Childhood Obesity – WHO European Region Perspective
All-island Obesity Action Forum

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Overview

- Recap of the European situation
- Update on current and future WHO Europe and global policy frameworks and their priorities
- European FNAP 2015-2020 & European Physical Activity for Health Strategy
Overweight and Obesity in WHO European Region

In 46 countries in the European Region

over 50% of the population is overweight

over 20% the population is obese
Burden of Disease – Ireland

Nutrition, Physical Activity and Obesity

Ireland

Monitoring and surveillance

Overweight and obesity in three age groups

Adults (20 years and over)

Health service staff and obesity in Ireland

In 2002, the health service staff and obesity in Ireland

Percentage of overweight and obesity in Ireland

In 2002, the percentage of overweight and obesity in Ireland was 20.1% for men and 26.2% for women. This increased to 21.6% for men and 30.7% for women by 2014. As of 2016, the percentage of overweight and obesity in Ireland is estimated to be 23.2% for men and 33.2% for women.
Special challenge: Children and adolescents
A north-south gradient of overweight

Source: COSI Round 2 2009/2010
How far are we from Ending Childhood Obesity in Europe?

Prevalence of overweight among boys aged 7 years - COSI 2010, by country

<table>
<thead>
<tr>
<th>Country</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRC</td>
<td>49</td>
</tr>
<tr>
<td>ITA**</td>
<td>45</td>
</tr>
<tr>
<td>ESP</td>
<td>45</td>
</tr>
<tr>
<td>MLT*</td>
<td>34</td>
</tr>
<tr>
<td>MKD</td>
<td>34</td>
</tr>
<tr>
<td>PRT</td>
<td>32</td>
</tr>
<tr>
<td>SVN</td>
<td>30</td>
</tr>
<tr>
<td>NOR**</td>
<td>29</td>
</tr>
<tr>
<td>BGR</td>
<td>28</td>
</tr>
<tr>
<td>IRL</td>
<td>26</td>
</tr>
<tr>
<td>HUN</td>
<td>25</td>
</tr>
<tr>
<td>LVA</td>
<td>25</td>
</tr>
<tr>
<td>LTU</td>
<td>24</td>
</tr>
<tr>
<td>CZE</td>
<td>24</td>
</tr>
<tr>
<td>SWE</td>
<td>24</td>
</tr>
<tr>
<td>BEL</td>
<td>23</td>
</tr>
</tbody>
</table>

* 6-year-olds
** 8-year-olds
Prevalence of overweight (%) among children aged 7: COSI, Ireland

Prevalence of overweight among European adolescents

11, 13 and 15 years old boys and girls

Source: HBSC Survey
Prevalence of overweight among European adolescents

11, 13 and 15 years old boys and girls

Source: HBSC Survey

2006
Prevalence of overweight among European adolescents

11, 13 and 15 years old boys and girls
Source: HBSC Survey

2010

BMI-for-age >10%
10% ≤ BMI-for-age <15%
15% ≤ BMI-for-age <20%
BMI-for-age ≥20%
No information
Nutrition, PA and Obesity

International highlights from the HBSC 2009/2010 International Report

Health behaviors: all worsen

Overweight and obesity: all increase

Breakfast: decreases in both boys and girls

Fruit: decreases in both boys and girls

Physical activity: decreases in both boys and girls
Social Inequalities in Obesity Persist in the Nordic Region Despite Its Relative Affluence and Equity

Maria Magnusson · Thorkild I. A. Sørensen · Steingerdur Olafsdottir · Susanna Lehtinen-Jacks · Turid Lingaas Holmen · Berit Lilienthal Heitmann · Lauren Lissner
Adolescents - overweight (including obesity) prevalence in youth according to “sub-region”

Sharper increase

Overweight prevalence distribution according to geographical region in 32 countries within WHO European Region, considering both boys and girls with 11, 13, 15 (Source: HBSC) – unpublished, please do not quote
Diet as a major risk factor in Europe

- **SALT**
  - WHO recommends less than 5 grams per day
  - 53 countries exceed this recommendation

- **SATURATED FAT**
  - WHO recommends maximum 10% of total calories consumed per day
  - 48 countries exceed this recommendation

- **SUGAR**
  - WHO recommends less than 5% of total calories consumed per day
  - In 24 countries, 25% of 15 year old boys consume sugary drinks on a daily basis

Trans fats, low F&V....
Salt intake per person per day for adults in the WHO European Region from individual country-based surveys, various years

WHO RECOMMENDATION - <5 grams
Trans-fatty acids, TF and SF
Denmark: action on trans fat

