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
Ministry of Public Health

- Professional Councils
- Cluster of Medical Service Development
  - Deputy Permanent Secretary
  - Department of Medical Services
  - Department for Development of Thai Traditional and Alternative Medicine
  - Department of Mental Health
- Cluster of Public Health Development
  - Deputy Permanent Secretary
  - Department of Disease Control
  - Department of Health
- Cluster of Health Service Support
  - Deputy Permanent Secretary
  - Department of Health Service Support
  - Department of Medical Sciences
  - Food and Drug Administration

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

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Kuala Lumpur, Malaysia, 2 June 2014
Vision
Bureau of Nutrition is a core organization to enhance food and nutrition technology for better health and nutrition of all Thai people.
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)

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

M&E System

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

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Malnutrition in Thailand

- IDA
- IDD
- Ca
- Vit A
- B₁, B₂

under - over
Excluding Breast Feeding 6 months in Thailand

Target 50%

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

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Nutrition situation in Thailand

Nutrition Situation among children 1-5 years


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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

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

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

<table>
<thead>
<tr>
<th>BMI (kg/m²)</th>
<th>15-29</th>
<th>30-44</th>
<th>45-59</th>
<th>60-69</th>
<th>70-79</th>
<th>80+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male &lt; 18.5</td>
<td>17.0</td>
<td>4.6</td>
<td>6.6</td>
<td>11.2</td>
<td>18.9</td>
<td>30.9</td>
<td>9.4</td>
</tr>
<tr>
<td>18.5 - &lt;25</td>
<td>64.5</td>
<td>63.3</td>
<td>59.7</td>
<td>62.4</td>
<td>62.6</td>
<td>57.8</td>
<td>62.2</td>
</tr>
<tr>
<td>25 – 30</td>
<td>12.0</td>
<td>25.7</td>
<td>27.4</td>
<td>22.1</td>
<td>16.1</td>
<td>10.0</td>
<td>22.3</td>
</tr>
<tr>
<td>≥ 30</td>
<td>6.5</td>
<td>6.5</td>
<td>6.3</td>
<td>4.3</td>
<td>2.4</td>
<td>1.3</td>
<td>6.0</td>
</tr>
<tr>
<td>Female &lt; 18.5</td>
<td>17.2</td>
<td>3.4</td>
<td>3.4</td>
<td>10.1</td>
<td>16.8</td>
<td>27.6</td>
<td>7.6</td>
</tr>
<tr>
<td>18.5 - &lt;25</td>
<td>62.2</td>
<td>52.4</td>
<td>46.0</td>
<td>46.9</td>
<td>52.0</td>
<td>58.5</td>
<td>51.7</td>
</tr>
<tr>
<td>25 – 30</td>
<td>13.6</td>
<td>31.6</td>
<td>36.0</td>
<td>31.9</td>
<td>25.4</td>
<td>9.8</td>
<td>29.1</td>
</tr>
<tr>
<td>≥ 30</td>
<td>7.0</td>
<td>12.6</td>
<td>14.7</td>
<td>11.1</td>
<td>5.9</td>
<td>4.1</td>
<td>11.6</td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th></th>
<th>SEX</th>
<th>2003</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BMI ≥ 25 kg/m²</strong></td>
<td>Female</td>
<td>34.4</td>
<td>40.7</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>26.5</td>
<td>28.4</td>
</tr>
<tr>
<td><strong>Excess waist circumference</strong></td>
<td>Female</td>
<td>36.1</td>
<td>45.0</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>15.4</td>
<td>18.6</td>
</tr>
</tbody>
</table>

Source: 4\textsuperscript{th} Health Exam. Survey (2008-2009)
Prevalence of anemia in Thai ≥ 15 y.


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IDD Control and prevention Program in Thailand

Median of urinary iodine
- Deficiency: < 150 µg/l
- Adequate: 150 - 249 µg/l
- Excess: 250 - 499 µg/l
- Over Excess: ≥ 500 µg/l

Main: USI
Add.: Supplementation in pregnancy

Source: Bureau of Nutrition

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# IDD Situation among children and elderly

<table>
<thead>
<tr>
<th>year</th>
<th>Median UI (µg/L)</th>
<th>%HH coverage iodized salt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Children (3-5 yrs.)</td>
<td>elderly</td>
</tr>
<tr>
<td>2011</td>
<td>229.2</td>
<td>129.0</td>
</tr>
<tr>
<td>2012</td>
<td>212.6</td>
<td>108.3</td>
</tr>
<tr>
<td>2013</td>
<td>226.6</td>
<td>113.8</td>
</tr>
</tbody>
</table>

Target %HH coverage iodized salt > 90

- deficiency
- more than adequate
- adequate
- excessive

Source: Bureau of Nutrition
“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

Retail Shop

Household Salt

Surveillance System (Salt)

Surveillance System (Pregnant women & Newborn & Preschool children)

Development

TSH

Preschool Children

Newborn

Urine Iodine

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Weight and Height measurement

Thai Local Growth Reference

Nutritional Status Interpretation

Underweight
- Nutrition Education
- Balance Diet
- Vitamin Supplementation
  - Every month

Normal
- Nutrition Education
- Balance Diet
  - Growth Monitoring (wt. & ht. every 3 months)

Overweight
- Nutrition Education
- Balance Diet
  - Every month

Well balance food consumption pattern and Physical fitness

Optimum Growth Development of Thai Children

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Obesity Measurement

Obesity among children 6 - 14 years

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-11</td>
<td>8.7</td>
</tr>
<tr>
<td>12-14</td>
<td>11.9</td>
</tr>
</tbody>
</table>

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)
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

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2:1:1 Thai dish
(Vegetable : Rice : Meat)
Important micronutrient supplementation

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

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

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
Fig 2. Nutritive values of Thai foods.
Fig 3. Amino acid content of Thai foods.
Fig 4. Fatty acids compositions and cholesterol in Thai foods.
THANK YOU