

Methodology and summary

Country profiles on nutrition, physical activity and obesity in the 53 WHO European Region Member States



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ABSTRACT

The aim of this document is to give an overview of information on selected monitoring and surveillance indicators as well as on policy developments and actions in the areas of nutrition, physical activity and obesity in the 53 WHO European Region Member States. It gives a description of the data sources used and summarizes some of the information that is included in individual country profiles, which are issued separately. The monitoring and surveillance section addresses overweight and obesity in three age groups, exclusive breastfeeding during the first six months of life, intake of saturated fatty acids and salt, fruit and vegetable supply, iodine status and physical inactivity. The policy section focuses on salt-reduction initiatives, trans fatty acids policies, actions taken in the area of marketing of food and non-alcoholic beverages to children, physical activity policies and recommendations. This document intends to support the exchange of experiences, policy development and action in these increasingly important areas of public health.

Keywords

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Ms Caroline Bollars, WHO Regional Office for Europe
Dr João Breda, WHO Regional Office for Europe
Ms Tina Kiaer, WHO Regional Office for Europe
Ms Misha Kouzeh, consultant
Ms Lauren McGale, WHO Regional Office for Europe
Ms Inês Lança de Morais, WHO Regional Office for Europe
Mr Stephen Whiting, WHO Regional Office for Europe
Ms Trudy Wijnhoven, WHO Regional Office for Europe.

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Abbreviations

BMI	body mass index
COSI	WHO European Childhood Obesity Surveillance Initiative
EC	European Commission
EU	European Union
Eurostat	statistical office of the European Commission
FAO	Food and Agriculture Organization of the United Nations
GDP	gross domestic product
GHO	WHO Global Health Observatory
HBSC	Health Behaviour in School-aged Children (survey)
HEPA	health-enhancing physical activity
IOTF	International Obesity Task Force
ISO	International Organization for Standardization
MET	metabolic equivalent
NCD	noncommunicable disease
NOPA	WHO European Database on Nutrition, Obesity and Physical Activity
PA	physical activity
TFA	trans fatty acids

Introduction

Noncommunicable diseases (NCDs) are the leading global cause of death, contributing to more deaths than all other causes combined. The disease burden due to inappropriate dietary patterns and physical inactivity remains high in the WHO European Region and is actually increasing in many countries. Excessive intake of saturated fatty acids and trans fatty acids (TFA), free sugars and salt, as well as low consumption of fresh vegetables and fruit have become the leading risk factors for diet-related NCDs such as obesity, cardiovascular diseases and certain cancers (1).

Overweight and obesity contribute to a large proportion of NCDs, shortening life expectancy and adversely affecting quality of life. The obesity epidemic has built up in recent decades as a result of the changing social, economic, cultural and physical environment and poses one of the most serious public health challenges in the WHO European Region. Overweight and obesity most affect people in lower socioeconomic groups, and this in turn contributes to a widening of health and other inequalities. A particular concern is the rapid rise of overweight and obesity in children, and it is important to recognize the negative impact this will have on the quality of life and well-being of the individual as well as society as a whole, with consequences for health systems (2).

This report provides an overview of country data on a selected list of monitoring and surveillance indicators and on policy developments and actions in the areas of nutrition, physical activity (PA) and obesity for the 53 Member States of the WHO European Region. It contains an update from mid-2010 on the progress made with regard to the implementation of the key action areas of the *WHO European Action Plan for Food and Nutrition Policy 2007–2012* (3), the *White Paper on a strategy for Europe on nutrition, overweight and obesity related health issues (2007–2013)* (4) and the first progress report on the implementation of that White Paper (5).

The future vision focuses on achieving commitment to nutrition and PA policies that are preventive and sustainable. These policies can take stock of the social determinants of health and build upon the foundation of health promotion in the current difficult economic climate. Such approaches can reduce the burden of NCDs arising from poor diet and lack of PA in the WHO European Region. They have been developed through a series of strategic initiatives globally and at the European level, including the *European Charter on Counteracting Obesity* (6), the *Action Plan for implementation of the European Strategy for the Prevention and Control of Noncommunicable Diseases 2012–2016* (7), and the Health 2020 policy framework (8).

Methodology

This section gives an overview of the definitions and sources used for the selected list of demographic indicators and monitoring and surveillance indicators, as well as the specific areas of focus in terms of policies and actions.

