



# ***IDF EUROPE POSITION ON ADDED SUGAR***

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## Introduction

Diabetes is a chronic and progressive disease that occurs when the pancreas is no longer able to produce insulin or when the body cannot make good use of the insulin it produces<sup>1</sup>. It is one of the largest global health emergencies of the 21<sup>st</sup> century, affecting ever growing numbers of people, who can be faced with life-changing complications.

Approximately 60 million European citizens are living with diabetes today, and trends are on the rise: it is estimated that by 2040, 71 million people (11% of the adult population) will be living with diabetes in Europe<sup>2</sup>. Our region also has the highest number of children with type 1 diabetes in the world, 140'000, with over 20'000 new cases diagnosed annually. On top of the human cost of diabetes, the annual economic burden of the disease is estimated at €145 billion.

Given the relation of sugar intake with poor nutrition quality and habits, obesity, diabetes and issues in its management, as well as current policy debates at European and global level, IDF Europe presents its position on this issue.

## I-ADDED SUGAR, PUBLIC HEALTH AND DIABETES

### I-1: Added sugar and diabetes

Over the past fifty years, the global per capita sugar consumption has increased by over 50%. In Europe, sugar intake in adults ranges from about 7-8% of total energy intake in countries such as Hungary and Norway, to 16-17% in Spain and the United Kingdom. Worryingly, sugar intake is much higher among children, ranging from about 12% in Denmark, Slovenia and Sweden, to nearly 25% in Portugal<sup>3</sup>.

While the types of commercially available foods on the market may be highly heterogeneous in terms of nutritional composition, evidence does suggest that when comparing the composition of many of these foods to a standard – such as the World Health Organization (WHO) Guidelines on sugar intake for adults and children<sup>4</sup> – a high percentage of foods are found to be too high in added sugar (and salt).

Added sugar is found in the vast majority of processed foods, especially sugar-sweetened beverages, grain-based desserts, dairy-based desserts and candy. A large proportion of commercial “baby dinners” and the majority of cereal bars/breakfast pastries and infant/toddler snacks, desserts, and juices contain added sugar and are often more energy dense than comparable home-prepared family foods and are no healthier than their counterpart products aimed at adults<sup>5,6,7</sup>.

Sugar intake can be reduced by limiting the consumption of foods and drinks containing high amounts of sugars (e.g. sugar-sweetened beverages, sugary snacks and candies) and eating fresh fruits and raw vegetables as snacks instead of sugary snacks.

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<sup>1</sup> There are three main types of diabetes:

- Type 1, when the pancreas does not produce insulin,
- Type 2, when the pancreas does not produce enough insulin, or the insulin cannot be processed
- Gestational diabetes, when the insulin is less effective during pregnancy

<sup>2</sup> <http://www.diabetesatlas.org/>

<sup>3</sup> <http://www.who.int/mediacentre/news/releases/2015/sugar-guideline/en/>

<sup>4</sup> [http://www.who.int/nutrition/publications/guidelines/sugars\\_intake/en/](http://www.who.int/nutrition/publications/guidelines/sugars_intake/en/)

<sup>5</sup> Elliott CD, Conlon MJ. Packaged baby and toddler foods: questions of sugar and sodium. *Pediatric obesity*. 2015 Apr; 10(2):149-55.

<sup>6</sup> Elliott CD. Sweet and salty: nutritional content and analysis of baby and toddler foods. *Journal of public health* (Oxford, England). 2011 Mar; 33(1):63-70.

<sup>7</sup> Garcia AL, Raza S, Parrett A, Wright CM. Nutritional content of infant commercial weaning Foods in the UK. *Archives of disease in childhood*. 2013 Oct; 98(10):793-7.



The WHO recommends a reduction in sugar intake throughout the life course to less than 10% of the total energy intake per day for adults and children, with additional benefits for intake of less than 5%. The American Heart Association recommends an intake of less than 100 calories or 25 grams of added sugars per day for women, and less than 150 calories or 37.5 grams of added sugars per day for men.

Further research to establish the effect of sugar intake on lipid profile and blood pressure and its effect on diabetes-related outcomes is also needed.

