



### **About WCRF International**

WCRF International is pleased to respond to this consultation as the principal international association dedicated to the prevention of cancer through healthy food, nutrition, physical activity, and weight management.

WCRF International leads and unifies a global network of cancer charities, comprising: World Cancer Research Fund UK (WCRF UK); Wereld Kanker Onderzoek Fonds (WCRF NL); World Cancer Research Fund Hong Kong (WCRF HK); and Fonds Mondial de Recherche contre le Cancer (FMRC). Since 1982, the WCRF global network has funded cutting-edge research to the value of more than £85 million. This research has helped further our understanding that cancer is a largely preventable disease, with experts estimating that about a third of the most common cancers could be prevented by eating a healthy diet, being physically active and maintaining a healthy body weight.

We have built on our scientific expertise to produce evidence-based policy recommendations for the prevention of cancer that target, among other actors, multinational bodies, governments and the private sector. These recommendations outline action to be taken at different levels in order to influence and change those lifestyle choices that increase people's risk of developing cancer.

Our principal recommendation to government at all levels is that they have a chief and central responsibility for protecting, maintaining and improving public health; strong government stewardship for health should include legislation, cross-sector policies, market measures and other available mechanisms directed towards promoting healthy patterns of diet and physical activity.

### **Prevention of cancer**

Our reports show that cancer is largely preventable by making long-term changes to the foods we eat and how active we are, as well as maintaining a healthy weight (WCRF/AICR, 2007). In fact, about a third of the most common cancers in higher-income countries and about a quarter in lower-income countries could be prevented through eating healthily, being physically active and maintaining a healthy weight (WCRF/AICR, 2009).

All of our scientific and policy publications can be downloaded at our [diet and cancer report website](#).

## WHO Monitoring Framework and Voluntary Global Targets

The Political Declaration on the Prevention and Control of Non-Communicable Diseases, issued by the UN General Assembly in September 2011, represents a major step forward for global health and development. Such high-level recognition of the scale of the problem and common underlying risk factors for non-communicable diseases (NCDs) is to be commended and provides an unprecedented opportunity to reduce the burden of cancer, cardiovascular disease, chronic respiratory disease, and diabetes as well as other chronic diseases.

We are pleased to be able to respond to this consultation on behalf of the World Cancer Research Fund global network. With our expertise in the prevention of cancer, obesity and overweight, we have given careful thought to the type of targets and indicators that are necessary to ensure the Political Declaration is a successful initiative.

The latest WHO Discussion Paper on a Global Monitoring Framework and Voluntary Targets for the Prevention and Control of NCDs addresses some of the most important risk factors. The WHO currently proposes an overarching target on reduced mortality from NCDs and exposure targets for certain behavioural risk factors (tobacco, dietary salt intake, physical activity) and physiological risk factors (hypertension). We welcome and support targets in these areas.

The importance of having a comprehensive set of global targets and indicators should not be underestimated. We would like to see the inclusion of two additional targets, one for the reduction of childhood obesity and a reinstated target for the reduction of per capita alcohol consumption. Given the strength of epidemiological evidence and the existences of effective population-based interventions, we feel targets in these two areas will contribute significantly to an overall reduction in the burden of NCDs. They are also particularly pressing as levels of obesity and alcohol consumption are increasing rapidly in low- and middle-income countries. In adopting targets in these areas, the WHO will encourage and facilitate action.

We recognise that the targets are supported by a set of indicators to ensure broad-based approaches and to help benchmark progress. We feel that a wider basket of core indicators is needed to help Member States identify and take action in all relevant areas. It will also help them to achieve the overarching goal of reducing mortality from NCDs by 25% by 2025. The inclusion of additional indicators will help to ensure that there are no gaps in the follow-up to the Political Declaration. We recommend the inclusion of indicators on saturated fat, consumption of plant foods and the consumption of energy-dense foods.

We call upon Member States, the WHO and other interested parties, in view of the compelling evidence and significance of these risk factors for health globally, to adopt:

- An **ambitious target on childhood obesity** that calls for a reduction in the prevalence of obesity
- A reinstated **target on per capita alcohol consumption** that calls for a reduction in per capita consumption. We support the Global Alcohol Policy Alliance [position](#).

We also urge the WHO and Member States to broaden the set of targets and indicators for the monitoring framework. A wider basket would include additional indicators on the following factors associated with NCDs:

- Saturated Fat
- Consumption of Plant Foods
- Energy-Dense Foods

## Why we need a global voluntary target on childhood obesity

### Target

Sustained downward trend in prevalence of obesity<sup>1</sup> in below-5s and school-aged children to  $\leq 5\%$  of the population by 2025

### Indicators on obesity

Age-standardised prevalence of overweight and obesity in adults aged 18+ years, children and adolescents<sup>2</sup> (%)

Proportion of children and adults meeting national guidelines for healthy eating and physical activity (%)

### 1. High epidemiological and public health relevance

Overweight and obese children face many of the same health conditions as adults, and can be particularly sensitive to the effects on their self-esteem and peer-group relationships. However, the most significant outcome of childhood obesity is the likelihood that these children will progress to being obese adults and suffer chronic diseases at a much younger age.