Trans-fat ban

– First country in world to legislate against trans-fat
  • Sets a maximum level of 2 grams of trans fatty acids per 100g of fat/oil
– No strong objection from industry
WHO new Sugar Recommendations – what's new?
Association between free sugars intakes and measures of body fatness in children

<table>
<thead>
<tr>
<th>Study</th>
<th>Log (odds ratio)</th>
<th>Standard error</th>
<th>Odds ratio (95% CI)</th>
<th>Weight (%)</th>
<th>Odds ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dubois 2007 (1)⁹⁵</td>
<td>0.77</td>
<td>0.32</td>
<td></td>
<td>6.3</td>
<td>2.16 (1.15 to 4.07)</td>
</tr>
<tr>
<td>Lim 2009 (2)⁹⁷</td>
<td>0.31</td>
<td>0.12</td>
<td></td>
<td>44.5</td>
<td>1.37 (1.08 to 1.74)</td>
</tr>
<tr>
<td>Ludwig 2001 (3)⁹⁵</td>
<td>0.39</td>
<td>0.44</td>
<td></td>
<td>3.5</td>
<td>1.48 (0.63 to 3.47)</td>
</tr>
<tr>
<td>Weijs 2011 (4)⁸⁰</td>
<td>0.61</td>
<td>0.24</td>
<td></td>
<td>11.8</td>
<td>1.84 (1.16 to 2.92)</td>
</tr>
<tr>
<td>Welsh 2005 (5)⁹⁶</td>
<td>0.26</td>
<td>0.25</td>
<td></td>
<td>10.7</td>
<td>1.30 (0.80 to 2.11)</td>
</tr>
<tr>
<td>Welsh 2005 (6)⁹⁶</td>
<td>0.59</td>
<td>0.24</td>
<td></td>
<td>11.2</td>
<td>1.80 (1.12 to 2.89)</td>
</tr>
<tr>
<td>Welsh 2005 (7)⁹⁶</td>
<td>0.59</td>
<td>0.23</td>
<td></td>
<td>12.1</td>
<td>1.80 (1.14 to 2.84)</td>
</tr>
<tr>
<td>Total (95% CI)</td>
<td></td>
<td></td>
<td></td>
<td>100.0</td>
<td>1.55 (1.32 to 1.82)</td>
</tr>
</tbody>
</table>

Test for heterogeneity: \( \tau^2 = 0.00, \chi^2 = 3.93, df = 6, P = 0.69, I^2 = 0\%

Test for overall effect: \( z = 5.42, P < 0.001 \)

(1) OR for incident obesity in frequent versus infrequent consumers of SSB between meals
(2) OR for incident overweight per daily serve SSB (8 oz)
(3) OR for incident obesity per daily serve SSB
(4) OR for incident overweight per approximate daily serve SSB (5% energy from beverage sugar)
(5) OR for incident overweight in normal weight children who consumed >1 serve/d SSB versus <1 serve SSB/d
(6) OR for remaining overweight in overweight children who consumed >1 serve/d SSB versus <1 serve SSB/d
(7) OR for incident overweight in children at risk of overweight who consumed >1 serve/d SSB versus <1 serve SSB/d
Per capita sugar consumption and prevalence of diabetes mellitus – global and regional associations.

Weeratunga P. BMC Public Health 2014
## Current status of policy

### Marketing of HFSS foods to children

<table>
<thead>
<tr>
<th>Countries (N)</th>
<th>No action reported</th>
<th>Partially or fully implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>33</td>
<td></td>
</tr>
</tbody>
</table>

### Notable recent developments:

- Ireland introduced statutory regulation on advertising and other forms of commercial communication to under 18s on TV and Radio
- Introduction of self-regulatory model in Norway, with government engagement, restricting most forms of marketing to under 13s
Prevalence of exclusive breastfeeding under or at 6 months of age in the WHO European Region from individual country-based surveys, various years

No data
Dietary inadequacies in European girls and women

<table>
<thead>
<tr>
<th>Age Group</th>
<th>HIGH</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children 5-9</td>
<td>protein, fat, SFA, sugars, salt</td>
<td>PUFA, vit D</td>
</tr>
<tr>
<td>Children 10-14</td>
<td>fat, SFA, sugars, salt</td>
<td>vit D, folates, iron</td>
</tr>
<tr>
<td>Adolescents</td>
<td>fat, SFA, sugars, salt</td>
<td>vit D, folate, iron, PUFA, magnesium, iodine</td>
</tr>
<tr>
<td>Adults</td>
<td>Fat, SFA, sugars, salt</td>
<td>calcium, magnesium and iron</td>
</tr>
<tr>
<td>Elderly</td>
<td>Fat, sugars, salt</td>
<td>vit D, α-tocopherol, folate, calcium, magnesium, iron</td>
</tr>
</tbody>
</table>