### ***Sugar-sweetened beverages***

There is increasing concern that intake of added sugars – particularly in the form of sugar-sweetened beverages – increases overall energy intake and may reduce the intake of foods containing more nutritionally adequate calories, leading to an unhealthy diet, weight gain and increased risk of non-communicable diseases (NCDs).

New alarming data on added sugar in hot flavoured drinks sold in coffee shop chains have been released in February 2016<sup>8</sup>. According to this study, if colour-coded labelling were applied to these beverages, 98% of the hot flavoured drinks would receive a red (high) label for excessive level of added sugars per serving: 55% contain the equivalent, or more than, the 30g maximum daily consumption recommended amount of added sugar for an adult and teenager.

Consumption of sugar-sweetened beverages provides little nutritional benefit and may be associated with weight gain, obesity and increased risk of metabolic syndrome and type 2 diabetes<sup>9</sup>. This association is likely due to low satiety of liquid foods and the resulting incomplete compensation of energy at subsequent meals. Soft drinks intake may even induce hunger and consequently food intake or accompany other dietary and lifestyle changes<sup>10</sup>. There is also concern about the high amounts of rapidly absorbable carbohydrates in soft drinks such as high-fructose corn syrup. HFCS may have a particular role in adiposity and type 2 diabetes by the exacerbation of the pro-inflammatory processes underlying diabetes risk<sup>11,12,13,14,15</sup>.

Intake of soft drinks has also been linked to increased risk of dental caries<sup>16</sup> and bone fractures in children and adults<sup>17,18,19,20</sup>. Additional implications of sugar-sweetened beverage

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<sup>8</sup> <http://www.actiononsugar.org/>

<sup>9</sup> Frank B. Hu, Vasanti S. Malik. Sugar-sweetened beverages and risk of obesity and type 2 diabetes: Epidemiologic evidence. *Physiology & Behavior*. 2010; 100:47–54. Popkin BM, Bray GA, Després JP, Willett WC, Hu F. Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2 Diabetes. *Diabetes Care*. 2010; 33 (11): 2477–2483).

<sup>10</sup> Schulze MB, Manson JE, Ludwig DS, et al. Sugar-sweetened beverages, weight gain, and incidence of type 2 diabetes in young and middle-aged women. *JAMA*. 2004; 292:927–34.)

<sup>11</sup> Akgun S, Ertel NH. The effects of sucrose, fructose, and high-fructose corn syrup meals on plasma glucose and insulin in non-insulin-dependent diabetic subjects. *Diabetes Care*. 1985; 8:279–83.)

<sup>12</sup> Sorensen LB, Raben A, Stender S, Astrup A. Effect of sucrose on inflammatory markers in overweight humans. *Am J Clin Nutr*. 2005; 82:421–7.

<sup>13</sup> Hofmann SM, Dong HJ, Li Z, et al. Improved insulin sensitivity is associated with restricted intake of dietary glycoxidation products in the db/db mouse. *Diabetes*. 2002; 51:2082–9

<sup>14</sup> Vlassara H, Cai W, Crandall J, et al. Inflammatory mediators are induced by dietary glycotoxins, a major risk factor for diabetic angiopathy. *Proc Natl Acad Sci U S A*. 2002; 99:15596–601

<sup>15</sup> Popkin BM, Bray GA, Després JP, Willett WC, Hu F. Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2 Diabetes. *Diabetes Care*. 2010; 33 (11): 2477–2483).

<sup>16</sup> Heller KE, Burt BA, Eklund SA. Sugared soda consumption and dental caries in the United States. *J Dent Res*. 2001; 80:1949–53

<sup>17</sup> Wyshak G, Frisch RE. Carbonated beverages, dietary calcium, the dietary calcium/phosphorus ratio, and bone fractures in girls and boys. *J Adolesc Health*. 1994; 15:210–5

<sup>18</sup> Wyshak G. Teenaged girls, carbonated beverage consumption, and bone fractures. *Arch Pediatr Adolesc Med*. 2000; 154:610–3



consumption in children and adolescents include displacement of milk, an important source of protein, certain vitamins and minerals, from the diet<sup>21</sup>.