For each Member State, an individual country profile was prepared using the selected surveillance indicators and policy items. A draft country profile was sent to all 53 Member States in December 2012 and the comments received from national information focal points were incorporated. A final draft of the country profiles was then subsequently circulated at the meeting of nutrition focal points (convened on 10–12 March 2013 in Tel Aviv, Israel) and at the WHO European Ministerial Conference on Nutrition and Noncommunicable Diseases in the Context of Health 2020 (convened on 5–6 July 2013 in Vienna, Austria).

The country codes used in the graphs that are presented in this summary document (as well as in each individual country profile) refer to the International Organization for Standardization (ISO) 3166-1 Alpha-3 country codes.

Demographic data

Unless Member States provided their own data, the most recent data for the first four demographic indicators listed below were provided for all European Union (EU) Member States except Croatia (27 countries) by Eurostat – the statistical office of the European Commission (EC) (9) – and for the non-EU Member States in the WHO European Region by the online databases of the United Nations Population Division (10) and of the United Nations Statistics Division (11). The information for the last (5th) listed demographic indicator for all countries was extracted from the WHO Nutrition Landscape Information System (12).

1. The figures on total population for the EU Member States were taken from 2011 (9) and for the non-EU Member States from 2010 (10).
2. The median age (in years) of the population for the EU Member States was derived from 2011 data, except for Belgium, Cyprus and Romania, for which data originate from 2010 (9), and for the non-EU Member States also from 2010 (10).
3. The figures on life expectancy at birth for both females and males in the EU Member States were taken from 2010 (9), except for Italy, for which data originate from 2009, and for non-EU Member States from the time period 2010–2015 (10).
4. The latest available information on gross domestic product (GDP) per capita at current prices in United States dollars for the EU Member States was taken from 2011 (9), except for Bulgaria, Poland and Romania, for which data originate from 2010. The GDP per capita figures for the non-EU countries were from 2010, except for Monaco and San Marino, for which data originate from 2009 (11).
5. The figures on total expenditure on health as a percentage of GDP were taken from 2010 data for all Member States of the WHO European Region (12).

Monitoring and surveillance

The primary sources for overweight, obesity, saturated fatty acids intake, fruit and vegetable supply, iodine status and physical inactivity were intercountry comparable data. Where the national information focal points were able to provide national estimates for these indicators, this information was also included in the respective section of the country profile. In this context, it should be taken into account that these national data do not allow for comparisons across countries due to sampling and other methodological differences.

Intercountry comparable sources could not be identified for the prevalence of exclusive breastfeeding during the first six months of life, or for salt intake, and thus only the available national survey data were used for these two indicators.

Overweight and obesity in three age groups

Adults

Definition

In adults, WHO defines overweight as having a body mass index (BMI) of ≥ 25.0 kg/m², obesity as having a BMI of ≥ 30.0 kg/m² and pre-obesity as having a BMI of 25.0–29.9 kg/m² (13). Overweight thus includes pre-obesity and obesity.

Sources

To present intercountry comparable estimates, the crude estimates for overweight and obesity in adults aged 20 years and above – which were generated by WHO in 2008 using measured weight and height only – were extracted from the WHO Global Health Observatory (GHO) Data Repository (14). Data for 51 WHO European Region Member States were available.

Published nationally representative overweight and obesity estimates were also included when provided by the country focal points.

Adulthood obesity prevalence forecasts for the years 2020 and 2030 were generated in 2012 by employing a modelling exercise tool.¹ This two-part modelling process was developed by the United Kingdom Government's Foresight Programme and uses different but complementary methods for each part. The first programme implements a cross-sectional and regression analysis and the second implements a longitudinal analysis using a microsimulation (15).

Adolescents

Definition

In adolescents aged 10–19 years, WHO defines overweight and obesity as the proportion of adolescents with a BMI-for-age value above +1 Z-score and above +2 Z-scores, respectively, relative to the 2007 WHO growth reference median (16). According to WHO definitions, the prevalence estimates for overweight adolescents include those who are obese (17).

¹ Report on modelling adulthood obesity across the WHO European Region, prepared by consultants (led by T. Marsh and colleagues) for the WHO Regional Office for Europe in 2013.

Countries might have defined overweight and obesity differently than recommended by WHO, using their national growth reference or the cut-off points recommended by the International Obesity Taskforce (IOTF) (18). This was indicated in the country profiles, when applicable.

Sources

Intercountry comparable prevalence figures on overweight in 11-, 13- and 15-year-old adolescents were derived from the 2009/2010 Health Behaviour in School-aged Children (HBSC) survey (19). Data for 33 participating Member States were available and were based on self-reported height and weight. The HBSC study is conducted in collaboration with the WHO Regional Office for Europe and facilitates the monitoring of young people's health and related trends over time.

