Dear Mr. Url,

Several EU Member States and international organisations have previously found scientific basis for setting a dietary recommendation for added sugars to a maximum of 10% of total energy intake. As outlined below, new scientific data have recently been published supporting efficacy of limiting intake of added sugars. Based on recently published scientific studies and in relation to weight gain, type-2 diabetes, cardiovascular disease and related risk factors, we request scientific assistance in line with Regulation (EC) No 178/2002 in assessing if a dietary reference value for sugar with particular attention to added sugar now can be set.

EFSA’s latest opinion on this matter was published 2010 and covers the scientific basis for setting reference values for carbohydrates, including dietary fibre, based on various health effects. Reference values are given for intake of total carbohydrates and dietary fibre. A reference value for added sugars is not given in this opinion, however it does state that a high intake of sugars as sugar-sweetened beverages may contribute to weight gain. The opinion is based on an assessment of studies published until 2008-2009.

Since the publication of the 2010 EFSA Scientific Opinion several organisations and authorities have published reports that review more recent studies on health effects of dietary carbohydrates and sugars such as the Nordic Nutrition Recommendations (NNR) 2012, the World Health Organization (WHO) 2015, the British Scientific Advisory

Committee on Nutrition (SACN) 2015⁴, and the Dietary Guidelines for Americans (DGA) 2015-2020⁵. These include some published research not covered in the EFSA opinion. For example, the NNR 2012 recommendations for added sugars uses new evidence on health effects, including type-2 diabetes⁶, body weight⁷ as well as dietary patterns⁷. Further, the WHO 2015 guidance takes into consideration two systematic reviews on the associations between sugar intake and body weight⁸ and dental health⁹. Based on available scientific evidence, and as outlined in the table 1 in the annex, NNR, WHO, SACN and DGA have set dietary recommendations for added sugars. It should be noted that WHO makes a conditional recommendation for reduction of the intake of free sugars to below 5% of total energy intake, while SACN recommend that the population average intake of free sugars should not exceed 5% of total dietary energy for age groups from 2 years upwards.

Recently literature searches were performed in PubMed with a focus on reviews and meta-analyses covering health effects of dietary sugars published from 2010 to April 2016. Searches were based on search terms and strategies used in a systematic review on sugars for NNR 2012¹⁰, with addition of association with body weight and dental health (see table 2 in annex for outcome). The results show that several reviews and meta-analyses on health effects of dietary sugars have been published since the publication of the EFSA opinion 2010. Some of the most relevant reviews that could be further evaluated are included in the reference list found in the annex. Articles were selected covering health effects of “sugars”, “sugar-sweetened beverages” or “added sugars” among the general population. Articles focusing on weight reduction or only covering fructose are not included in the list. In addition, the SACN report on dietary

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⁶ Sørenstedt, Emily et al. Does high sugar consumption exacerbate cardiometabolic risk factors and increase the risk of type 2 diabetes and cardiovascular disease? Food & Nutrition Research, [S.1.], jul. 2012. [Link](http://dx.doi.org/10.3402/fnr.v56i0.19104)

⁷ Wirfält E, Drake I, Wallström P. What do review papers conclude about food and dietary patterns? Food & Nutrition Research 2013. 57: 20523. [Link](http://dx.doi.org/10.3402/fnr.v57i0.20523)


carbohydrates and US DGA 2015-2020 include a number of reviews covering sugars that also should be considered.

Yours sincerely,

Annica Sohlström  
Director General  
National Food Agency, Sweden

Matti Aho  
Director General  
Finnish Food Safety Authority, EVIRA, Finland

Christine Nellemann  
Director of Institute  
National Food Institute, DTU, Denmark

Lars Hansen  
Director of Norwegian Scientific Committee for Food Safety, Norway

Jón Gíslason  
Director of Icelandic Food and Veterinary Authority, Iceland

Enclosure: Annex with two Tables and Examples of studies containing new scientific elements
Annex

Tables and examples of studies containing new scientific elements

Table 1. Recommendations for added sugars issued by various organizations.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>DRV</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>NNR 2012</td>
<td>&lt; 10 E%</td>
<td></td>
</tr>
<tr>
<td>WHO 2014</td>
<td>&lt; 10 E%</td>
<td>Conditional: &lt; 5 E%</td>
</tr>
<tr>
<td>SACN 2015</td>
<td></td>
<td>Population mean: 5 E%</td>
</tr>
<tr>
<td>DGA 2015-2020</td>
<td>&lt; 10 E%</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Outcome of searches in PubMed for different health impacts linked to sugar intake. Period January 2010 - April 2016. Search date 2016-04-14.

The number of hits for article type "review" varied between 7 (mortality) and more than 400 (dental health), and for article type "meta-analysis" between 1 (mortality) and 25 (type-2 diabetes). Most articles covered associations between consumption of sugar-sweetened beverages and health outcomes. Several reviews focused on effects of fructose, these are not included in the attached reference list. Two meta-analyses are included in the WHO's guideline (Te Morenga et al. 2012; Moynihan & Kelly 2014). A new meta-analysis by Te Morenga et al. (2014) analysed results from intervention studies regarding effects of sugar intake on blood pressure and serum lipids. One review evaluated influence of funding source on conclusions on association between sugar-sweetened beverages and body weight (Massougoudji et al. 2014).

<table>
<thead>
<tr>
<th>Query</th>
<th>Number of hits, Reviews + meta studies</th>
<th>Number of hits, meta studies</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glucose tolerance and insulin sensitivity</td>
<td>266</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Type-2 diabetes</td>
<td>329</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Glucose tolerance and insulin sensitivity</td>
<td>434</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>or type-2 diabetes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serum lipids</td>
<td>51</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Blood pressure</td>
<td>44</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>162</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>All-cause mortality</td>
<td>7</td>
<td>1</td>
<td>No relevant meta-analyses</td>
</tr>
<tr>
<td>Body weight and obesity</td>
<td>297</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Dental caries or dental health</td>
<td>140</td>
<td>8</td>
<td>No relevant meta-analyses</td>
</tr>
<tr>
<td>Dental caries or dental health or oral health</td>
<td>417</td>
<td>21</td>
<td>No relevant meta-analyses</td>
</tr>
</tbody>
</table>
Examples studies containing new scientific elements

Reports


Type-2 Diabetes


Serum lipids, blood pressure, CVD

Jayalath VH, de Souza RJ, Ha V, Mirrahimi A, Blanco-Mejia S, Di Buono M, Jenkins AL, Leiter LA, Wolever TM, Beyene J, Kendall CW, Jenkins DJ, Stevenpiper JL. Sugar-sweetened beverage consumption and incident hypertension: a systematic review and


**Body weight**


**Oral health**


**Other**