Recent studies have demonstrated that per capita sugar consumption is independently associated with the prevalence of type 2 diabetes<sup>22</sup>; that every 150 kcal/person/day (around one can of soda per day) increase in sugar availability was associated with increased diabetes prevalence by 1.1%<sup>23</sup>; and that an increased access to added sugar may explain part of the association between urbanisation and increased risk of type 2 diabetes<sup>24,25</sup>.

Considering that global prevalence of overweight and obesity is rising, particularly among children and adolescents, it is imperative that current public health strategies include education about consumption of sugar-sweetened beverages as well as other food containing added sugar, which should be discouraged. Efforts to promote the consumption of liquids such as water, unsweetened milk, and small quantities of unsweetened fruit juice should be made a priority.

## **I-2: Reduction of sugar intake: An international issue**

While recognising that access to other sources of sucrose/glucose is important to treat hypoglycaemia in people with diabetes, IDF Europe believes there is sufficient evidence of the need for concerted action to reduce sugar intake by the general population.

In 2015 WHO published Guidelines on sugar intake for adults and children<sup>26</sup> which included an analysis of studies linking sugar intake and body weight. An association was suggested between the reduction of free sugar intake and the reduction of body weight, and similarly, an association between an increased intake of free sugars and a comparable increase in body weight among adults. Studies including children found that children with the highest intake of sugar-sweetened beverages had a greater likelihood of being overweight or obese than children with the lowest intake.

Therefore, WHO recommends a reduced intake of sugar throughout the life-course and, in both adults and children, a reduction of the intake of sugar to less than 10% of total energy intake per day. A further reduction of the intake of sugar to below 5% of the total energy intake would provide further benefits. These limits apply to all sugars added to food, as well as sugar naturally present in honey, syrups, fruit juices and fruit concentrates.

### **At the European level**

In Europe, several initiatives have emerged to reduce sugar intake, which IDF Europe supports.

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<sup>19</sup> Petridou E, Karpathios T, Dessypris N, Simou E, Trichopoulos D. The role of dairy products and non alcoholic beverages in bone fractures among schoolage children. *Scand J Soc Med*. 1997; 25:119–25.

<sup>20</sup> McGartland C, Robson PJ, Murray L, et al. Carbonated soft drink consumption and bone mineral density in adolescence: the Northern Ireland Young Hearts project. *J Bone Miner Res*. 2003; 18:1563–9

<sup>21</sup> Kranz S, Smiciklas-Wright H, Siega-Riz AM, Mitchell D. Adverse effect of high added sugar consumption on dietary intake in American preschoolers. *J Pediatr*. 2005; 146:105–11.

<sup>22</sup> Weeratunga P, Jayasinghe S, Perera Y, Jayasena G, Jayasinghe S. Per capita sugar consumption and prevalence of diabetes mellitus: global and regional associations. *BMC Public Health*. 2014;14(1):186.

<sup>23</sup> Basu S, Yoffe P, Hills N, Lustig RH. The relationship of sugar to population-level diabetes prevalence: a, economic analysis of repeated cross-sectional data. *PLoS ONE*. 2013, 8(2):e57873. Dpo:10.1371/journal.pone.0057873

<sup>24</sup> Basu S, Stuckler D, McKee M, Galea G. Nutritional determinants of worldwide diabetes: an econometric study of food markets and diabetes prevalence in 173 countries. *Public Health Nutr*. 2013 Jan;16(1):179–86

<sup>25</sup> Cheema A, Adeloye D, Sidhu S, Sridhar D, Chan KY Urbanization and prevalence of type 2 diabetes in Southern Asia: A systematic analysis. *J Glob Heal (internet)*. 2014 Jun (cited 2015 Feb 6);4(1). Available from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4073245/>

<sup>26</sup> [http://www.who.int/nutrition/publications/guidelines/sugars\\_intake/en/](http://www.who.int/nutrition/publications/guidelines/sugars_intake/en/)



In the context of the overall EU Framework for National Initiatives on Selected Nutrients, EU Health Ministers agreed on 15 April 2015 on the need for a common framework for action to reduce free sugars in food and called for such a framework to be developed to decrease overweight, obesity and Non Communicable Diseases risk factors. This led to the development of Annex II on added sugar of the EU framework for Action on Selected Nutrients with the aim of achieving population intake levels and dietary patterns in line with national, European Food and Safety Authority and WHO recommendations.