The rise in overweight and obesity over the past decade has been dramatic. Globally, in 2010 the number of overweight children under the age of five is estimated to be over 42 million. Close to 35 million of these are living in developing countries. Obesity in both children and adults is truly a global issue – today 65% of the world's population lives in a country where overweight and obesity kill more people than underweight, including *all* high-income countries and most middle-income countries. Although current estimates indicate that the rate of overweight and obesity is highest in developed countries, in terms of absolute numbers the prevalence is much higher in developing countries (WHO, 2009). Obesity prevalence is also rising in countries throughout the world, reaching 20% to 30% in some European countries and 70% in Polynesia (Kumanyika, 2008).

Overweight and obesity now ranks as the fifth leading global risk for mortality (WHO, 2009). Overweight and obesity present their own health challenges, but they are also major risk factors for NCDs: 44% of the diabetes burden, 23% of the ischaemic heart disease burden and up to 41% of certain cancer burdens are attributable to overweight and obesity (WHO, 2009). In addition to higher risks of NCDs, people suffering from overweight and obesity also experience adverse outcomes such as breathing difficulties, increased risk of fractures, hypertension and psychological effects that impact upon well-being. Overweight and obesity are associated with higher health costs and reduced productivity (OECD, 2010).

If a significant reduction in prevalence and mortality from NCDs is to be achieved, this will involve *significant* reduction in risk factors such as overweight and obesity. Population-based prevention strategies to tackle overweight and obesity are likely to have a major impact on population health that is not confined to a reduction in levels of overweight and obesity.

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<sup>1</sup> Obesity among children can be defined as  $>+2SD$  from WHO 2007 Growth Reference Standard

<sup>2</sup> Defined for adults as body mass index greater than 25 kg/m<sup>2</sup> for overweight or 30kg/m<sup>2</sup> for obesity, or for children and adolescents according to the WHO 2007 Growth Reference and WHO Growth Reference Standard

It is important that action targets *both* overweight and obesity, as disease risk and mortality increase steeply as people cross the overweight threshold (WCRF/AICR, 2007; OECD, 2010). It is also worth considering the positive contribution to health to be achieved by increasing the proportion of the population at a healthy weight, so there is value in tracking secondary indicators such as mean BMI and BMI distribution.

## 2. Coherence with major strategies

Overweight/obesity is identified as one of the four major biological (physiological/metabolic) risk factors for NCDs in the Global Action Plan on the Prevention and Control of NCDs (2008-2013). Additionally, the Global Strategy on Diet, Physical Activity and Health (2004) targets overweight and obesity as one of the most important risk factors for NCDs.

The Political Declaration on the Prevention and Control of Non-Communicable Diseases notes with concern the rising levels of obesity and recognises that obesity and overweight have strong linkages with the four main NCDs. It recommends multi-sectoral action to 'reverse, stop and decrease' the trends in children, youth and adult populations respectively.

In addition to global strategies, many regional initiatives have recognised the importance of tackling obesity, including the European Charter on Counteracting Obesity (2006) and, more recently, the Aruban Declaration on Obesity (2011).

## 3. Availability of evidence-based effective and feasible public health interventions

Overweight and obesity have multiple complex causes associated with behaviours such as unhealthy diet and physical inactivity, as well as social determinants such as poverty, low education, limited breastfeeding, cultural norms and lifestyle influences. Multi-sectoral, multi-level action is therefore required; this makes it more difficult to pinpoint single examples of evidence-based effective interventions. The complexity of this challenge is widely recognised (WHO, 2007a).

We do not believe that the current definition of what is considered admissible scientific evidence should prevent the adoption of a target on obesity. On the contrary, such a demand has been at the root of the failure to invest in multilevel, multisectoral policy to tackle obesity, and for its consequent relentless increase. In particular, while this failure has already taken place for many higher income countries, it is potentially preventable for lower income and transitional countries. Relying on the demonstration of effectiveness of interventions is a self-fulfilling prophecy of failure. In contrast, it is the scale of the problem that demands action, based on the best – though imperfect – evidence, which in turn can provide practice based evidence for policy improvement.

For this reason in the case of obesity, the criteria need to be more flexible. Concerted, comprehensive and sustained action on obesity needs to occur to ensure that the evidence base is improved for the future.

To date, the WHO and many other organisations have engaged policy- and decision-makers in setting out the evidence in favour of population-level strategies by clarifying risk factors, the causal pathways and modeling the impact of policy interventions that are plausible and sustainable (WHO, 2007a). We now need to implement these population-level strategies to enhance our understanding and expand practice-based evidence (Lang et al, 2007).

