**The Scientific Advisory Committee on Nutrition (SACN)** **Carbohydrates and Health Report**

**1. Purpose**

1.1 This intersessional paper informs the Board about the publication of the above report on the 17 July 2015.

1.2 The purpose of this paper is to ask the Board to:

1. agree to accept the SACN recommendations contained in the Appendix;
2. agree that the Chair should write to the Minister for Public Health with the Board’s advice;
3. if the Board accepts the recommendations, advise the Minister for Public Health that Food Standards Scotland (FSS), in collaboration with the Scottish Government (SG), will fully consider the implications of the new recommendations for Scottish dietary advice and policy, including the Scottish Dietary Goals (SDGs);
4. note that Food Standards Scotland (FSS), SG and NHS Health Scotland will work collaboratively to consider what changes will be needed to dietary messaging for consumers in Scotland.

**2. Background**

2.1 The Scientific Advisory Committee on Nutrition (SACN) provide advice to all four administrations across the UK in relation to diet and health. The committee comprises independent scientific experts as well as lay, industry and consumer representatives. Public Health England (PHE) provides the Secretariat. Officials from FSS regularly attend meetings and working groups as observers.

2.2 In 2008, the Department of Health and the Food Standards Agency asked SACN to review the literature to ensure that governments’ advice on carbohydrates is based on up-to-date evidence.

2.3 SACN has carried out a rigorous assessment of an extensive evidence base on the role of carbohydrates (total carbohydrates, dietary fibre, starches and sugars) in the diet and their relationship to a range of health outcomes – such as heart disease, type 2 diabetes, bowel health and tooth decay.

2.4 In June 2014 SACN published its draft report and recommendations on Carbohydrates and Health for public consultation. The final report will be published on 17 July 2015.

**3. Key findings of the SACN Carbohydrates and Health Report**

3.1 In relation to total carbohydrate:

* Overall, the evidence indicates that total carbohydrate intake appears to be neither detrimental nor beneficial to cardio-metabolic health, colo-rectal health and oral health. However, there are specific components or sources of carbohydrates which are associated with beneficial or detrimental health effects.

3.2 In relation to sugar:

* Higher consumption of sugars and sugars-containing foods and beverages is associated with a greater risk of dental caries;
* Greater consumption of sugars-sweetened beverages is associated with increased risk of type 2 diabetes mellitus;
* Increasing sugar consumption leads to increases in energy intake;
* Consumption of sugars-sweetened beverages results in greater weight gain and increases in body mass index in children and adolescents.

3.3 In relation to dietary fibre:

* There is strong evidence that increased intakes of total dietary fibre, and particularly cereal fibre and wholegrain, are associated with a lower risk of cardio-metabolic disease and colo-rectal cancer.

**4. Recommendations of the SACN Carbohydrates and Health report**

SACN has made a number of recommendations based on their findings (see Appendix).

In summary:

* The average population intake of free sugars should not exceed 5% of total dietary energy for age groups from 2 years upwards.
* Starchy carbohydrates should remain at 50% of total dietary energy.
* The consumption of sugars-sweetened beverages by children and adults should be minimised.
* Dietary fibre should increase by increasing intakes of fruit, vegetables and wholegrain foods.

**5. Carbohydrate intakes in the Scottish Diet**

Recently published FSS dietary monitoring data shows that:

* In 2012 the Scottish population consumed around 14.4% of food energy from added sugars (similar definition to free sugars)[[1]](#footnote-1), which is higher than the current recommendation of less than 11% of food energy[[2]](#footnote-2) (equivalent to 10% of total energy) and much higher than the new 5% recommendation.
* More than 50% of added sugars in the Scottish diet comes from confectionery and sweet biscuits (24%), sugars sweetened beverages (22%), cakes, pastries and puddings (6%).[[3]](#footnote-3)
* Data from the UK National Diet and Nutrition Survey suggests that intakes of carbohydrates, including added sugars and dietary fibre, in Scotland are broadly in line with those of the UK.[[4]](#footnote-4)

**6. Discussion**

6.1 FSS officials have attended the SACN Carbohydrate working group meetings throughout.

6.2 The report highlights a clear and consistent link between a high sugars diet and conditions like obesity and type 2 diabetes.

6.3 In Scotland there continues to be little progress towards meeting the Scottish Dietary Goals, and almost two-thirds of adults and a third of children are overweight or obese.

6.4 Although intakes of added sugars have reduced in Scotland in recent years to 14.4% of food energy1, we are still a long way off the current SDG of less than 11% of food energy2. The new SACN recommendation of 5% of food energy represents a considerable tightening of the current recommendation and highlights the magnitude of change required to improve the health of the population.

6.5 FSS commissioned work shows a clear need to reduce the consumption of high sugar discretionary foods such as confectionery, sweet biscuits, cakes, pastries, puddings and sugars sweetened beverages, which together contribute more than half of added sugar intake and around 16% of calorie intake3. While intakes of most of these foods are broadly similar in Scotland compared to the UK, intakes of sugars sweetened beverages are generally higher in Scotland4 and teenage boys in Scotland have the highest intakes of sugars sweetened beverages in the UK4.

6.6 People in Scotland from the most deprived areas have higher intakes of added sugars and sugars sweetened beverages compared to those in the least deprived areas1.