For those countries that did not participate in the 2009/2010 HBSC survey and for which data were available from the respective country's Demographic and Health Survey (20), the prevalence of overweight was presented for adolescents aged 15–19 years. However, these data should be interpreted with caution as WHO criteria for adults were used to define overweight/obesity indicators in adolescents.

Published nationally representative overweight and obesity estimates were also included when provided by the country focal points.

Children

Definition

In school-aged children aged 5–9 years, WHO defines overweight and obesity as the proportion of children with a BMI-for-age value above +1 Z-score and above +2 Z-scores, respectively, relative to the 2007 WHO growth reference median (16). According to WHO definitions, the prevalence estimates for overweight children include those who are obese (17).

Countries might have defined overweight and obesity differently than recommended by WHO, using their national growth reference or the cut-off points recommended by the IOTF (18). This was indicated in the country profiles, when applicable.

Sources

Intercountry comparable prevalence figures on overweight and obesity in 6-, 7-, 8- or 9-year-old children were derived from the 2007/2008 WHO European Childhood Obesity Surveillance Initiative (COSI) (21). Data for 12 participating WHO European Region Member States were available and were based on measured height and weight. The COSI aims to measure trends in overweight and obesity in children aged 6.0–9.9 years in order to monitor the progress of the epidemic and to make intercountry comparisons across the WHO European Region.

Published nationally representative overweight and obesity estimates were also included when provided by the country focal points.

Exclusive breastfeeding until 6 months of age

Definition

WHO recommends mothers worldwide to exclusively breastfeed infants for the first six months of the child's life in order to achieve optimal growth, development and health (22). Exclusive breastfeeding means that the infant receives breast milk (including expressed breast milk or breast milk from a wet nurse) and allows the infant to receive oral-rehydration salt, drops, syrups (vitamins, minerals, medicines), but nothing else (23). Two indicators were mainly used in the country profiles:

- exclusive breastfeeding under six months of age – this is the proportion of infants aged 0–5.9 months who are fed exclusively on breast milk;
- exclusive breastfeeding at six months of age, representing the proportion of infants who have been exclusively fed breast milk from birth to six months of age.

Countries might have provided information that was based on other definitions, in which case this was indicated in the individual country profiles.

Sources

No intercountry comparable data source could be identified. Instead, nationally representative data were derived from country-specific publications on surveys conducted in this field (24).² Owing to the different data collection methods for these country-specific surveys, any comparisons between countries must be made with caution.

Saturated fat intake

Definition

This was defined as the proportion of energy of the total daily calorie intake derived from saturated fatty acids.

The presented information referred to the adult population only and was compared against the maximum daily level of 10%E (energy percentage) recommended by the Food and Agriculture Organization of the United Nations (FAO) (25).

Sources

Intercountry comparable dietary intake estimates on saturated fatty acids (available for some countries) were provided to the WHO Regional Office for Europe by the statistics division of the FAO (26). They referred to the year 2007.

Published nationally representative saturated fat intake estimates were also included when provided by the country focal points.

Fruit and vegetable supply

In the absence of intercountry comparable estimates on fruit and vegetable consumption in the WHO European Region, fruit and vegetable supply data were presented instead.

Definition

This was defined as the supply of fruit (excluding wine) and vegetables in grams per capita per day.

WHO and FAO recommend the consumption of a minimum of 400 grams of fruit and vegetables per person per day (13). It is estimated that a supply of 600 grams would be sufficient to meet this recommendation.

Sources

Intercountry comparable fruit and vegetable supply data (available for some countries) came from the FAO online statistical database (26). They were derived from the food balance sheets and referred to the year 2009.

Published nationally representative fruit and vegetable supply or consumption data were also included when provided by the country focal points.

Salt intake

Definition

This was defined as the mean intake of salt in grams per person per day.

The presented information referred to the adult population only and was compared against the WHO/FAO recommended maximum population salt intake level of 5 grams per person per day (13). Salt is a commonly used term to refer specifically to sodium chloride (5 g salt ~ 2 g sodium).

Sources

No intercountry comparable data source could be identified. Instead, nationally representative data were derived from country-specific publications on surveys conducted in this field (27). Owing to the different data collection methods for these country-specific surveys, any comparisons between countries must be made with caution.

² See also WHO Regional Office for Europe grey literature from 2012 on breastfeeding.

Iodine status

Definition

Insufficient iodine intake was defined as the proportion of the population with a urinary iodine concentration level lower than 100 µg/L (28).