The challenge is to introduce multiple policies and interventions simultaneously that tackle the determinants of obesity through innovative environmental approaches that complement and support traditional education and personal health promotion and behaviour change

efforts. This is also likely to have a beneficial impact on levels of cancer, cardiovascular diseases, and diabetes. Areas to be addressed include:

- Exclusive breastfeeding and appropriate complementary feeding practices
- Family practices, school policies and procedures that impact individual energy intake and expenditure
- Transport and urban planning policies
- Commercial marketing activities targeting children
- Policies on food supply and agriculture
- The role of pre-school and school settings in establishing healthy lifestyles
- Activities of food manufacturers and suppliers, including fast-food outlets, relating to portion size, nutritional profile, pricing, labelling
- Vulnerable social groups, including low socio-economic and minority ethnic groups

Evidence-based interventions that should be adopted can be grouped into two categories:

- Micro-scale interventions in the school, workplace and community
- Macro-scale interventions to influence behaviour including action on food labeling, pricing and availability and the built environment.

Micro-scale interventions are only likely to be effective if supported by macro-scale interventions. Many examples of cost-effective opportunities for promoting macro-scale interventions exist, including built environment interventions for physical activity at the local and community levels (Marmot, 2011).

Action on obesity requires engaging multiple sectors to gain their support and shift the balance from individual-based to population-level interventions.

The WHO Regional Office for Europe compiled a useful review of strategies to respond to the challenge of obesity ahead of the WHO Europe Ministerial Conference on Counteracting Obesity (WHO Europe, 2007a). National bodies have also examined environmental and social influences on overweight, obesity, diet and physical activity, (such as the [National Observatory on Obesity](#) in the UK) and made recommendations for comprehensive obesity strategies. In Australia, the Commonwealth Minister for Health appointed a Preventative Health Task Force to produce recommendations for a comprehensive obesity strategy, including targets ([2009](#)).

#### **4. Evidence of achievability at the country level, including low- and middle-income countries**

We recognise that there is currently limited evidence on the effects on obesity and achievability of altering social and economic policies, such as policies on agricultural production or food pricing – mainly due to a continuing lack of policy implementation. Much more evidence, however, is available on localised attempts to influence the individual through health promotion, such as education, school training and parental training, principally because such approaches are more amenable to experimental designs.

This imbalance is a continuing challenge, given the broad range of environmental and social influences that raise the risk of obesity. WHO has previously noted that it is much more likely that obesity will be effectively addressed through policy measures operating at the macro-scale level, rather than through a focus on individual behaviours (WHO, 2007a).

This is particularly the case for interventions at the country level, where the relatively limited breadth of studies identified, mainly school based and mainly individually orientated,

indicates an urgent need to explore preventive interventions in other settings and at multiple levels upstream (Kumanikya, 2008).

Although the picture for successful interventions is far from complete, guidance and policy recommendations have been developed by various expert panels and working groups in different countries (NICE, 2006; NICE, 2010; Cochrane, 2011; CDC, 2007). Frameworks for evaluating progress in implementing elements have also been developed and can be shared between countries and adapted. A study of 9 countries in Europe has set the precedent for comprehensive study of how various policy options for obesity prevention are viewed by a broad range of stakeholders (Millstone, 2007).

Policies to tackle obesity – as the evidence suggests – need to be based on multiple and comprehensive forms of intervention that are together sustained for enough time to allow for an effect to be observed. A target on childhood obesity would provide the impetus for such action.

We currently have good information on the drivers of obesity, but at this stage evidence for achievability of population interventions is weaker. This is because population-based interventions have been less widely implemented, are less easily evaluated and the use of so-called gold standard methodologies (controlled trials) is not only inappropriate but also often impossible. This should not prevent global support for a target on childhood obesity.

## 5. Existence of unambiguous data collection instruments

Robust population-level prevalence data on overweight and obesity are important to monitor progress, and to allow assessment and evaluation of policy and other responses to the problem. While there are certainly challenges in data collection, member states should be aiming to improve and expand active monitoring and surveillance schemes.

For children, the school setting provides a relatively easy opportunity to identify and measure representative samples. There is also good data worldwide on body weight among the under-5s. The Childhood Obesity Surveillance Initiative in Europe provides a good model for the standardised and harmonised collection of data in a way that is simple and does not require major investment of public resources (WHO Europe, 2007b)

We recognise that the routine collection of reliable *measured* data on adults can be more difficult to conduct, as there are limited settings that allow easy access to a large and representative sample of adults. Large-scale routine surveys are an alternative.

Measures can be taken to ensure that the data are fit for the purpose of monitoring progress towards a target. For example, self-reported data can be calibrated within each country against a sub-sample among whom measurements have been taken (Gorber et al, 2008).

