

Processed and ultra-processed foods

1 Purpose of the paper

- 1.1 The purpose of this paper is to provide an overview of the evidence in relation to processed and ultra-processed foods.
- 1.2 The Board is asked to:
 - 1.3 Discuss and **agree** our proposed position in relation to processed and ultra-processed foods.
 - 1.4 **Note** that we will develop consumer facing messaging on processed and ultra-processed foods for inclusion within [Eat well, your way](#).

2 Strategic aims

- 2.1 This work contributes to the following strategic outcomes:
 - Consumers have healthier diets
 - Consumers are empowered to make positive choices around food
 - FSS is trusted and influential
- 2.2 This work also supports the achievement of FSS' vision for a safe, healthy and sustainable food environment that benefits and protects the health and well-being of everyone in Scotland.

3 Background

- 3.1 There has been growing interest in the topic of food processing in recent years, with lots of reports linking ultra-processed foods with health and environmental outcomes, and emphasising the prominence these foods have within our society. Alongside developments within the scientific literature, there have also been various campaigns and high profile reports/books published for example, by the [Soil Association](#) and Dr Chris Van Tulleken in recent months. This widespread coverage has resulted in much speculation within the media, and [concern among consumers](#). FSS published a short column on the topic seeking to summarise the evidence and dispel myths within the [Press and Journal](#) in December 2023. A separate article published in [The Conversation](#) by Professor Eric Robinson of the University of Liverpool similarly outlines the evidence in relation to ultra-processed foods.
- 3.2 Processed foods are those which have been prepared by a variety of methods and contain a number of ingredients. There is no universally agreed definition of a processed food, however the NOVA classification is the most commonly used classification system. The NOVA system groups foods and food ingredients into four

categories based on their level of processing and not their energy or nutrient content. These are:

- Un-processed or minimally processed foods, like fresh fruits, vegetables meat and fish.
- Processed culinary ingredients, like oils, butter, sugar and salt.
- Processed foods, including tinned vegetables, canned fish, fruits in syrup, cheese and freshly made breads. These are essentially made by adding ingredients like, salt, oil, sugar and preservatives to unprocessed foods or culinary ingredients.
- Ultra-processed foods, including soft drinks, sweet and savoury packaged snacks, reconstituted meat products and pre-prepared frozen dishes. The NOVA classification considers these as formulations made mostly or entirely from substances derived from foods and additives such as colouring, artificial sweeteners, anti-caking agents and emulsifiers. Whilst the term 'ultra-processed foods' is specific to the NOVA classification system, it is now commonly adopted terminology.

3.3 In June 2022, Food Standards Scotland, alongside two members of the Scientific Advisory Committee on Nutrition (SACN), put forward a proposal for the committee to consider the evidence in relation to ultra-processed foods as part of their regular horizon scanning process. SACN agreed to take forward a scoping review of the evidence on processed foods and health, [published in July 2023](#).

3.4 SACN concluded that, although there is evidence to suggest that high consumption of processed and ultra-processed foods was associated with poor health outcomes, there were uncertainties around the quality of the evidence available. Additionally, it is currently unclear how much of this relationship may be explained by other nutritional risk factors, such as calorie, fat, sugar or salt content. SACN also concluded that there is currently insufficient evidence to carry out a full risk assessment on processed foods and health.

4 Discussion

4.1 As a nation, Scotland has consistently not met its [dietary goals](#) since they were set in 1996. These goals describe, in nutritional terms, the diet that will improve and support the health of the Scottish population. Our diet remains [too high in calories, fat, sugar and salt](#) which poses well established risks to our health. Many dietary causes of ill-health could be avoided with a healthier diet which includes much less consumption of high fat, sugar and/or salt (HFSS) foods.

4.2 Whilst consumption of processed and ultra-processed foods may be an indicator of other unhealthy dietary patterns and lifestyle behaviours, diets which are high in these products are also often energy dense, high in saturated fat, salt or added sugars, high in processed meat and/or low in fruit and vegetables and fibre.