Countries might have provided information that was based on other definitions, in which case this was indicated in the individual country profiles.

Sources

Inter-country comparable estimates on iodine status in the general population were extracted from the Global Iodine Nutrition Scorecard for 2012, which was prepared by the International Council for the Control of Iodine Deficiency Disorders Global Network (29–31).

Published nationally representative iodine status data were also included when provided by the country focal points.

Physical inactivity

Definition

For adults, insufficient PA was defined as not meeting any of the following criteria (32):

- at least 30 minutes of moderate-intensity activity or walking per day on at least five days in a typical week; or
- at least 20 minutes of vigorous-intensity activity per day on at least three days in a typical week; or
- five or more days of any combination of walking, moderate- or vigorous-intensity activities achieving a minimum of 600 metabolic equivalent (MET)-minutes per week.

Countries might have provided information that was based on other definitions, in which case this was indicated in the individual country profiles.

Sources

To present inter-country comparable estimates, the crude estimates for insufficient PA were extracted from the WHO GHO Data Repository (14). They were generated for the year 2008 and referred to individuals aged 15 years and older. Data were available for 36 WHO European Region Member States.

Published nationally representative physical inactivity data were also included when provided by the country focal points.

Policies and actions

The primary source for the report on policies and certain actions in the areas of nutrition, PA and obesity was a country reporting template that was developed in the context of the WHO/EC project on monitoring progress on improving nutrition and PA and preventing obesity in the EU (33, 34). The country reporting template was completed in 2009 by the national information focal points of each of the 53 WHO European Region Member States. The WHO European Database on Nutrition, Obesity and Physical Activity (NOPA) was also consulted, as it contains information on the content of policy documents and actions addressed within them (35). Any additional sources that were consulted are discussed in the subsections that follow.

Salt reduction initiatives

Items

Three key elements of salt reduction initiatives were addressed in the country profiles: (a) monitoring and evaluation methods of salt intake; (b) the stakeholder approach toward salt reduction; and (c) the population approach in terms of labelling and consumer awareness initiatives (27).

Monitoring and evaluation consisted of:

- self-reporting frameworks for industry
- monitoring of salt content of foods
- monitoring of salt intake in the population
- monitoring consumers' awareness and changes in their behaviour
- conducting urinary sodium excretion surveys.

Whether the industry in a country was involved in reducing salt intake in the population was indicated under the description "stakeholder approach toward salt reduction." Industry involvement covered collaborative action involving the food and catering industries, food retailers and restaurants. A key activity in any salt reduction strategy is working with industry to reduce salt levels in prepared foods. Through reformulation of industrially processed foods, for example, Member States have been encouraged to obtain a broad endorsement of the common vision for salt reduction with food producers and their local confederations. Whether food reformulation was implemented in a country was thus also indicated. Whether a specific food category was part of national targets or goals to reduce salt intake in the population was a third element reported under the stakeholder approach heading.

The use of labelling to highlight the salt content of foods was indicated, and consumer awareness covered initiatives designed to raise awareness, for example via television, radio, newspapers, pamphlets, online tools, social media, national salt-level awareness days and press releases.

A classification system was used to indicate the extent of the implementation of individual policy components; namely, **xx** representing partial implementation and **xxx** representing full implementation.

Sources

Salt reduction initiatives for the three key components were identified by the completed country reporting templates, the NOPA database (35) and the WHO Regional Office for Europe publication *Mapping salt reduction initiatives in the WHO European Region* (27). For the latter publication, the identified information was confirmed and fine-tuned with Member States in 2012.

TFA policies

Items

The year of adoption of government legislation was indicated, as well as the type of legislation (mandatory or voluntary action) and the specific measures that had been taken to remove or restrict TFA from the food supply.

Source

An unpublished review (grey literature) from the WHO Regional Office for Europe from 2012 on TFA health, TFA policy and food industry approaches was used as the basis for the TFA policy information.

Price policies

Items

This section focused on the existence of policies on food taxation in Member States and the use of subsidies, such as participation in the EC (voluntary) School Fruit Scheme for school-aged children.

Sources

An unpublished review (grey literature) from the WHO Regional Office for Europe from 2012 on diet and the use of fiscal policy in the control and prevention of NCDs was used as a source of information on fiscal policies.

In addition, information on the participation of Member States in the EC School Fruit Scheme was taken from the EC web site (36).

Marketing of food and non-alcoholic beverages to children

Items

The focus of this section was policy actions taken by the government in terms of regulatory and self-regulatory activities in the area of reducing marketing of food and non-alcoholic beverages to children.