### References:

- World Health Organization, "Global Health Risks – morbidity and disease attributable to selected major risks", 2009
- Kumanyika S et al, "Population-based prevention of obesity", 2008
- Organisation for Economic Cooperation and Development, "Obesity and the Economics of Prevention: Fit not Fat", 2010
- World Cancer Research Fund International/American Institute for Cancer Research, "Food, Nutrition, Physical Activity, and the Preventions of Cancer: a Global Perspective", 2007
- World Health Organization Regional Office for Europe, "The challenge of obesity in the European Region and the strategies for response", 2007a
- National Institute of Clinical Excellence, "Obesity: the prevention, identification, assessment and management of overweight and obesity in adults and children", 2006; 2010
- Cochrane Heart Group (Summerbell et al), "Interventions for Preventing Obesity in Children", 2011

Center for Disease Control (Barlow S), "Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report", 2007

Millstone E and Lobstein T, "The PorGrow project: overall cross-national results, comparisons and implications", 2007

World Health Organization Regional Office for Europe, "Childhood Obesity Surveillance Initiative", 2007

Gorber et al, "The feasibility of establishing correction factors to adjust self-reported estimates of obesity", 2008

Marmot et al, "The Marmot Review: Implications for Spatial Planning", 2011

Lang et al, "Overcoming policy cacophony on obesity: an ecological public health framework for policymakers", 2007

## Why we need a global indicator on the consumption of plant foods

### Public health goals:

Population average consumption of non-starchy vegetables and of fruits to be at least 600g daily

Relatively unprocessed cereals (grains) and/or pulses (legumes), and other foods that are a natural source of dietary fibre, to contribute to a population average of at least 25g non-starch polysaccharide daily

**We support the indicator proposed by WHO on fruit and vegetable consumption, but also call for the inclusion of an indicator that captures the consumption of relatively unprocessed cereals (grains) and pulses (legumes).**

### 1. High epidemiological and public health relevance

There is increasingly good evidence that greater consumption of plant foods protects against cardiovascular disease, some cancers, and can help to reduce the prevalence of overweight and obesity (WCRF/AICR, 2007).

Plant foods include non-starchy vegetables and fruits, unprocessed cereals (grains) and/or pulses and other foods that are a natural source of dietary fibre. Vegetables and fruit are generally low in energy density and, when consumed in variety, are sources of many vitamins, minerals and other bioactive compounds.

Consumption of fruits and vegetables is very variable and in most countries for which data were available daily consumption fell short of recommended levels, although this is not due to lack of availability (FAO/WHO 2003; Lock et al, 2005). The WHO includes fruit and vegetable consumption as a risk factor for chronic disease in its global burden of disease studies (WHO, 2000) and the WHO/FAO joint consultation recommended a daily intake of 400g of fruit and vegetables (FAO/WHO, 2003). National and regional surveys have shown that low consumption of fruit and vegetables, for example, was responsible for between 2.4% and 3.5% of the burden of disease (Lock et al, 2005).

Cereals (grains), roots, tubers, and plantains in whole or processed forms are a source of dietary fibre and micronutrients. Cereals in whole forms also contain essential fats. With industrialisation and urbanisation, consumption of these foods decreases and more is consumed in the form of cereal products, which are typically higher in energy density and may contain substantial amounts of fat, sugar or salt.

Systematic reviews of the literature on food, nutrition, physical activity and cancer found that plant foods probably decreased the risk of cancer in nine different sites (WCRF/AICR, 2007). Increased consumption of low energy-dense foods reduced the likelihood of weight gain, overweight and obesity, which independently increases the risk of certain cancers, CVD and diabetes.

Fourteen reviews relating to the prevention of NCDs recommended including wholegrain cereals in the diet, and four of these recommended that people should consume 3-6 servings per day to prevent CVD and those at risk of CVD should eat 6-12 servings per day. Sixteen reports recommended consuming relatively high amounts of vegetables and fruit with thirteen recommending at least 400g per day (at least 5 servings). Eleven reports recommended the consumption of pulses (WCRF/AICR, 2007).

## **2. Coherence with major strategies**

The WHO/FAO joint consultation included fruit and vegetable consumption as part of its overall dietary recommendations for diet-related chronic diseases (2003). Major policy strategies and action plans from the WHO have subsequently included increased consumption of fruit and vegetables, and legumes, wholegrains and nuts as a policy objective.

The Global Action Plan on the Prevention and Control of NCDs (2008-2013) includes the prevalence of low fruit and vegetable consumption as an indicator. The Global Strategy on Diet, Physical Activity and Health (2004) identifies the need to for fuller information about healthy consumption patterns, including steps to increase the consumption of fruit and vegetables.

The Political Declaration on the Prevention and Control of Non-Communicable Diseases recognises that the most prominent NCDs are linked to common risk factors, including unhealthy diets.

## **3. Availability of evidence-based effective and feasible public health interventions**

Examination of the evidence shows that the price and availability of foods and drinks is in many cases affected by public policies and practices that distort supply and demand. Policies and actions that make some foods and drinks artificially cheap have not been put in place with public health in mind.

