Position Statement
Processed Food

Summary
Processed foods are commonplace within people's diets in the UK. Dependent on the composition and degree of processing, processed foods can add to, or reduce the nutritional quality of an individual's diet.

Food processing are methods and techniques that turn fresh foods into food products[1]. A range of operations are used, including washing, chopping, heating, freezing, packaging and the addition of ingredients, which may change the characteristics of a food; including their nutritional composition. This includes food fortification[2,3]. There is a growing narrative that classes all forms of processing, and in particular significant degrees of processing as less healthy or desirable, even though this does not apply in all cases.

Key points
- The nutritional quality of foods is more important to consider than simply whether or not they are processed.
- For some products, consumers should be aware that processing will increase the content of sugar, salt, fat or other ingredients that will make them less healthy than their unprocessed equivalent.
- It is also important to recognise that processed foods and ultra-processed foods as described by NOVA category 4 are not necessarily high in fat, salt and sugar or other less healthy additives. Processed or ultra-processed foods are not necessarily unhealthy to consume, and in some cases may be beneficial, especially to certain population groups, who may have more restricted diets.
- Some processed and ultra-processed foods have their place to support populations to meet nutritional requirements. It is important that people do not avoid all foods that include more than five ingredients, as many of these products are integral to achieving a balanced diet for good health.

Background
The processing of a food or beverage includes an array of technologies and processes to transform raw food materials and ingredients into consumer food products. Reasons for food processing include preservation, enhancing flavour or ensuring food safety.

The processing of a food can create change in the quality and attributes of the product. In some cases, these changes are intentional and provide improvements in the nutrient content, texture, appearance, and flavour of the product. In other cases, the changes may simply make the product different, without improving or changing its quality.[3]

Defining a processed food

The term processed food does not have a consistent definition. At its most basic, it could refer to any food that has undertaken any process, such as chopping, freezing, canning or cooking. This is recognised in NHS live well advice[10].

However, more generally, processed foods are taken to mean foods which have had other foods or ingredients added to them. These additives can be to extend shelf-life or improve palatability, or to fortify the food with nutrients and minerals. Processing may also involve the inclusion of less healthy additives, such as salt, sugar or saturated fat. Processed foods with high amounts of fat, sugar and salt are also referred to as High Fat, Sugar and Salt foods (HFSS), although the two terms are not interchangeable. Consumers are recommended to limit the amount of HFSS foods that they consume as part of a healthy diet.

The NOVA classification[7] created the definition of an "ultra-processed" food, distinct from processed food. This term describes the level of processing that has been involved to produce a "food product", which in their view contains little in the way of whole foods (Category 1 in the NOVA definition). The full tables of NOVA classifications can be found in the appendix of this statement.

Concerns

Consumer studies identify there is a lack of awareness of the benefits that some processing methods offer, and that the public have a pejorative view of processed foods. It has been noted that many consumers feel avoiding processed foods is "healthier"[4].

Yet there is inconsistency among consumer understanding of what constitutes a processed food. They often do not regard highly processed yet staple foods, such as bread and cheese, as processed,[5] whereas novel food processing technologies often create concern. Many presume unknown and potentially harmful health effects, with a lack of knowledge about novel technologies being a major barrier to their acceptance.[6]

Concerns have also been raised about the inconsistency in the way in which the NOVA classification of "ultra-processed" has been applied[9].

Role of processed food in diet

For those choosing to reduce their meat and fish consumption, or choosing a vegetarian or vegan lifestyle for health, ethical or environmental sustainability reasons, processed food may play an important role in the diet. Replacements for meat, fish and dairy can support individuals to replace nutrients where products are high in protein and fortified. Many will be defined as "processed" or "ultra-processed".

It is clear that some processed foods can play a role in a well-balanced diet as per The Eatwell Guide[8]. However, the same guide recommends limiting the consumption of processed foods that are HFSS products.

Those at risk of malnutrition will benefit from energy dense foods. Therefore, the inclusion of processed foods with higher levels of fat and sugar may be useful to increase intakes of energy (kcals). Older adults, and those with limited cooking skills may rely on processed and ultra-processed food to meet their nutritional needs.

Food Fortification

Food fortification is the addition of vitamins and minerals to increase the micronutrient density in a food to support people in achieving their daily requirements. For example, the fortification of breakfast cereal with B vitamins and iron, and the fortification of white flour with Iron, Niacin and Thiamin. Such fortification can lead foods to be categorized as

processed or ultra-processed, but it is important to ensure that consumers are aware of the positive benefits of this form of processing.