Sources

A summary of the policy actions taken in this area were identified by the completed country reporting templates, the NOPA database (35) and two WHO Regional Office for Europe publications (37, 38).

PA, national policy documents and action plans

Items

Seven selected activities that were carried out or policies that were developed by national governments were identified within five PA-related areas – sport, target groups, health, education and transportation:

1. existence of a national “sport for all” policy and/or a national “sport for all” implementation programme;
2. existence of a specific scheme or programme for community interventions to promote PA in the elderly;
3. counselling on PA as part of primary health care activities;
4. mandatory physical education in primary and secondary schools;
5. inclusion of PA in general teaching training;
6. national or subnational schemes promoting active travel to school;
7. existence of an incentive scheme for companies or employees to promote active travel to work.

A classification system was used to indicate the extent of implementation of each individual policy component: (a) clearly stated in a policy document, partially implemented or enforced; and (b) clearly stated in a policy document, entirely implemented and enforced.

Sources

The extent of implementation was indicated by the completed country reporting templates or identified within the PA policies included in the NOPA database (35).

Leadership, partnerships and professional networks on health-enhancing PA (HEPA)

Items

Existence of a specific national coordinating mechanism (working group, advisory body, coordinating institution, and so on) was identified in the area of PA promotion, along with an institution leading this mechanism and the participating stakeholders, which can be representatives from both the public and private sectors.

Sources

The existence of a specific national coordinating mechanism was indicated by the completed country reporting templates and presented in the WHO Regional Office for Europe publication on PA promotion policy development and legislation in EU Member States (39).

PA recommendations, goals and surveillance

Items

Existence of national recommendations in the area of HEPA was identified, along with the targeted population groups addressed by national HEPA policy and the inclusion of PA in a national health monitoring system.

Sources

The existence of national HEPA recommendations and the inclusion of PA in a national health monitoring system were indicated by the completed country reporting templates, and the specific target groups were identified through the PA policies included in the NOPA database (35).

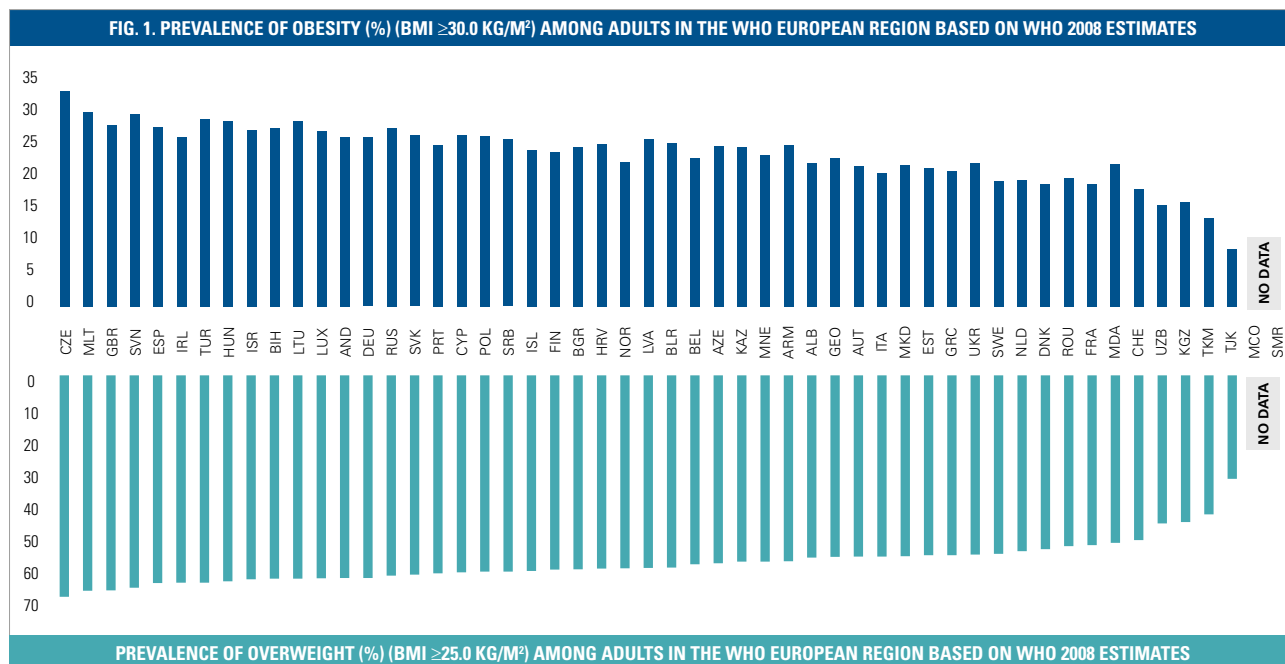
Summary

Monitoring and surveillance

Overweight and obesity in adults

Intercountry comparable overweight and obesity estimates from 2008 (14) show that in 46 out of the 51 countries for which data were available, more than 50% of the adult population (≥ 20 years old; both genders) were overweight and that in 40 countries more than 20% were obese (Fig. 1). The prevalence of overweight