- 4.3 Processed and ultra-processed foods can be cheap, convenient and with a long shelf life, with many also being classed as healthier options – for example bread and breakfast cereals (including wholemeal and high fibre options), tinned fruits and vegetables. In contrast, not all foods within the unprocessed category could be classed as healthy. For example, high intakes of red meat are associated with increased risk of colorectal cancer. In addition, many vegan meals/meat alternatives and foods specifically designed for consumption by those with allergies or intolerances, for example gluten free, would fall within the definition of ultra-processed.
- 4.4 Processing is also a vital part of ensuring food safety and standards are upheld. Although a key concern for consumers is the use of additives and substances such as preservatives, emulsifiers, sweeteners, artificial colours and flavours these are covered by the Regulated Products legislation and require safety assessments before they can be authorised to be placed on the market (see Annex 1 for more detail).
- 4.5 Although a move away from processed and ultra-processed foods may be a longer term ambition to support achieving our dietary Goals, it is currently unrealistic to expect these foods to be removed from the diet completely given their widespread prevalence within our food environment. According to 10 different analyses of the National Diet and Nutrition Survey presented within the SACN position statement, ultra-processed foods can account for up to 51% of energy intake in adults. [Evidence](#) also suggests that the UK (alongside the US) has the highest intakes of ultra-processed foods compared with many other countries, such as Italy or Spain.
- 4.6 At present there are no safety issues that need to be addressed in relation to preservatives, emulsifiers, sweeteners, artificial colours and flavours used within food products in the UK. However, it is important to acknowledge that this does not necessarily equate to a food product containing these additives being healthy.
- 4.7 Existing dietary recommendations, as contained within our Scottish Dietary Goals and the [Eatwell Guide](#), emphasise the importance of reducing foods and drinks which are HFSS – these are foods which make up around a quarter of our shopping basket and are contributing to risk of poor health. Given that many ultra-processed foods are also HFSS, following existing consumer facing advice for a healthy, balanced diet as outlined within the Eatwell Guide is also likely to substantially reduce the amount of ultra-processed foods consumed.
- 4.8 Recent evidence from the [Institute of Grocery Distribution](#) (IGD) demonstrates that the term ‘ultra-processed’ is not well understood by consumers and highlights a number of barriers to reducing intakes of these foods, including price, habit, shelf life and general preferences. The ongoing debate in relation to ultra-processed foods therefore provides an opportunity to continue to promote our existing advice and resources, and emphasise messaging around HFSS, and a healthy balanced diet more generally.
- 4.9 Based on all of these factors, including the conclusions from SACN (paragraph 3.4), we assert that there is no strong rationale at this time to propose changes to existing

dietary recommendations to specifically consider processed and ultra-processed food

- 4.10 FSS are working closely with our partners in public health, including Scottish Government and Public Health Scotland to take forward and deliver a range of measures designed to improve diet and levels of healthy weight in Scotland. This includes a focus on improving the food environment to make it easier for consumers to access healthier options which are lower in fats, sugar and salt. We will also continue to remain abreast of developments in the scientific literature, and discussions by SACN on the topic at its next horizon scan meeting in June 2024.

5 Identification of risks and issues

- 5.1 A key issue and concern is that there is a steady stream of media coverage by a wide range of high profile individuals and organisations who are pushing for action on ultra-processed foods, irrespective of what they are. Recent calls have also been made for front of pack labelling on ultra-processed and high fat, sugar and salt products, such as those used in Chile. There is a risk that these requests gain more traction than FSS or government communications on this issue. Regardless, as a consumer facing organisation it is our responsibility to ensure that evidence based information is published and available. Further, there is a risk that the emphasis on ultra-processed foods creates a distraction from the key diet issues where there is robust evidence for action, i.e. high fat, salt and sugar foods, thereby providing further impetus for FSS to provide clear consumer messaging on this issue.
- 5.2 Given the strong opinions in relation to processed and ultra-processed foods, and the continued publication of new evidence in this area, there is a risk that FSS may be viewed as not taking enough action. However, as individual studies can indicate differing outcomes it is essential that we consider the consensus scientific view from advisory committees such as SACN before making any changes to our advice or dietary recommendations. As noted above, we will be guided by future discussions on this topic by SACN.