At the EU level, it is proposed:

- to set a general benchmark for added sugars reduction of a minimum of 10% by 2020 in food products against the Member State baseline levels at the end of 2015, or to move towards 'best in class' levels. In line with this goal, the European Parliament<sup>27</sup> voted in January 2016 to reject draft EU rules on baby food which would have allowed it to contain up to three times more sugar than recommended by the WHO. The European Commission must resubmit a text in line with WHO recommendations of a maximum content of 10% added sugar, with a provision against marketing baby food for use for infants under six months of age.
- to encourage food producers to exceed the benchmarks or improve the 'best in class' levels for added sugars content for all categories of food.
- for Member States to achieve broad endorsement of this vision by national economic operators by the end of 2016. In addition, Member States should have a monitoring system in place by the end of 2017.

### ***At the national level***

At the national level, a number of countries have introduced taxes in an effort to reduce consumption of sugar-sweetened beverages:

- In Finland, soft drinks have been taxed since 1940. In 2011 this tax was increased from 0.045 € per litre to 0.075 € while the tax on production of candy (90 cents per kilo) was introduced the same year and extended to include ice-cream.
- Norway has placed a tax of 7.05 kroner (0.75 €) per kilo on refined sugar products including soft drinks.
- In 2011, Hungary increased a tax on a series of products including soft drinks, energy drinks, pre-packed sweetened products, salty snacks and condiments.
- In France, a tax on sugar-sweetened beverages has been introduced in 2012 (0.075 € per litre).
- On 16 March 2016, the United Kingdom HM Treasury announced a levy on drinks with added sugars which will come into force in April 2018. In England, the revenue generated by this tax will be used to fund primary school physical activity education and sport.

Outside Europe, ever more countries are placing a tax on added sugar in an effort to reduce obesity rates. In Mexico, a tax of one peso (0.06 €) per liter on all beverages containing sugar was introduced in 2013. In Canada, a recent obesity report by the Senate urged an overhaul of Canada's food guide and tax on sugary drinks<sup>28</sup>.

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<sup>27</sup> <http://www.europarl.europa.eu/news/en/news-room/20160115IPR10184/MEPs-move-to-reduce-permitted-sugar-content-in-baby-foods>

<sup>28</sup> [http://www.huffingtonpost.ca/2016/03/01/senate-committee-urges-overhaul-of-canada-s-food-guide-to-combat-obesity\\_n\\_9355550.html?utm\\_medium=social&utm\\_source=twitter](http://www.huffingtonpost.ca/2016/03/01/senate-committee-urges-overhaul-of-canada-s-food-guide-to-combat-obesity_n_9355550.html?utm_medium=social&utm_source=twitter)

## **II-ADDED SUGAR AND THE FOOD AND DRINK INDUSTRY**

Recent changes in the lifestyle of most European citizens, in particular the decrease in physical activity and modification of eating habits, have an important impact on the current epidemic of obesity and type 2 diabetes. Furthermore, food is now more readily available, more heavily marketed, promoted and advertised and, in real terms, much cheaper than ever before<sup>29</sup>. Since certain food categories, such as sugar-sweetened beverages, represent significant sources of added sugar, the food and drink industry has a crucial role to play in providing and supporting a healthier environment in Europe, ensuring nutritional choices for consumers and reducing the intake of added sugar in the general population.

The sheer scale and complexity of diabetes mean that no single actor or sector can solve the epidemic alone. A truly society-wide approach is required, involving international agencies and organisations, governments, NGOs and the private sector. When adopting the UN Political Declaration on NCD Prevention and Control in 2011, governments signed up to the Triple P Partnerships approach -public, private and people. The Declaration has multi-sectoral action at its core and a set of commitments dedicated entirely to the private sector.

IDF Europe believes it will take a broad mix of policies, including industry regulation and fiscal measures in addition to industry-led-voluntary efforts, to reverse the global diabetes and NCD epidemics. The Roadmap for Action on food product improvement proposed by the Dutch European Presidency in February 2016 is a first interesting step toward a better public-private partnership to reduce the intake of sugar.