The agriculture market subsidises the production of foods (such as high-fructose corn syrup and red meat) that should only be consumed in moderation in order to maintain a healthy and balanced diet. Subsidies for unhealthy foods should be removed, with subsidies on fruit, vegetables and wholegrain cereals calibrated to improve population health. Public health impact assessments have modelled the positive and negative impact of food and agriculture policies on public health (Lock, Gabrijelcic et al, 2003; Elinder, 2003).

It is also possible to take cross-sectoral action at the regional, national and local level. For example, supermarkets and retailers can ensure they offer a sufficiently wide range of affordable plant foods, including but not limited to fruit and vegetables and that these are positioned and priced to incentivise purchases, including by children (Lang, 2007; Lang, 2004; Nestle, 2006). Furthermore, a settings approach to encouraging plant food consumption, including fruit and vegetable, has been trialled at the national and European levels. The UK 5-A-Day School Scheme was evaluated and it was found to have increased consumption and to have changed knowledge, attitude and awareness. The EU School Fruit Scheme is currently being evaluated.

## **4. Evidence of achievability at the country level, including low- and middle-income countries**

Studies have tested the effectiveness of giving vouchers for fruit and vegetables to families living on low income. A study in the USA found that after a twelve-month follow-up the amount of fruit and vegetable consumed had increased and was sustained in comparison to controls (Herman et al, 2008). Comparable results have also been obtained in middle-income settings (Claro et al, 2007).

## **5. Existence of unambiguous data collection instruments**

Estimates of plant food consumption can be based on national representative surveys of dietary intake. Surveys with individual-level dietary data provide information on intakes and

variability in population subgroups. Nationally representative surveys have been conducted in some of the most populated countries in the world, including China, India, the Russian Federation and the USA (Lock et al, 2005).

When no survey data are available, estimates of plant food consumption can be derived from per capita food supply statistics from the FAO, which can be taken with estimates of population size to give a figure for average food availability.

Complete details of methods used for estimating food consumption have been published elsewhere.

**References:**

World Cancer Research Fund International/American Institute for Cancer Research, "Food, Nutrition, Physical Activity, and the Preventions of Cancer: a Global Perspective", 2007

Food and Agriculture Organization/World Health Organization, "Diet, Nutrition and the Prevention of Chronic Diseases: Report of a Joint WHO/FAO Expert Consultation", 2003

Lock et al, "The global burden of disease attributable to low consumption of fruits and vegetables: implications for the global strategy on diet", 2005

World Health Organization, "Global Health Risks – morbidity and disease attributable to selected major risks", 2009

Lock, Gabrijelcic et al, "Health impact assessment of agriculture and food policies: lessons learnt from the Republic of Slovenia", 2003

Schafer-Elinder, "Public health aspects of the EU Common Agricultural Policy", 2003

Lang et al, "Overcoming policy cacophony on obesity: an ecological public health framework for policymakers", 2007

Lang et al, "Food Wars – The Global Battle for Mouths, Minds and Markets", 2004

Nestle, "What to Eat", 2006

Herman et al, "Effect of a Targeted Subsidy on Intake of Fruits and Vegetables Among Low-Income Women in the Special Supplemental Nutrition Program for Women, Infants, and Children", 2008

Claro et al, "Income, food prices, and participation of fruit and vegetables in the diet", 2007

## Why we need a global indicator on the consumption of energy-dense foods

### Public health goals:

Average energy density of diets to be lowered towards 125 kcal per 100g

Population average consumption of sugary drinks to be halved by 2025

**We support the NCD Alliance proposed indicator on mean population intake of added sugar per day as a percentage of total energy.**

**We also support the NCD Alliance proposed indicator on mean population intake of saturated fat per day as a percentage of total energy.**

### 1. High epidemiological and public health relevance

Energy density describes the amount of energy per unit weight of foods. The rising availability of energy-dense foods is believed to be a prime driver of the obesity epidemic (Prentice, 2003).

Fats and oils are the most energy-dense macronutrients in pure form, followed by ethanol. Protein and carbohydrate are the least energy-dense. The energy density of foods and diets varies depending on the water content and concentration of the different macronutrients, and of dietary fibre (WHO, 2000 Technical Report Series No. 894).

Cereals (grains) and vegetables cooked in water, and most fruits, are examples of low energy-dense foods. By contrast, high energy-dense diets tend to contain fewer fibre-rich foods and to be relatively concentrated in macronutrients. Many processed foods are energy dense

As incomes rise and populations become more urban, societies enter into “nutrition transition”, characterised by a shift from diets featuring grains and vegetables to those high in fat and sugar, an increasing number of meals eaten outside the home, and a greater proportion of processed foods (WCRF/AICR, 2009). In many cases the most accessible products have the highest energy density (WHO, 2007a)

In general, people tend to consume roughly the same amount of food from day to day, measured by bulk and weight. High energy-dense diets can undermine normal appetite regulation and tend to lead to greater energy intake – a process that has been termed ‘passive over-consumption’. This is compounded by the consumption of energy-rich drinks, such as sugary drinks, which can also contribute to passive over-consumption and weight gain (Prentice, 2003; WHO, 2007a; WCRF/AICR, 2007).

