

BRITISH NUTRITION FOUNDATION - WRITTEN EVIDENCE (FDO0081)

Summary:

- The links between food, diet, and obesity are complex. Addressing obesity and reducing health inequalities through dietary change will require robust, well-structured policies spanning multiple government departments to initiate a holistic, system-wide approach. The structure of our food environment requires a fundamental overhaul under strong leadership. Whilst challenging, we believe this can be achieved collaboratively, if executed in concert with policy makers, organisations and institutions well placed to deliver change at scale. Meaningful change will not be achieved without the active participation of all stakeholders across the food chain.
- It is widely agreed that discouraging high intakes of energy dense, nutrient poor foods, currently classified as high in saturated fats, sugars and salt (HFSS) is crucial, although there is debate on the exact definitions of these foods. The concept of ultra-processed foods (UPFs) has prompted critical questions about the health implications of food processing, underscoring the need for deeper insight into potential mechanisms linking processing and ill health. Limited research on this challenging topic is underway but this shouldn't delay immediate action to curtail the consumption of energy-dense foods high in saturated fat, sugar, and salt. Reducing these will undoubtedly diminish intake of many foods that are widely accepted as less healthy and many items classified as ultra-processed by the NOVA system. There is substantial scientific evidence that energy-dense, nutrient-poor dietary patterns, characterized by high intake of HFSS foods, are detrimental to health. Conversely, diets rich in fibre, vitamins and minerals from whole grains, fruits, vegetables, fish, pulses, nuts, seeds, and dairy products are associated with better health outcomes, forming the foundation of national and international dietary guidelines around the world.
- The pervasive influence of the food environment on individuals' dietary choices underscores the crucial role of industry in finding and implementing solutions. All sectors of the food and beverage industry, alongside other stakeholders, must engage in combating

this significant public health issue. Government intervention is essential to fund research in diet and health (such as continuation of the diet and health innovation research) and to promote and to incentivize innovation, reformulation, and the adoption of effective new technologies that can improve the nutritional profile of our food. While reformulation alone cannot solve the problem, it can contribute significantly to making healthier, sustainable products more accessible and affordable to consumers and aligning with dietary recommendations. Monitoring and reporting by the food industry, will further incentivise healthier production and promotion practices.

- While policies relying solely on individual action are inadequate without structural changes, educating young people about the connections between diet and health, where food comes from, and how to prepare basic meals is imperative. Supporting teachers to achieve this with resources and training is the cornerstone of our Food – a Fact of Life programme. We welcome initiatives advocating for the expansion of free school meal eligibility and encouraging, and enabling, schools to adopt whole school approaches to food.
- Moving forward, holistic and evidence-based, well evaluated policies are needed to support long term action if we are to improve food systems and provide access to healthy, nutrient dense food, promote healthy eating habits and lifestyles, and address the root causes of malnutrition, notably poverty and food insecurity. Setting long- and medium-term targets for obesity reduction, supported by thorough analysis and cross-party strategies, is essential to enable a gradual transition that will lead to healthier eating, reduced risk of common diet-related diseases and conditions and reduced burden of the NHS and social care systems. This will require long-term, nationally agreed, ambitious policies akin to the UK's net zero strategy.

About us

The British Nutrition Foundation is a leading UK nutrition charity with a clear vision; we believe that healthy, sustainable diets should be accessible to all. Our work involves translating the evidence-base in nutrition science to help navigate complex issues linking diet and health including the availability of healthy and more sustainable food options and awareness of the importance of healthy eating and the links between diet and health.

We focus on three key levers of change:

- Changing the food environment. We work with partners across the food system including companies in the food industry, to help drive change through reformulation and product innovation, menu development, evidence-based criteria to inform healthier food ranges, scientific reviews and other evidence-based support.
- Educating people. Our website and social media channels provide evidence-based information that supports people's knowledge, skills and motivation to eat healthily. The British Nutrition Foundation also provides teacher training and resources through *Food a fact of life*, our education programme supporting teachers and teaching assistants from early years settings to Key Stage 3.
- Advocating science and building consensus. We disseminate and translate nutrition science for a range of audiences who can influence public understanding of healthy eating and encourage behaviour change, and we work collaboratively to advance the study of, and research into, nutrition for the public benefit.