Source: European Nutrition Report 2009
WHO recommends 150 min./week
Sedentary behavior
A snapshot from across Europe
Successful nutrition policies - country examples
Overview Policy Actions Implementation
53 WHO/Europe Member States – 2012/13

- Labelling - nutritional information
- Food Based Dietary Guidelines
- Breastfeeding promotion and protection policies
- Physical Activity Policy incl. Guidelines
- Baby Friendly Hospital Initiative
- Programs in schools (inc. vending machines)
- School Fruit Scheme (SFS) or similar
- Salt reduction initiatives
- Marketing HFSS foods to children - restrictions
- Promote Active Travel for school-children
- Reformulation - less sugar and salt
- Labelling - signposting
- Measures to affect food prices

No Action  Partially implemented  Fully implemented
Commission on Ending Childhood Obesity

16 May 2014 – To gather the best possible advice on dealing with the crisis of childhood obesity, WHO’s Director-General has established a high-level Commission on Ending Childhood Obesity.

Many countries are experiencing a rapid rise in obesity among infants and children under 5 years of age. Tackling childhood obesity now represents an important opportunity to reduce the impact of heart disease, diabetes and other serious diseases in future – while immediately improving the health of children.

Read more about the work of the Commission

40 million

In 2012, more than 40 million children under the age of 5 were overweight or obese by 2025 if current trends continue.
Global & Regional commitments
Set of 9 voluntary global NCD targets for 2025:

- Premature mortality from NCDs: 25% reduction
- Essential NCD medicines and technologies: 80% coverage
- Drug therapy and counseling: 50% coverage
- Diabetes/obesity: 0% increase
- Tobacco use: 30% reduction
- Raised blood pressure: 25% reduction
- Physical inactivity: 10% reduction
- Salt/sodium intake: 30% reduction
- Harmful use of alcohol: 10% reduction
How can we support national efforts?
WHO provides upstream policy advice to set national targets

6 global targets for nutrition to be attained by 2025

-40%
40% reduction in number of children under-5 who are stunted

<5%
Reduce and maintain childhood wasting to less than 5%

≥ 50%
Increase the rate of exclusive breastfeeding in the first six months to at least 50%

-50%
50% reduction of anaemia in women reproductive age

-30%
30% reduction in low birth weight

0%
No increase in childhood overweight
From Health 2020 to the FNAP & PAS

2012

Health 2020

2013

Vienna Declaration on Nutrition and Noncommunicable Diseases in the Context of Health 2020

2014

Physical Activity Strategy (PAS) & FNAP

2015
European Food and Nutrition Action Plan 2015-2020
A European Region in which the negative impacts of preventable diet-related NCDs and malnutrition in all its forms—including overweight and obesity—have been dramatically reduced, and all citizens have healthier diets throughout their lives.
Vision

Health 2020 as overarching framework
Governments as primary leaders
Cooperation across sectors, levels, countries
All citizens enabled to have a healthier diet
Better and longer lives for everyone
5 Priority areas

- Create healthy food and drink environments
- Promote the gains of a healthy diet throughout life, especially for the most vulnerable groups
- Reinforce health systems to promote healthy diets
- Support surveillance, monitoring, evaluation and research
- Strengthen governance, alliances and networks to ensure a health-in-all-policies approach
## Selected examples of policy options in new FNAP 2015-2020

<table>
<thead>
<tr>
<th>Priority policy options</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong controls on marketing, incl. but not limited to TV advertising</td>
<td>Reduce exposure of children to marketing of HFSS foods, including foods high in free sugars; use of nutrient profile for marketing (WHO)</td>
</tr>
<tr>
<td>Fiscal measures and price policies</td>
<td>Explore policies that affect the price of foods for consumers at point of purchase</td>
</tr>
<tr>
<td>Consumer-friendly front of pack labelling</td>
<td>Identify foods for which consumption should be limited or promoted through interpretative labelling, including foods high in free sugars; encourage product reformulation</td>
</tr>
<tr>
<td>Calorie reduction and smaller portion sizes</td>
<td>Reformulation of food products. Introduce smaller portion sizes to prevent over-consumption</td>
</tr>
<tr>
<td>Healthier food retail environment, incl. in schools</td>
<td>Improve availability &amp; affordability of healthier food products</td>
</tr>
</tbody>
</table>
The intergenerational cycle of under and overnutrition

- From pre-pregnancy to older population
Existence of National Recommendations (Nutrition)

- Recommendations exist on nutrition for women of reproductive age, including pre-conception, pregnancy and postpartum/lactation.