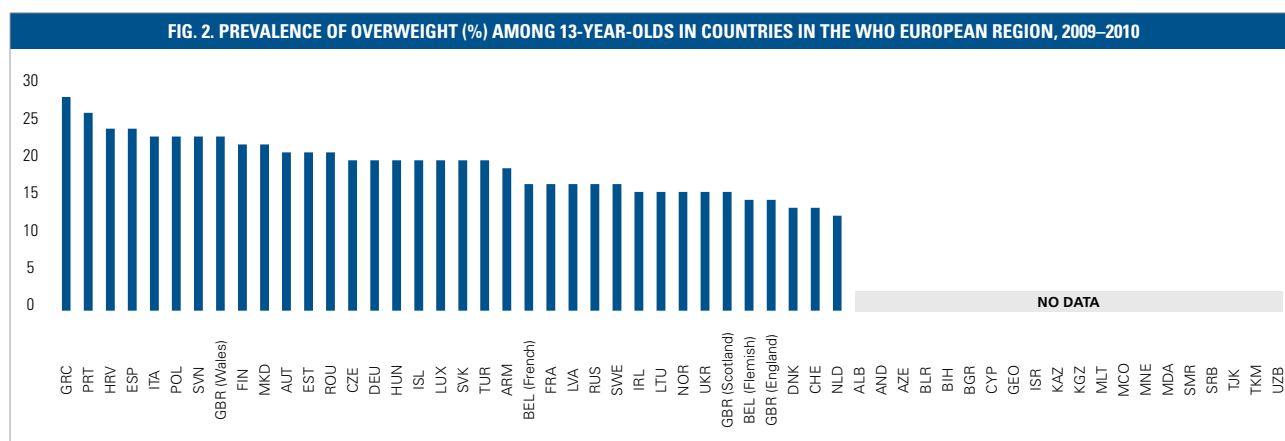
among adult males ranged from 31% in Tajikistan to 72% in the Czech Republic. Among adult females, the prevalence of overweight ranged from 31% in Tajikistan to 64% in Turkey.



Notes. The country codes refer to the ISO 3166-1 Alpha-3 country codes. Data ranking for obesity is intentionally the same as for the overweight data.
Source: WHO GH0 Data Repository (14).

Overweight and obesity in adolescents

Among 11-year-olds (both genders), according to the 2009/2010 HBSC survey, the highest prevalence of overweight was found in Greece (33%), Portugal (32%), Ireland (30%) and Spain (30%) and the lowest was found in the Netherlands (13%) and Switzerland (11%) (19). Among 15-year-olds, prevalence of overweight ranged from 10% (Armenia, Lithuania and the Russian Federation) to 23% (Greece). Fig. 2 shows the prevalence of overweight in 13-year-olds, indicating that up to 27% were overweight.



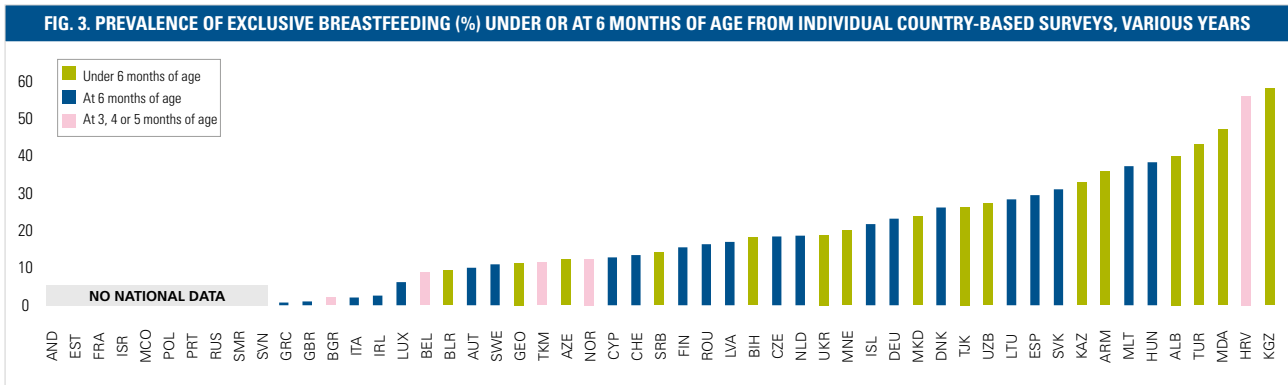
Notes. The country codes refer to the ISO 3166-1 Alpha-3 country codes. Overweight is defined as a BMI-for-age value above +1 Z-score relative to the 2007 WHO growth reference median.
Source: Currie et al. (19).