We work with multiple stakeholders and are proud of our long-established reputation for partnership working and our ability to bring together those with an interest in food and nutrition from diverse sectors - academia, health, education, communications and the food system.

The British Nutrition Foundation's funding comes from membership subscriptions; donations and project grants from food producers and manufacturers, retailers and food service companies; funding from research projects and grant providing bodies, trusts and other charities; training and publications.

As a membership organisation, we provide an unbiased view on nutrition science to our members and other stakeholders. We recognise the importance of safeguarding our independence and protecting our understanding of science from potential bias. We safeguard our impartiality through our governance, with membership of our Board of

Trustees, Advisory Committee and Scientific Committee weighted towards the scientific community. Our Scientific Committee provides an additional layer of scrutiny of the positions that we take on key nutrition science issues.

The British Nutrition Foundation does not lobby for, or endorse, products, nor do we allow commercial or political pressure to influence us when publishing or disseminating information.

In our detailed submission below, we have focused our response on those questions we feel most qualified to comment upon.

Key trends in food, diet and obesity and the evidential base for identifying these trends

Despite government ambitions to boost healthy life expectancy by 5 years by 2035, improvements in life expectancy in the UK have stalled and there are considerable and widening differences between areas of lower and higher deprivation. Recent analysis demonstrates higher geographical disparity within the UK compared with comparable countries such as Italy and the Netherlands (Cavallaro et al. 2024). Although, on average, people in the UK can expect to live to around 82 years, a quarter of these years will be spent in poor health with disabling illness (Centre for Ageing Better 2022). Britain has one of the worst healthy life expectancy rates in Western Europe, driven by poor diets, obesity, hypertension, excess alcohol use and inactivity, which are compounded in some areas by poor physical, economic, and social environments.

UK diets are misaligned with dietary recommendations (DHSC 2020). For most people, this means diets that are high in saturated fat, salt, and sugars, and low in fibre and some important micronutrients (PHE & FSA 2020). Our increasing rates of obesity are a direct result of energy intakes in excess of requirements.

The prevalence of obesity in the UK is unacceptably high with rates amongst the highest in Europe. Almost two-thirds of adults in England are living with overweight (BMI, body mass index ≥ 25) or obesity (BMI, body mass index ≥ 30) (63%; 67% of men and 60% of women) and more than 1 in 4 is obese (27%; 26% of men and 29% of women) (NHS Digital 2020). One in ten children in England are living with obesity by the age of five years, with the number increasing to 23% by age 10-11 years (NHS Digital 2022); and figures are as shocking elsewhere in the UK (e.g. in the 2022/23 academic year, 21.9% of primary 1 children in Scotland, aged 4-5 years, were at risk of overweight and obesity) (Public Health Scotland 2023). In addition, there is a steep socioeconomic gradient in the prevalence of obesity with rates amongst children in the most deprived decile being twice those of the most socioeconomically advantaged decile

of children. This underscores the importance of seeing this issue through a lens of social justice, not just health.

Obesity is a long-term chronic condition with significant economic, health and personal costs. It increases the chances of developing life-limiting diseases including heart disease, hypertension, type 2 diabetes and several types of cancer. According to the Health Survey for England, around 30% of adults are living with hypertension, around 4.3 million people in the UK are living with diabetes (NHS Digital 2023), and recent figures from the Office for National Statistics suggest there may be an additional one million people in England alone with undiagnosed type 2 diabetes (Office for National Statistics 2024). Numerous studies have also demonstrated the psychosocial burden of obesity, including strong links between obesity and depression, eating disorders, anxiety and substance abuse, as well as stigma and discrimination (Sarwer and Polonsky 2016). This results in a clear inverse relationship between weight and wellbeing/quality of life.