Conversely, diets low in energy density, with lower proportions of fat, more complex carbohydrates and more fibre, protect against weight gain (WHO, 2007a). Thus the finding that diets with higher fruit and vegetable are linked to lower weight gain (WHO, 2007a).

Given this perspective, the emergence of energy-dense ‘fast food’ and sugary drinks as specific risk factors for overweight, obesity and NCDs is not surprising.

## **2. Coherence with major strategies**

The Global Strategy on Diet, Physical Activity and Health recognises that elevated consumption of energy-dense foods that are high in sugar, fat and salt as a risk factor for NCDs.

In addition, WHO recommendations on the marketing of food and non-alcoholic beverages to children specifically target energy-dense foods and drinks.

The Political Declaration emphasises the need to implement cost-effective interventions to reduce salt, sugar and saturated fat in foods, while supporting the production and manufacturing of foods that contribute to a healthy diet.

## **3. Availability of evidence-based effective and feasible public health interventions**

Action to reduce the consumption of energy-dense foods and drinks needs to target both supply and demand (i.e. influencing the consumer and the food producers, manufacturers and retailers). Action should be taken in the following areas:

- Financial incentives and disincentives on food should be implemented as part of an integrated package of mutually reinforcing actions (Hawkes, 2009)
- Promote consumer awareness and understanding of healthy eating, particularly the adverse effects of excess energy intakes on body weight, and risk of cancer, cardiovascular disease, and diabetes.
- Introduce front-of-pack labeling (including traffic light labeling) to aid consumers make healthier choices (Kelly, 2008; FSA Ireland, 2009; UK FSA, 2009)
- Encourage increased availability of healthier reduced saturated fat and energy alternatives to mainstream products through reformulation. Encourage the uptake of these healthier options by consumers, including by ensuring that healthy options are competitively priced (UK FSA, 2007; Robertson, 2008; Hawkes, 2009).
- Encourage increased availability of smaller portion sizes for some products and encourage their uptake by consumers (Robertson, 2008; UK FSA, 2008).
- Encourage the food industry to improve the nutrition profile of its mainstream products by reducing saturated fat and sugar levels, and total energy value through reformulation. Lessons can be learnt from the experience removing salt and trans fatty acids (Uuay, 2009; Wyness, 2011)
- Address the promotion and marketing of energy-dense foods (Hastings, 2003; Hastings, 2006)

Consideration needs to be given to the best approach to implementing such interventions, and how to engage with the private sector. Options for enforcement, monitoring and sanctions must also be considered. Literature is available to guide member states in this regard (UK FSA, 2007; Robertson, 2008).

## **4. Evidence of achievability at the country level, including low- and middle-income countries**

Population-based approaches to reducing energy density in diets can use a variety of interventions.

Early experience with saturated fats in Australia, Finland, Mauritius, Poland and the US has shown that substantial health gains can be achieved through supply side and fiscal policies (see target on saturated fat). Actions included subsidising production and prices of healthier foods, including food grains, vegetables, and low fat milk; raising prices of sugar and butter; regulations to promote provision of healthy foods by retailers, institutions and street vendors;

provision of consumer food price subsidies to encourage healthier food uptake; and education and information for professionals and the public.

There are many positive food reformulation initiatives that are in progress or under preparation, particularly in the European Union and the European Commission has played a role in coordinating national action (DG SANCO, 2009). The focus and approaches used vary, but action areas include saturated fat, energy intake, total fat, added sugars and trans fats. Reformulation efforts have been applied to a range of food categories including, *inter alia*, dairy products, meat products, fats, oils, margarine, breakfast cereals, ready meals, and school meals (DG SANCO, 2011).

Comprehensive food reformulation programmes are less widely adopted in other regions of the world (WHO WPRO, 2010). However, actions such as public education campaigns, 'healthy choice' markers, and food labelling have been shown to contribute to healthier, less energy-dense food choices (WHO WPRO, 2010). In the Americas region, food reformulation (mainly salt), consumer awareness and labelling programmes have been implemented in Argentina, Brazil and Canada; the programmes in Argentina and Brazil also consider restrictions on marketing to children. In the Western Pacific region governments of the Pacific Islands have been considering ways to reduce the average energy density of the processed foods and drinks it imports.

In light of recent successes with salt reformulation, consideration should be given to extending programmes in such countries to include other nutrients and energy density. These programmes will involve manufacturers, primary producers, and retailers, as appropriate, to focus on reformulation of specific groups of foods.

There is no gold standard policy for reducing energy density of foods and diet to date – which means that Member States action should be based on multiple interventions to address a major risk factor for obesity and diet-related NCDs.

## **5. Existence of unambiguous data collection instruments**

In some countries, governments maintain databases with extensive information on the nutrient contents of foods commonly consumed. The processed food databank in the UK, for example, provides information on levels of fat, sugar, salt and a range of other nutrients in processed food products. Sampling plans are informed by market share data and cover foods that are major contributors to fat, sugar and/or salt intakes (FSA, 2006).