Exclusive breastfeeding until 6 months of age

The indicator “exclusive breastfeeding under six months of age” was used by 16 countries³ and ranged from

³ Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Montenegro, Republic of Moldova, Serbia, Tajikistan, the former Yugoslav Republic of Macedonia, Turkey, Ukraine and Uzbekistan.

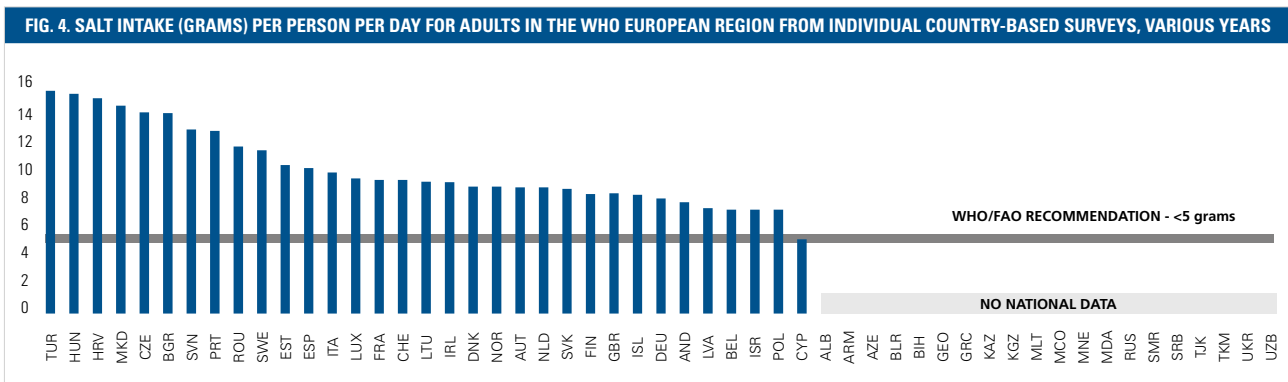
9.0% in Belarus to 56.1% in Kyrgyzstan, whereas the indicator “exclusive breastfeeding at six months of age” was used by 22 countries⁴ and ranged from 0.7% in Greece to 37.0% in Hungary (Fig. 3).



Notes. The country codes refer to the ISO 3166-1 Alpha-3 country codes. Data were derived from country-specific publications on surveys carried out in this field, not as part of a European-wide survey. Due to different data collection methods of the country-specific surveys, any comparisons between countries must be made with caution. *Source:* WHO Regional Office for Europe grey literature from 2012 on breastfeeding.

Salt intake

Salt intake data were identified for 33 countries, all reporting for the adult population a mean intake per person per day of 5 grams or higher (Fig. 4). Methods used to collect the data included 24-hour urine samples, 24-hour dietary recall or food frequency questionnaires (27).



