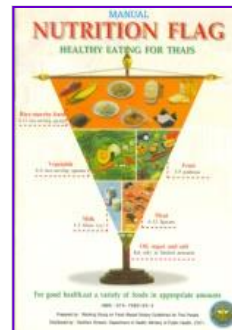
- **Mandate** : Support food fortification to improve micronutrient nutrition
- Fortified product development :Fe, VA fortified in instant noodle seasoning mix, fish sauce, soy sauce etc.

Dietary diversification

- Development and modification of **Food Composition Table**
- Promotion of **micronutrient-rich food production**
- Development of **dietary guideline** and micronutrient-rich menu
- Dietary guidelines for preparation of complementary foods from locally available raw materials for children of different age groups

The development of national food based dietary guidelines

- FBDG and Nutrition Flag
- FBDG for pregnant women
- FBDG for infant
- FBDG for preschool children





Nutrition Surveillance System



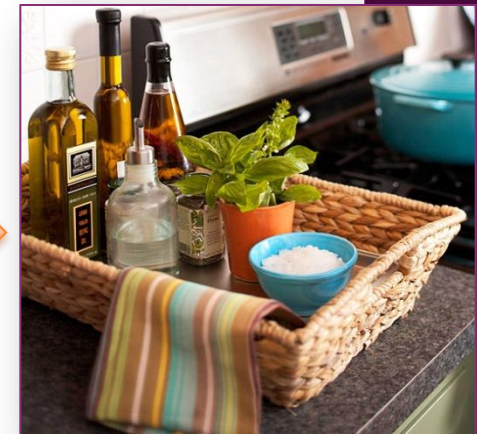
Production



Distribution



Retail Shop



Household Salt

Surveillance System (Salt)

Surveillance System (Pregnant women & Newborn & Preschool children)



Development

TSH

Urine
Iodine



Preschool Children



Newborn



Weight and Height measurement

Thai Local Growth Reference

Nutritional Status Interpretation

Underweight

Normal

Overweight

Nutrition Education
Balance Diet
Vitamin Supplementation

Nutrition Education
Balance Diet

Nutrition Education
Balance Diet

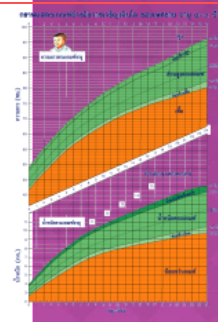
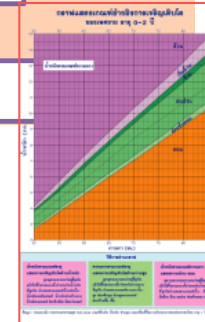
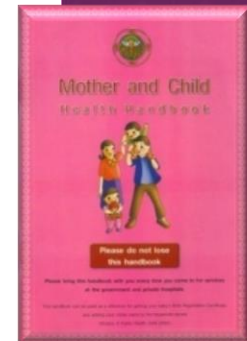
Every month

Growth Monitoring (wt. & ht. every 3 months)

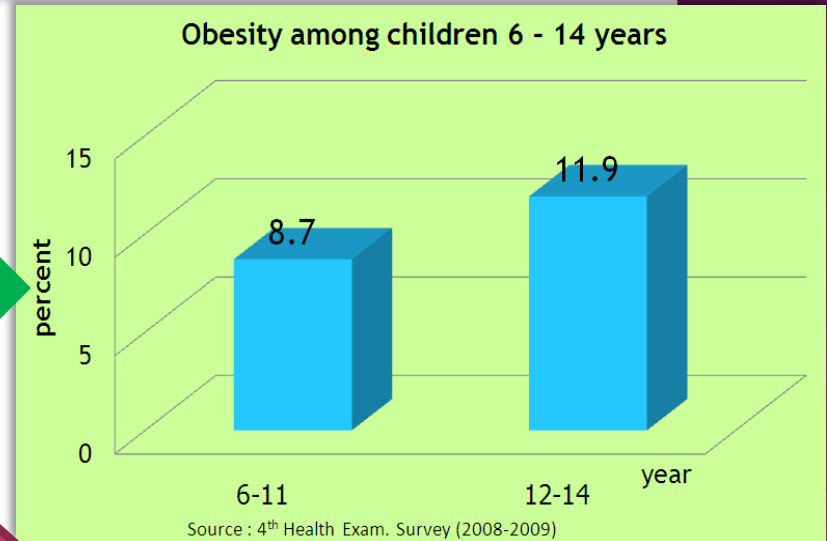
Every month

Well balance food consumption pattern and Physical fitness

Optimum Growth Development of Thai Children



Obesity Measurement



Nutrition interventions

- Nutrition capacity building
- Public Relation : Air/Ground Campaign
- Nutrition education :
 - Food-based Dietary Guidelines (FBDGs)
 - Healthy Thai Menu for all Thai People
 - 2:1:1 Thai dish (Vegetable : Rice : Meat) for obese adults and elderly
 - Reduced sugar fat salt
- Improve organization development toward Flat Belly
- Encourage health promoting hospital district established DPAC to modify health behaviors of obese people.