The European Food Safety Authority maintains a comprehensive food consumption database for EU member states based on national information from dietary surveys (EFSA, 2011).

In the context of public health nutrition, self-report methods are commonly used to collect food intake data. This is because they usually use fewer resources than alternative methods, such as the use of biomarkers or clinical indicators. Errors can be minimised through careful design and analyses of the data, and this should be taken into account when analysing data or interpreting existing analyses. The relative advantages and disadvantages of methods has been discussed extensively (NOO, 2010).

Population-level data can be obtained from the Food and Agriculture food balance sheets, which provide information about the amounts of food available for consumption. These can be easily interpreted, with careful attention to food wastage and potential for over-/under-estimation of consumption depending on country context (Lock et al, 2005)

**References:**

- Prentice, "Fast foods energy density and obesity: a possible mechanistic link", 2003
- WCRF/AICR, "Policy and Action for Cancer Prevention: Food, Nutrition, and Physical Activity: a Global Perspective", 2009
- World Health Organization Regional Office for Europe, "The challenge of obesity in the European Region and the strategies for response", 2007a
- World Health Organization, "Obesity: preventing and managing the global epidemic - Report of a WHO Consultation (WHO Technical Report Series 894)", 2000
- World Cancer Research Fund International/American Institute for Cancer Research, "Food, Nutrition, Physical Activity, and the Preventions of Cancer: a Global Perspective", 2007
- Hawkes, "Financial incentives and disincentives to encourage healthy eating", 2009
- Kelly, "Front of pack food labelling: traffic light labeling gets the green light", 2008
- Food Safety Authority of Ireland, "A research study into consumers' attitudes to food labeling", 2009
- Food Standards Agency UK, "Independent evaluation of front-of-pack labeling", 2009
- Food Standards Agency UK, "Saturated Fat and Energy Intake Programme", 2007
- Robertson et al, "Review of previous and existing actions, initiatives, policies on nutrition and physical activity", 2008
- Hastings, "The extent, nature and effects of food promotion to children: a review of the evidence (technical paper prepared for the WHO)", 2006
- Hastings, "Review of the research on the effects of food promotion to children", 2003
- Wyness et al, "Reducing the population's sodium intake: the UK Food Standards Agency's salt reduction programme", 2011
- Uuay et al, "WHO Scientific Update on trans fatty acids: summary and conclusions", 2009
- European Commission DG SANCO, "Working Paper on Product Reformulation and Portion Size", 2009
- European Commission DG SANCO, "EU Framework for National Initiatives on Selected Nutrients", 2011
- World Health Organization WPRO, "Regional Consultation on Strategies to Reduce Salt Intake", 2010
- National Obesity Observatory UK, "Dietary Surveillance and Nutritional Assessment in England", 2010
- European Food Safety Authority, "Comprehensive European Food Consumption Database", 2011

## Why we need a global indicator on saturated fat

### Public health goals:

Population saturated fat goal of less than 10% of total dietary energy intake

**We support the NCD Alliance proposed indicator on mean population intake of saturated fat per day as a percentage of total energy.**

### 1. High epidemiological and public health relevance

**Current intakes & rationale for action:** Saturated fat is a significant risk factor for heart disease, stroke and other vascular diseases through raising blood total cholesterol and LDL cholesterol levels (European Heart Network 2011; WHO 2009b). The primary sources of dietary saturated fat are meat, dairy products, processed foods and palm oil. In the absence of comparable data on individual dietary fat intakes around the world, the availability of food for human consumption derived from national Food balance sheets has been used (WHO 2011). While availability of saturated fat in low- and middle-income countries is currently below 10% of energy, across all world regions, availability of dietary energy from total fat has been rising (WHO 2011). It is imperative that global targets for saturated fat are put in place to prevent high saturated fat intakes and high cholesterol becoming a significant problem, particularly in low-income countries.

**Cholesterol links & current targets:** Prevalence of raised total cholesterol – defined as a blood level of 5 mmol/L or above – currently ranges from 23% in the WHO Afro region to 30% in the WHO SE Asia Region and 54% in the WHO Euro region. High cholesterol features in the top 10 risks for total mortality and morbidity in high income and middle income countries, ranking 5th for in the mortality risks for high income countries and 7<sup>th</sup> for middle income (WHO 2009b). A saturated fat target of less than 10% total energy intake is recommended by WHO for the prevention of chronic diseases (WHO 2003) to support key objectives on blood cholesterol and mortality (WHO 2004 & WHO 2009a). Recent expert recommendations in Europe and the US have proposed a long-term target saturated fat intake of less than 7% energy (European Heart Network 2011; US Departments of Agriculture & Health & Human Services 2010). The 10% energy saturated fat target has been adopted by several high-income countries for the prevention of CVD.