6.7 FSS will collaborate with policy colleagues in SG, NHS Health Scotland and others to fully consider the implications of the SACN recommendations for all Scottish diet related policies. This will include a full consideration of the underpinning and aspirational SDGs.

6.8 Dietary messaging will also be reviewed to assist consumers to change their behaviours to reduce obesity and diet related ill-health. FSS is currently involved in discussions with PHE colleagues on a revision of the eatwell plate, which is widely used to convey dietary advice to consumers.

**7. Communications**

7.1 We expect there to be significant press and media interest. A stakeholder meeting is being held by PHE on 16 July, and the report will be published on the 17th July. FSS will prepare a news release together with SG in advance of the publication of the report, and we will work closely with SG over any media queries. We are also working collaboratively with colleagues across the UK.

7.2 The new recommendations add strength to current advice on healthy eating which emphasises increasing consumption of high fibre starchy foods, fruit and vegetables and reducing intakes of high fat/sugar foods and drinks.

**8. Conclusion**

The Board is asked to:

1. agree to accept the SACN recommendations contained in the Appendix;
2. agree that the Chair should write to the Minister for Public Health with the Board’s advice;
3. if the Board accepts the recommendations, advise the Minister for Public Health that Food Standards Scotland (FSS), in collaboration with the Scottish Government (SG), will fully consider the implications of the new recommendations for Scottish dietary advice and policy, including the Scottish Dietary Goals (SDGs);
4. note that Food Standards Scotland (FSS), SG and NHS Health Scotland will work collaboratively to consider what changes will be needed to dietary messaging for consumers in Scotland.

**Appendix**

**SACN dietary carbohydrate recommendations**

The dietary recommendations for total carbohydrate, free sugars, starch and sugars contained within the cellular structure of food, and milk sugars have been proposed in the context of an energy intake which is appropriate to maintain a healthy weight (SACN Energy report 2011).

It is recommended that the dietary reference value for total carbohydrate should be maintained at an average population intake of approximately 50% of total dietary energy.

It is recommended that the definition for ‘free sugars’ be adopted in the UK. This comprises all monosaccharides and disaccharides added to foods by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups and unsweetened fruit juices. Under this definition lactose when naturally present in milk and milk products is excluded.

It is recommended that the average population intake of free sugars should not exceed 5% of total dietary energy for age groups from 2 years upwards.

With the proposed reduction in the population intake of free sugars, their contribution toward recommended total carbohydrate intake should be replaced by starches, sugars contained within the cellular structure of foods and, for those who consume dairy products, by lactose naturally present in milk and milk products. The complete replacement of energy derived from free sugars by these carbohydrate sources would only apply to those people who are a healthy BMI and in energy balance. In those who are overweight, the reduction of free sugars would be part of a strategy to decrease energy intake.

It is recommended that the consumption of sugars-sweetened beverages should be minimised in children and adults.

It is recommended that dietary fibre should be defined as all carbohydrates that are neither digested nor absorbed in the small intestine and have a degree of polymerisation of three or more monomeric units, plus lignin. For extracted natural carbohydrate components or synthetic carbohydrate products to be defined as dietary fibre, beneficial physiological effects, similar to those demonstrated for the naturally integrated dietary fibre component of foods, must be demonstrated by accepted scientific evidence. Dietary fibre is to be chemically determined using the prevailing AOAC method agreed by regulatory authorities.

It is recommended that the dietary reference value for the average population intake of dietary fibre for adults should be 30g/day, as defined in the paragraph above and measured using the AOAC methods agreed by regulatory authorities. The previous dietary reference value of 18g/day of non-starch polysaccharides, defined by the Englyst method, equates to about 23-24 g/day of dietary fibre if analysed using these AOAC methods, thus the new recommendation represents an increase from this current value.

It is recommended that the average population intake of dietary fibre for children aged 2 to 5 years should approximate 15g/day, for children aged 5 to 11 years 20g/day, for children aged 11 to 16 years 25 g/day and for adolescents aged 16 to 18 years about 30g/day.

Most of the evidence for the wide range of health benefits of fibre comes from studies where the exposure reflects dietary fibre intakes achieved through a variety of foods where it is present as a naturally integrated component. There is evidence to show that particular extracted and isolated fibres have positive effects on blood lipids and colorectal function but due to the smaller evidence base, it is not known whether these components confer the full range of health benefits associated with the consumption of a mix of dietary fibre rich foods. Therefore, it is recommended that fibre intakes should be achieved through a variety of food sources.

No specific recommendations are made for children aged under 2 years, due to the absence of information, but gradual diversification of the diet to provide increasing amounts of whole grains, pulses, fruits and vegetables with reduced amounts of free sugars is encouraged.

1. http://www.foodstandards.gov.scot/monitoring-progress-towards-scottish-dietary-goals-2001-2012-report-1 [↑](#footnote-ref-1)
2. http://www.gov.scot/Resource/0042/00421385.pdf [↑](#footnote-ref-2)
3. http://www.foodstandards.gov.scot/monitoring-progress-towards-scottish-dietary-goals-2001-2012-report-2 [↑](#footnote-ref-3)
4. http://www.foodstandards.gov.scot/national-diet-and-nutrition-survey-rolling-programme-results-years-1-4-combined-scotland-200809 [↑](#footnote-ref-4)