- Recommendations on nutrient supplementation for pregnant women include:

- Dietary recommendations are general but include information on:
  - Pregnant women with a BMI ≤20
  - Pregnant women with a BMI ≥25
  - Pregnant women who need a special diet, e.g. gestational diabetes mellitus, vegetarians etc. – face-to-face counseling is provide for this group.
Existence of National Recommendations (Physical Activity)

• No recommendations exist on physical activity for women of reproductive age
  – Making Ireland one of the 22 countries in the WHO European Region without recommendations on physical activity

• 36% of countries (i.e. 19) in WHO European Region provide recommendations on physical activity
Existence of National Recommendations (Weight Gain during Pregnancy)

- Recommendations exist on gestational weight gain
  - Based on pre-pregnancy BMI according to WHO cut-offs
  - Using IOM 2009
  - No monitoring frequency is recommended
Existence of National Recommendations (Newborn, Infant and Young Child Nutrition)

- Recommendations exist on **newborn, infant and young child nutrition** and include e.g.:
  - Early initiation of breastfeeding in the delivery room
  - Breastfeeding “on demand” during the stay in the maternity care services
  - Breastfeeding “on demand” during at home
  - Exclusive breastfeeding for 6 months
  - Continued breastfeeding at 2 years or more
  - Introduction of complementary foods at 6 months
Priority area: Monitoring, evaluation & research

Key objectives:

• Strengthen surveillance systems and evaluate policies

• Strengthen the evidence base for action

Examples

Update of WHO Europe’s NOPA database
Special challenge: Children and adolescents

Health Behaviour in School-aged Children Study

WHO Childhood Obesity Surveillance Initiative
Percentage of the costs due to obesity and overweight related to the total costs of diseases

<table>
<thead>
<tr>
<th></th>
<th>Portugal</th>
<th>The Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overweight (BMI&gt;25)</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Obesity (BMI&gt;30)</td>
<td>17</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: Dias J. WHO & RIVM unpublished data - 2011
### Primary care counselling: nutrition and physical activity

<table>
<thead>
<tr>
<th></th>
<th>Nutrition counseling in PHC: fully implemented</th>
<th>Physical activity counseling in PHC: fully implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU Member States</td>
<td>31%</td>
<td>15%</td>
</tr>
<tr>
<td>Non EU Member States</td>
<td>18%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Source: WHO Europe, 2010
Priority area: Governance & Leadership

Key objectives:

• Provide high-level leadership

• Establish coordination mechanisms, promote alliances

Example:
developed by 9 national ministries AND Nutrition Policies
Overview of 71 European community-based initiatives against childhood obesity starting between 2005 and 2011: general characteristics and reported effects

Wanda Jose Erika Bemelmans, Trudy Maria Arnoldina Wijnhoven, Marieke Verschuuren and João Breda

• Diversity, heterogeneity but some common features like integrated actions...
• Aimed at environment and children...
• Some evidence effectiveness
• Design and implementation problems (control, sample size, selection bias...
Childhood obesity: a multi-stakeholder approach - POR

81% children, all from poor families achieved a BMI reduction after 6 M

Rito et al. PHN 2013

All Community
All settings
**In sum:** interventions for better NCD outcomes

- Political will
- Enlightening policy frameworks
- Evidence
- Management
- Training and capacity building
- Investment (particularly in children)

- Tangible effective actions
- Surveillance and better data
- Interventions that work (innovation and technology)
- Collaboration with stakeholders
- Reaching most difficult groups
- Intersectoral coordination
- Sustainability
- Inspiring guidelines
Way forward for nutrition…. WHO’s role

WHO will support Member States implement the Action Plan through:

• Clear policy recommendations and guidelines

• Development of specific tools, toolkits and technical guidance to assist countries

• Region wide work plans and country cooperation strategies

• Supporting strengthened governance, alliances and networks across region

• WHO Europe Action Networks (e.g. on salt reduction and marketing) to share country experience and learn from policy implementation

• Continued collaboration with European Union

• Timely data from surveillance programmes, with supporting analyses, interpretations and inferences
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Division of Noncommunicable Diseases & Life-course
WHO Regional Office for Europe, Copenhagen

http://www.euro.who.int/nutrition