IDF Europe recognizes the efforts from the food and drink industry, such as the EU Pledge Nutrition Criteria White Paper, which have been implemented to self-regulate food and beverage advertising to children under the age of twelve. In recent years, action has been taken by food and drink industry players to reduce the amount of added sugar in their products and provide more transparent information to consumers through better food labelling. Despite these improvements, where the impact of voluntary measures to cut the amount of sugar in products is too slow or unsatisfactory, laws should be implemented to force the industry to play their part in protecting the health of European citizens.

IDF Europe therefore encourages the food industry to strengthen self-regulation through the adoption of the WHO EURO nutrient profile model published in 2015. IDF Europe also supports the key recommendation from the Global access to nutrition index<sup>30</sup> 2016 that companies should set and publish clear reformulation targets for all products in line with WHO recommendations. These should include targets to reduce ingredients such as salt, fat, trans fat and added sugar and to increase levels of fruit, vegetables, wholegrain and fibre as relevant to their portfolios. Finally, more R&D resources should be allocated to improve the nutritional quality of their products, as current evidence shows for example that the quality of macronutrients, especially carbohydrates and dietary fats are more important than their quantity.

## **III – ADDED SUGAR AND FOOD LABELLING**

A key requirement in preventing debilitating complications in diabetes is maintaining good blood glucose (glycaemic) control, blood pressure and cholesterol. This is highly dependent on choosing healthier foods and knowing the nutritional content of foods including carbohydrates, salt and fats. Food labelling is the main information tool on product content for consumers. It is therefore crucial that pertinent, easy to read and understandable information are displayed on the packaging.

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<sup>29</sup> <https://www.gov.uk/government/publications/sugar-reduction-from-evidence-into-action>

<sup>30</sup> [www.accesstonutrition.org/](http://www.accesstonutrition.org/)



In 2011, the Regulation of the European Parliament and of the Council on the provision of food information to consumers (also known as “food labelling”) was adopted. This is an important breakthrough for people living with diabetes as it paves the way for better information and helps consumers make informed and healthy choices with respect to intake of sugar. Improvements are, however, needed (see Recommendations below).

Effective diabetes treatment assumes that the person with diabetes manages to keep a constant balance between food input – focused on carbohydrates and fats – physical activity and medication. Food composition affects the amount and way nutrients are absorbed by the body and this has to be matched with physical activity and medication. This explains IDF Europe’s special interest in a proper system of food labelling across Europe.

Contrary to popular belief, people living with diabetes do not need to eat special foods. They can eat all foods recommended to the general population as part of a balanced diet. However, they need comprehensive nutritional information, backed with education and training, to be able to adequately manage their condition. This may include calculating the amount of carbohydrates, recognizing hidden sugar within food ingredients and knowing the amount of salt and fats. Clear and easily understandable food labelling is therefore essential for people with diabetes to make the best everyday food choices.

To top it all, for people with diabetes timing is everything: people taking insulin or some glucose-lowering medication must match the timing and dosage of their medication with the quantity and nature of the carbohydrate contained in their meal to help maintain good or near-normal blood glucose control. Carbohydrate-related information on the front of pack label would therefore significantly support good diabetes care.

#### **IV – RECOMMENDATIONS: IDF FRAMEWORK FOR ACTION ON SUGAR**

The International Diabetes Federation published the “IDF Framework for Action on Sugar” in 2014. IDF Europe supports this document, which advocates for the following specific measures:

***1- The introduction of clear, unambiguous, colour-coded front of pack labelling which give total sugar content, including all types of sugar, those with alternative names (such as high fructose corn syrup).***

Research shows that use of colour-coded labels, also known as traffic light labelling, kept in a single format across the food products, is one of the most effective ways to communicate nutritional information to people<sup>31</sup>.

***2- A ban on advertising of sugar-sweetened beverages and high sugar foods to children and adolescents.***

Increasing concerns are raised that advertising targeted at children may not only influence children’s current consumption, but may also set patterns of consumption behaviour for the future. Moreover it is believed that advertising has increased the consumption of sugar-sweetened beverages and high sugar foods and is related to the increase in obesity among children. Evidence suggests that a ban on advertising targeted at children can be effective in lowering consumption, and approximate estimates of the total difference in expenditures suggest the social welfare impact of such ban can be significant<sup>32</sup>.