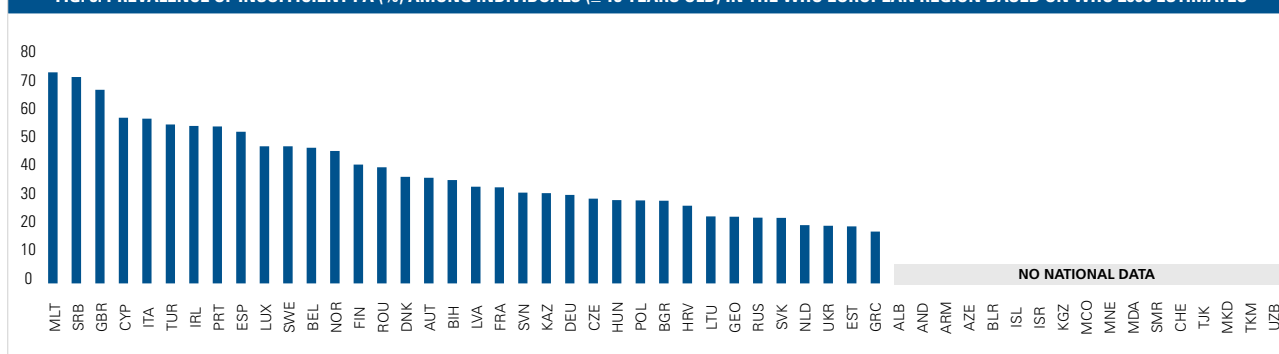
Notes. The country codes refer to the ISO 3166-1 Alpha-3 country codes. Data were derived from country-specific publications on surveys carried out in this field, not as part of a European-wide survey. Due to different data collection methods of the country-specific surveys, any comparisons between countries must be made with caution. Ranking of data was carried out so that country data at the right-hand side of the graph – with values below the WHO/FAO recommendation – fall within the positive frame of the indicator. *Source:* WHO Regional Office for Europe (27).

Physical inactivity

Intercountry comparable estimates from 2008 (14) show that in 23 out of 36 countries more than 30% of the population aged 15 years and over (both genders) were insufficiently physically active (Fig. 5). The prevalence of insufficient PA among males ranged from 17% in Estonia to 71% in Malta. Among females, it ranged from 16% in Greece to 76% in Serbia.

⁴ Austria, Cyprus, Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Romania, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

FIG. 5. PREVALENCE OF INSUFFICIENT PA (%) AMONG INDIVIDUALS (≥ 15 YEARS OLD) IN THE WHO EUROPEAN REGION BASED ON WHO 2008 ESTIMATES

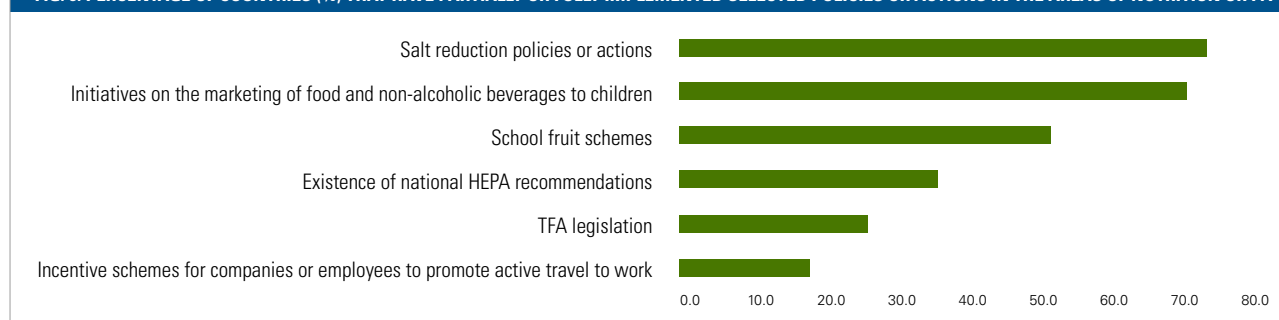


Note. The country codes refer to the ISO 3166-1 Alpha-3 country codes.
Source: WHO GHOData Repository (14).

Policies and actions

Fig. 6 displays the percentage of countries that have partially or fully implemented selected policies or actions in the areas of nutrition or PA and shows that around 70% of the countries have implemented policies or actions on salt reduction or initiatives in the area of marketing of food and non-alcoholic beverages to children. An incentive scheme to promote active travel to work does not yet form a substantial part of many policies identified in the WHO European Region (35).

FIG. 6. PERCENTAGE OF COUNTRIES (%) THAT HAVE PARTIALLY OR FULLY IMPLEMENTED SELECTED POLICIES OR ACTIONS IN THE AREAS OF NUTRITION OR PA



Source: WHO NOPA Database (35).

Conclusions

The country profiles prepared for each of the 53 Member States in the WHO European Region can serve as a tool to assess the current status of selected surveillance indicators and policy developments in the areas of nutrition, PA and obesity. In terms of a vision for the future, there is room to continue efforts to harmonize definitions of indicators, data availability, survey designs and data comparability. The aim is to proceed with current policies, actions and policy development and to act according to population need in the various countries by increasing commitment to nutrition and PA policies.

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Country profiles on nutrition, physical activity and obesity in the
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**World Health Organization
Regional Office for Europe**

UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark
Tel.: +45 45 33 70 00 Fax: +45 33 70 01 Email: contact@euro.who.int
Website: www.euro.who.int