### 2. Availability of evidence-based effective and feasible public health interventions

This target is to be achieved by implementation of saturated fat reduction interventions including:

- Reduced saturated fat content in processed foods through product reformulation
- Limiting consumption of meat and meat products to moderate amounts (eg no more than 70g per person per day)
- Limiting consumption of dairy products to low fat
- Mass media campaigns and implementation of clear food labels to inform and empower consumers to make informed choices
- Agriculture support and subsidies to focus on grains, fruit and vegetable products and non-intensive, grass-fed animal production methods.

### 3. Evidence of achievability at the country level, including low- and middle-income countries

Examples of successful population-wide interventions to reduce and replace saturated fat intakes with unsaturated fat and CVD mortality exist for a number of countries including Finland (Laatikainen et al 2005), Poland (Zantonski 1991 & Zantonski 2005) and Mauritius (Uusitalo 1996). In Mauritius, estimated intakes of saturated fats decreased by 3.5% of energy intake while intakes of polyunsaturated fats increased by 5.5%, and were mirrored in changes in serum phospholipid levels between 1987 and 1992. This followed an intervention by the government in 1987, to change the composition of the commonly used cooking oil from mostly palm oil (high in saturated fatty acids) to wholly soya bean oil (Uusitalo et al 1996).

**In some countries the problem is worsening:** By contrast with the successes seen in some countries, rapid rises in CVD mortality have been seen in China and elsewhere, principally due to the adoption of a Western diet rich in saturated fats (NICE 2010; Critchley et al. 2004).

**Correlation with other fats & sugar:** Evidence suggests that a reduction in saturated fat intake is most beneficial when replaced with unsaturated fat, but not with trans fats or simple carbohydrates which have large amounts of free sugars (Siri-Tarino et al 2010; European Heart Network 2011). Therefore saturated fat targets need to be accompanied by efforts and targets to eliminate trans fat and limit population sugar intakes in line with existing sugar recommendations of a maximum of 10% of energy (WHO 2003), to prevent harmful replacement and substitution.

**Target setting:** A target intake of less than 10% of total dietary energy is recommended by WHO for the prevention of CVD

#### **4. Existence of unambiguous data collection instruments**

Work is needed by WHO and others to support the development of monitoring mechanisms in low and middle income countries to assess dietary saturated fat intake levels at the individual level (WHO 2011). In the absence of comparable data on individual dietary intakes around the world, the availability of food for human consumption derived from national food balance sheets should continue to be used (WHO 2011).

Data on blood lipids from nationally representative surveys such as WHO Steps can also provide a useful indication of dietary saturated fat intakes. However, further work is needed to support the development of monitoring mechanisms in low income and some middle-income countries to assess blood cholesterol levels utilising WHO STEPS or similar health examination survey protocols (WHO STEPS).

#### **Summary rationale for a saturated fat core indicator or target**

1. Help countries to meet the proposed WHO core NCD indicator on raised total cholesterol.
2. Ensure that policies on the proposed WHO core NCD indicator to eliminate trans fats are not undermined by replacement or substitution of trans fats with equally harmful saturated fats (or free sugars).
3. Ensure appropriate processes are put in place to monitor and help mitigate the negative impacts of globalisation and the homogenisation of diets.
4. Assist low and middle income countries to avoid the pit-falls that have befallen high-income countries and prevent the double-burden of communicable and non-communicable diseases they already face from worsening.

**References:**

- Critchley et al, "Explaining the increase in coronary heart disease mortality in Beijing between 1984 and 1999", 2004
- Laatikainen et al, "Explaining the decline in coronary heart disease mortality in Finland between 1982 and 1997", 2005
- European Heart Network, "Diet, Physical activity and cardiovascular disease prevention in Europe", 2011
- NICE, "NICE public health guidance 25: Prevention of cardiovascular disease at population level", 2010
- Siri-Tarino et al, "Saturated fat, carbohydrate, and cardiovascular disease", 2010
- US Department of Agriculture and US Department of Health and Human Services, "Dietary Guidelines for Americans", 2010
- Uusitalo et al, "Fall in total cholesterol concentration over five years in association with changes in fatty acid composition of cooking oil in Mauritius: cross sectional survey", 1996
- WHO, "Diet, Nutrition and the prevention of chronic diseases", 2003
- WHO, "Global Strategy on Diet, Physical Activity and Health (DPAS)", 2004
- WHO, "2008-2013 Action plan for the global strategy for the prevention and control of non-communicable diseases", 2009a
- WHO, "Global Health Risks: Mortality and burden of disease attributable to selected major risks", 2009b
- WHO, "Global status report on noncommunicable diseases 2010", 2011
- WHO, "STEPwise approach to surveillance (STEPS)", <http://www.who.int/chp/steps/en/>
- Zatonski WA, Willett W, "Changes in dietary fat and declining coronary heart disease in Poland: population based study", 2005
- Zatonski et al, "Ecological study of reasons for sharp decline in mortality from ischaemic heart disease in Poland since 1991", 1998