Nutrition Intervention in Thailand

(Public Private Partnership)

- Reduce 25% Sugar, Fat & Sodium Products (snack) in Thailand
- Fortification Products in Thailand
 - Fish Sauce (Fe, I₂ Fortification) (Fish Sauce Association)
 - Instant noodles (Vit A, Fe fortification) (Food Company)
 - Fortified Salt (Salt Producer Society)

Nutrition intervention in Thailand

- ❖ Removing most high sugar, salt and fat foods and beverages from school



Healthy Thai Menu for all Thai People



Healthy Thai Dish in Clean Food
Good Taste Shop/Restaurant



<p>ผู้หญิงวัยทำงาน กินอาหารให้พลังงาน วันละ 2,000 กิโลแคลอรี</p> <p>1 มื้อ ประมาณ 600-850 กิโลแคลอรี ประกอบด้วย</p> <ul style="list-style-type: none"> ข้าวแป้ง 3 - 3 1/2 ทัพพี เนื้อสัตว์ 3 ช้อนกินข้าว ผัก 2 ทัพพี ผลไม้ 1 1/2 ส่วน 	<p>ร้าน 4</p> <p>ก๋วยเตี๋ยว บะหมี่ต้มยำ</p>	<p>ผู้หญิงวัยทำงาน กินอาหารให้พลังงาน วันละ 1,600 กิโลแคลอรี</p> <p>1 มื้อ ประมาณ 450-500 กิโลแคลอรี ประกอบด้วย</p> <ul style="list-style-type: none"> ข้าวแป้ง 2 - 2 1/2 ทัพพี เนื้อสัตว์ 2 ช้อนกินข้าว ผัก 2 ทัพพี ผลไม้ 1 1/2 ส่วน
<p>ก๋วยเตี๋ยวบะหมี่ต้มยำ /ขนมหวาน มีกะทิ 1 ถ้วย</p> <p>รวมพลังงาน 461 กิโลแคลอรี</p>		<p>บะหมี่ 1 1/2 ทัพพี = 120 กิโลแคลอรี แกงออก 1 ทัพพี = 11 กิโลแคลอรี ลูกชิ้นปลา, กุ้ง, เนื้อหมูสับ = 80 กิโลแคลอรี (ไม่ใช้น้ำมันข้าว) กระเทียมเจียว 1 ช้อน = 45 กิโลแคลอรี น้ำตาล 1 ช้อนชา = 20 กิโลแคลอรี ตัวติดตัว 1 ช้อนชา = 45 กิโลแคลอรี</p> <p>ขนมหวานขนาด 1 ถ้วย (180 กรัม) = 140 กิโลแคลอรี</p>

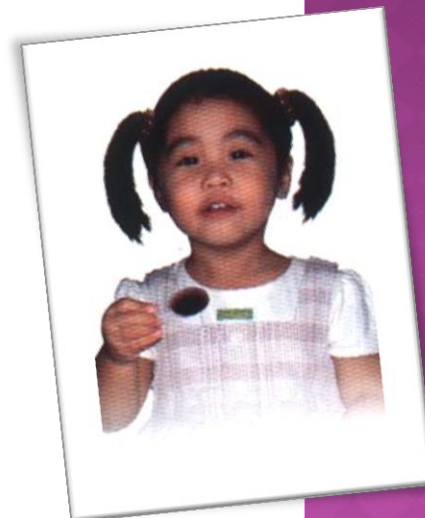
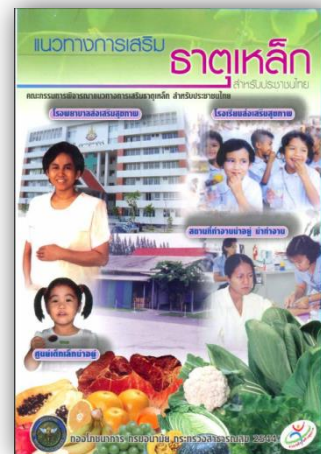
2:1:1 Thai dish (Vegetable : Rice : Meat)



Nutrition intervention in Thailand

❖ Important micronutrient supplementation

- Iodine, folate, iron supplementation for pregnant women : daily dose
- Iron supplementation for pre-school and school-age children : weekly dose