***3- Revision of healthy eating guidelines to reduce consumption of foods with naturally high sugar content (e.g. certain fruits and fruit juices).***

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<sup>31</sup> Draper AK, Adamson AJ, Clegg S, Malan S, Rigg M, Duncan S. Front-of-pack nutrition labelling: are multiple formats a problem for consumers? EUR J Public Health. 2013 Jun 1;23(3):517-21

<sup>32</sup> Dhar T, Baylis K. Fast-Food Consumption and the Ban on advertising Targeting Children: The Quebec Experience. Journal of Marketing Research. 2011 Oct;48 (5) :799813.



National guidelines generally make no distinction between vegetables and fruit, or between types of fruit, in their healthy eating guidelines. Some include fruit juice or dried fruits as healthy options<sup>33</sup>, despite high sugar content. It is recommended that guidelines favour the consumption of leafy vegetables and fresh (or unsweetened frozen) fruit, rather than higher-sugar alternatives such as fruit juice, dried or sweetened canned fruit.

***4- A ban on sponsorship of sporting events by manufacturers of sugar-sweetened beverages or high sugar foods.***

It is recommended to introduce criteria to select sponsors for major sporting events that exclude food and beverage companies that produce high-calorie brands that increase risk of obesity and type 2 diabetes.

***5- A ban on selling sugar-sweetened beverages and high sugar foods in canteens and vending machines in schools and policies to restrict access in workplaces.***

Prohibiting or restricting the access to sugar-sweetened beverages and high sugar foods is associated with less consumption of these items and increased availability of healthier options. The more comprehensive these policies are, the more effective they are found to be<sup>34</sup>.

***6- An obligation to make clean drinking water freely available in all schools, places of employment and in public open spaces.***

Evidence shows that the types of the liquids we drink have a long-term impact on health, influencing the development of overweight, obesity and metabolic diseases<sup>35,36</sup>. Thus it is recommended that the largest portion of daily fluid intake is from plain water.

***7- Government incentives (including taxes) to reduce consumption of sugar-sweetened beverages and high sugar foods.***

Taxation is well-recognised to influence consumption (e.g. tobacco, alcohol). The health risks of excess sugar consumption demand similar action to reduce consumption. Similar measures have been introduced in France and Mexico with a tax on sugar-sweetened beverages.

***8- Government incentives to promote production of leafy vegetables and fruit in preference to sugar.***

Sugar has calories, but no other nutritional value. Dietary recommendations all around the globe emphasize that sugar-containing foods should be consumed in very limited amounts. Agricultural subsidies should support those recommendations by promoting production of healthy foods.

***9- Government incentives to increase availability and affordability of fresh vegetables, fresh fruit and clean drinking water.***

Fresh vegetables and fruits should form the basis of any diet. Government incentives should promote availability and consumption of vegetables and fruits rather than sugar.

***10- A regulatory framework for reformulation of processed foods to reduce sugar content.***

The UN General Assembly High Level Meeting declaration identified the reformulation of products to provide healthier options that are affordable and accessible as an approach to

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<sup>33</sup> Food Standards Agency. Eat Well Your guide to healthy eating [Internet]. London: Food Standards Agency; 2010. Available from:

<http://www.food.gov.uk/sites/default/files/multimedia/pdfs/publication/eatwell0708.pdf>

<sup>34</sup> Chriqui JF, Pickel M, Story M. Influence of School competitive food and beverage policies on obesity, consumption and availability: A systematic review. *JAMA Pediatr.* 2014 Mar 1;168(3):279.

<sup>35</sup> Barrio-Lopez MT, Martinez-Gonzalez MA, Fernandez-Montero A, Beunza JJ, Zazpe I, Bes-Rastrollo M. Prospective study of changes in sugar-sweetened beverage consumption and the incidence of the metabolic syndrome and its components: the SUN cohort. *Br J Nutr.* 2013 Nov 14;110 (9) :172231.

<sup>36</sup> Koning L de, Malik VS, Rimm EB, Willett WC, Hu FB. Sugar-sweetened and artificially sweetened beverage consumption and risk of type 2 diabetes in men. *Am J Clin Nutr.* 2011 Jun 1;93 (6) :13217.



support the promotion and production of food products that are more consistent with a healthy diet<sup>37</sup>.