6 Equality Impact Assessment and Fairer Scotland Duty

- 6.1 Completion of an Equality Impact Assessment and Fairer Scotland Duty was not required for preparation of this Board paper.

7 Conclusion/Recommendations

- 7.1 As outlined within the SACN review, it remains unclear to what extent the risk associated with processed food is due to the processing itself or because these foods are often energy-dense, high in saturated fat, salt or sugars, high in processed meat, and/or low in fruit and vegetables and fibre.
- 7.2 We therefore do not propose changes to existing dietary recommendations at this time to consider processed and ultra-processed food, however we will continue to monitor the evidence base going forward and revisit if necessary. We will continue

to remain abreast of developments in the scientific literature, particularly future discussions by SACN on the topic at its next horizon scan meeting in June 2024.

7.3 Building on the our previous publication within the Press and Journal, we will seek to include specific messaging on processed and ultra-processed foods within our dietary guidance resource, [Eat Well, Your Way](#). This will aim to provide a clear and succinct overview of what these foods are and reiterate our existing advice for healthy diets.

7.4 The Board is asked to:

- Discuss and **agree** our proposed position in relation to processed and ultra-processed foods.
- **Note** that we will develop consumer facing messaging on processed and ultra-processed foods for inclusion within [Eat well, your way](#).

Please direct queries to:

Author: Alana McDonald

Contact details: alana.mcdonald@fss.scot

SLT Sponsor: Garry Mournian

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Annex 1 – Further information on Regulated Products

Food additives are substances that are not normally consumed as food or used as ingredients in food in themselves but which are added to food for a technological purpose. Food additives are categorised into various functional classes depending on their technological purpose, which include the following:

- Antioxidants – used to prolong the shelf-life of foods by protecting them against oxidation
- Colours – used to add or restore colour to foods
- Emulsifiers – used to form or maintain a mixture of two or more foodstuffs which do not usually mix (e.g. oil and water)
- Preservatives – used to prolong the shelf-life of foods by protecting them against micro-organisms
- Sweeteners – used to impart a sweet taste to foods or in table-top sweeteners

Under [Regulation No 1338/2008 on Food Additives](#), food additives can only be added to food if they are first included in the domestic list of food additives, which is provided for by the same legislation. Regulation No 1338/2008 also provides for the conditions use of food additives in food and for the rules on labelling of food additives. The relevant domestic lists for approved food additives can be found in [Annex II](#) and [Annex III](#) of Regulation No 1338/2008.

The approval of food additives is subject to the common procedure on the authorisation of regulated products laid down in [Regulation No 1331/2008 on the Establishment of a Common Authorisation Procedure for Food Additives, Food Enzymes and Food Flavourings](#). Food business operators apply to GB food authorities (i.e. FSS in Scotland and FSA in the rest of GB) to have their product considered for inclusion on the domestic list. After receiving a valid application for a food additive, the food safety authorities proceed to having SERD undertake a scientific risk assessment of the product to establish if it is safe. If a product passes risk assessment, FSS and FSA will undertake risk management procedures in order to have the product on the domestic list of food additives (therefore allowing the food additive to be placed on the market). As part of this process all authorised food additives are given an E-number (e.g. the sweetener aspartame is logged as E951).

Further information, including a list of approved additives and E-numbers can be found [here](#). Some examples of different food additives are as follows:

- Colours:
 - E123, Amaranth
 - E131, Patent Blue V
 - E142, Green S
- Preservatives:
 - E210, Benzoic acid
 - E234, Nisin

- Anti-oxidants:
 - E300, Ascorbic acid
 - E301, Sodium ascorbate
- Sweetener:
 - E951, Aspartame
 - E960a and E960c, steviol glycosides
- Emulsifiers, stabilisers, thickeners and gelling agents:
 - E412, Guar gum
 - E425, Konjac
 - E440, Pectins