For more information on the BDA's views on food fortification, please see our Food Fortification Policy Statement.

References

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7. https://archive.wphna.org/wp-content/uploads/2016/01/WN-2016-7-1-3-28-38-Monteiro-Cannon-Levy-et-al-NOVA.pdf
8. Morris J, Rankin J, Draper E, et al (2016) Prevention of neural tube defects in the UK: a missed opportunity. Archives of Disease in Childhood 101: 604-607.
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Appendix – NOVA Classifications

NOVA Group	Definition
Group 1 Unprocessed or minimally processed foods	Unprocessed (or natural) foods are edible parts of plants (seeds, fruits, leaves, stems, roots) or of animals (muscle, offal, eggs, milk), and also fungi, algae and water, after separation from nature. Minimally processed foods are natural foods altered by processes that include removal of inedible or unwanted parts, and drying, crushing, grinding, fractioning, filtering, roasting, boiling, non-alcoholic fermentation, pasteurization, refrigeration, chilling, freezing, placing in containers and vacuum-packaging. These processes are designed to preserve natural foods, to make them suitable for storage, or to make them safe or edible or more pleasant to consume. Many unprocessed or minimally processed foods are prepared and cooked at home or in restaurant kitchens in combination with processed culinary ingredients as dishes or meals
Group 2 Processed culinary ingredients	Processed culinary ingredients, such as oils, butter, sugar and salt, are substances derived from Group 1 foods or from nature by processes that include pressing, refining, grinding, milling and drying. The purpose of such processes is to make durable products that are suitable for use in home and restaurant kitchens to prepare, season and cook Group 1 foods and to make with them varied and enjoyable hand-made dishes and meals, such as stews, soups and broths, salads, breads, preserves, drinks and desserts. They are not meant to be consumed by themselves, and are normally used in combination with Group 1 foods to make freshly prepared drinks, dishes and meals.
Group 3 Processed foods	Processed foods, such as bottled vegetables, canned fish, fruits in syrup, cheeses and freshly made breads, are made essentially by adding salt, oil, sugar or other substances from Group 2 to Group 1 foods. Processes include various preservation or cooking methods, and, in the case of breads and cheese, non-alcoholic fermentation. Most processed foods have two or three ingredients, and are recognizable as modified versions of Group 1 foods. They are edible by themselves or, more usually, in combination with other foods. The purpose of processing here is to increase the durability of Group 1 foods, or to modify or enhance their sensory qualities.
Group 4 Ultra-processed foods	Ultra-processed foods, such as soft drinks, sweet or savoury packaged snacks, reconstituted meat products and pre-prepared frozen dishes, are not modified foods but formulations made mostly or entirely from substances derived from foods and additives, with little if any intact Group 1 food. Ingredients of these formulations usually include those also used in processed foods, such as sugars, oils, fats or salt. But ultra-processed products also include other sources of energy and nutrients not normally used in culinary preparations. Some of these are directly extracted from foods, such as casein, lactose, whey and gluten.

	Many are derived from further processing of food constituents, such as hydrogenated or interesterified oils, hydrolysed proteins, soya protein isolate, maltodextrin, invert sugar and high-fructose corn syrup. Additives in ultra-processed foods include some also used in processed foods, such as preservatives, antioxidants and stabilizers. Classes of additives found only in ultra-processed products include those used to imitate or enhance the sensory qualities of foods or to disguise unpalatable aspects of the final product. These additives include dyes and other colours, colour stabilizers; flavours, flavour enhancers, non-sugar sweeteners; and processing aids such as carbonating, firming, bulking and anti-bulking, de-foaming, anti-caking and glazing agents, emulsifiers, sequestrants and humectants. A multitude of sequences of processes is used to combine the usually many ingredients and to create the final product (hence 'ultra-processed'). The processes include several with no domestic equivalents, such as hydrogenation and hydrolysation, extrusion and moulding, and pre-processing for frying. The overall purpose of ultra-processing is to create branded, convenient (durable, ready to consume), attractive (hyper-palatable) and highly profitable (low-cost ingredients) food products designed to displace all other food groups. Ultra-processed food products are usually packaged attractively and marketed intensively.

This position statement was created by a specially convened working group including members of the BDA head office team and dietitian with expertise in this area.

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