Nutrition intervention in Thailand

❖ Strengthen the involvement of partnership in communities by encouraging local staffs and people to participate in nutrition promotion

Iodine
villages



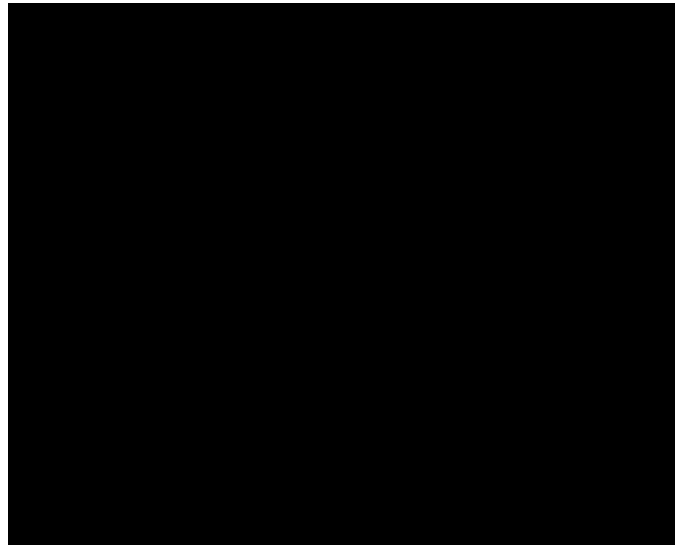
Full potential
growth children
promoting
organization
(villages, child
center and
school)

Thai people “Flat Belly”



Air Campaign

Mass Media 30 million Thai people can be estimated to get these media



Ground Campaign

- ❖ Promote aerobic exercise every day
- ❖ Campaign of waist circumference contest
- ❖ Access to safety fruit and vegetable in local area
- ❖ Raise awareness of the importance obese people to lose weight



Nutrient composition data

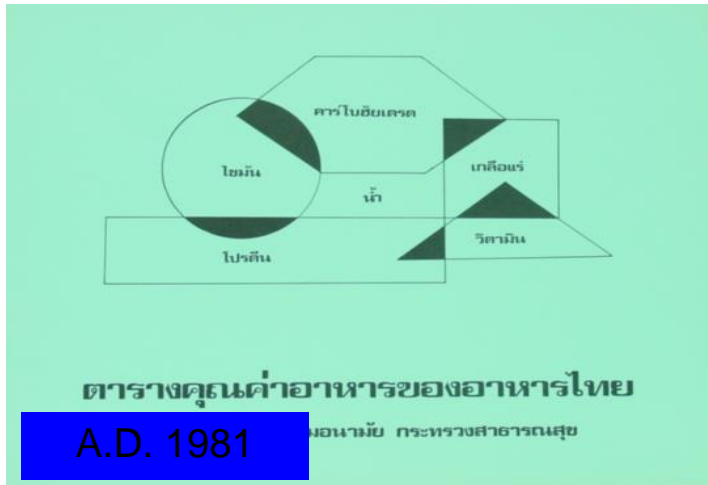


Fig 2. Nutritive values of Thai foods.

Nutrient composition data (cont.)

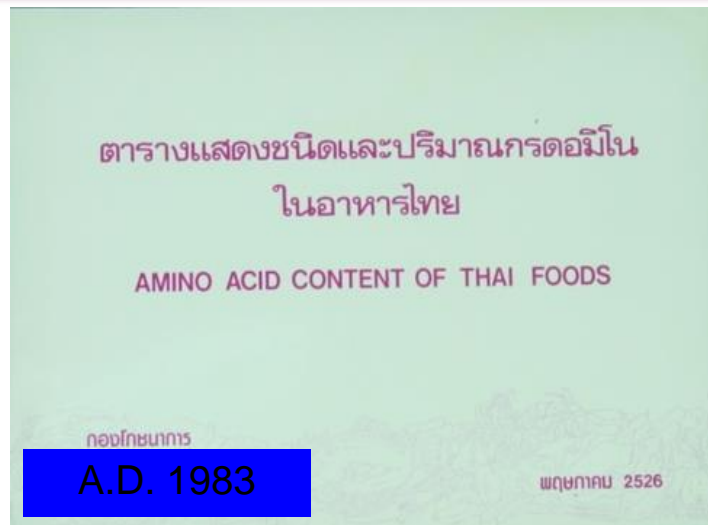


Fig 3. Amino acid content of Thai foods.

Nutrient composition data (cont.)



Fig 4. Fatty acids compositions and cholesterol in Thai foods.



THANK YOU