***11- Public health campaigns to educate people about the health risks associated with excess sugar intake.***

There is a significant link between health information and food choices<sup>38</sup>. A decrease in consumption of fat was observed following government campaigns to educate individuals on the links between dietary fat and health. This consumption decreased even further when food producers made additional health claims as part of their advertising campaigns<sup>39</sup>. The same approach now needs to be used to reduce sugar consumption.

***12- Further research to be undertaken to establish links between sugar intake and type 2 diabetes.***

There are extensive data which show associations between sugar intake and increased risk of developing type 2 diabetes, but less evidence for direct causality. This is exploited by the food industry to weaken the position of those advocating for reduction in sugar intake. Availability of quality data which strengthens the link will help inform future public health policy for prevention of type 2 diabetes.

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<sup>37</sup> World Health Organisation. Policy Brief: Producing and promoting more food products consistent with a healthy diet [Internet]. 2014 Dec. Available from: <http://www.who.int/nmh/ncd-coordinationmechanism/Policybrief32.pdf>

<sup>38</sup> Brown DJ, Schrader LF. Cholesterol Information and Shell Egg Consumption. *Am J Agric Econ.* 1990 Aug;72 (3):548.

<sup>39</sup> Ippolito PM, Mathios AD. Information and advertising: the case of fat consumption in the United States. *Am Econ Rev.* 1995 May;85(2):91–5.



## ANNEX: DEFINITIONS

**Definition of sugar-sweetened beverages** (adapted from: the CDC Guide to Strategies for Reducing the Consumption of Sugar-Sweetened Beverages, with the addition of fruit juice<sup>40</sup>).

Sugar-sweetened beverages are those that contain caloric sweeteners and include:

*Soft drinks:* Non-alcoholic, flavoured, carbonated or non-carbonated beverages usually commercially prepared and sold in bottles or cans.

*Soda, pop, soda pop:* Same as soft drink.

*Fruit drinks, fruit juice, punches, or ades:* Fruit juice and sweetened beverages of diluted fruit juice.

*Sports drinks:* Beverages designed to help athletes rehydrate, as well as replenish electrolytes, sugar, and other nutrients.

*Tea and coffee drinks:* Teas and coffees to which caloric sweeteners have been added.

*Energy drinks:* Most energy drinks are carbonated drinks that contain large amounts of caffeine, sugar and other ingredients, such as vitamins, amino acids, and herbal stimulants.

*Sweetened milks or milk alternatives:* Beverages prepared by blending sweetened powder or syrup and milk.

### Definition of high sugar foods

High sugar foods are foods containing more than 22.5g of sugar per 100g<sup>41</sup>. This reflects the total amount of sugars in the product also taking into account naturally-occurring sugars.

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### About the International Diabetes Federation European region (IDF Europe)

*IDF Europe is an inclusive and multicultural umbrella organisation of 70 diabetes associations in 47 countries across the European region, representing people living with diabetes and healthcare professionals. Through our activities we aim to influence policy, increase public awareness and encourage health improvement, as well as promote the exchange of best practice and high-quality information about diabetes throughout the European region. We provide essential expertise and up-to-date evidence on diabetes, support awareness campaigns through a wide network of partners and stakeholders, and work with European and international organizations towards the development, implementation and monitoring of effective public policies for diabetes.*

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<sup>40</sup> The CDC Guide to Strategies for Reducing the Consumption of Sugar-Sweetened Beverages. CDC 2010 Available from [http://www.cdph.ca.gov/SiteCollectionDocuments/StratstoReduce\\_Sugar\\_Sweetened\\_Bevs.pdf](http://www.cdph.ca.gov/SiteCollectionDocuments/StratstoReduce_Sugar_Sweetened_Bevs.pdf)

<sup>41</sup> Guide to creating a front of pack (FoP) nutrition label for pre-packed products sold through retail outlets. Dept of Health, London 2012. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/300886/2902158\\_FoP\\_Nutrition\\_2014.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/300886/2902158_FoP_Nutrition_2014.pdf)