The annual cost of obesity in the UK including to our health system, the loss of quality adjusted life years for individuals and the wider costs to society including loss of productivity and costs of social care, has been estimated as £98 billion, equivalent to 4% of the 2021UK GDP (Frontiers in Economics 2022).

Obesity is a population-wide problem and there are opportunities at key life stages for intervention. A long-term obesity strategy should include measures for adult, as well as child prevention and interventions to reduce progression for those who are already overweight or obese and to delay the onset of obesity-related medical conditions. This will require widespread cultural change (Office for Health Improvement and Disparities 2022). At an individual level, comprehensive training for health and social care professionals is needed to promote appropriate conversations and support effective treatment pathways with an understanding of the toolkit of options available locally to support individuals. Despite warranted interest in new GLP-1 agonist weight loss drugs offering help to those already living with obesity, they do not offer a 'silver bullet' and can only be a small part of a larger toolkit of solutions to addressing such a huge public health problem. Given the issues around cost, availability and side-effects, diet and lifestyle will remain at the forefront of obesity prevention and treatment (Ludwig & Holst 2023; Mozaffarian 2024).

The Government's focus for many years has been on tackling childhood obesity as this threatens quality of life over the whole life-course, impacts on future cost of diet-related disease and negatively influences the health of the future workforce. The British Nutrition Foundation supports this focus because: i) the behaviours that drive obesity risk i.e. eating patterns and levels of physical activity track from childhood into

adulthood (Craigie et al. 2011) and ii) food preferences develop at the beginning of life and show remarkable stability from childhood through to adulthood (British Nutrition Foundation 2013, De Cosmi et al. 2017). This highlights the importance of the early years and school sectors in helping to improve children's diets and promote healthier eating and physical activity habits for the future.

Children living in the most deprived areas are more than twice as likely to be living with obesity than their peers in the least deprived communities, and when comparing across local authorities, the difference is closer to three-fold (NHS Digital (2022)). We now see coexistence of both obesity and food insecurity, which has increased dramatically over the last two years. The cost-of-living crisis and increasing food prices have made eating healthily unaffordable for many families, leaving them little choice but to rely on less healthy, cheaper foods. Indeed, to eat a diet that matches the Government's Eatwell Guide, the most deprived fifth of the population would need to spend half of their disposable income on food compared with only 11% for the least deprived fifth (Food Foundation 2023). Unsurprisingly, there is a greater density of fast-food outlets selling relatively inexpensive energy-dense foods in more deprived areas, and fewer shops offering access to a variety of healthier foods and fresh fruit and vegetables.

Comprehensive effort is needed to transform our food and physical environment and to rebalance the cost of food to make healthy options more affordable. We believe that significant improvements to the food environment can be achieved collaboratively, and when executed in concert with organisations and institutions well placed to deliver change at scale.

The primary drivers of obesity both amongst the general population and amongst distinct population and demographic groups

As well as widespread concern about the diet-related health of our population, there is consistent agreement on the underlying contributors to obesity and poor dietary patterns. This was clearly set out in the 2007 Foresight report (Government Office for Science 2007), subsequent government reports (Department of Health and Social Care 2020; Public Health England 2017) and outputs from many academic reviews (Williams et al. 2015; Cambell et al. 2016). Whilst obesity is ultimately a consequence of energy imbalance, the behaviours that create this imbalance are influenced by a highly complex interaction of biological, psychological, sociological and environmental factors.

Within this, the role of the food environment has been increasingly recognised, and the term 'obesogenic environment' is now used widely to

acknowledge the adverse changes to the food supply and physical activity environment that we have seen in recent years in the UK and elsewhere. Understanding how the food environment influences obesity is critical to efforts to tackle the problem. There is consensus that wide availability and marketing of energy-dense foods and those that are high in saturated fat, sugar and salt (HFSS), increasing portion sizes, and the rise-of energy-dense meals eaten outside of the home are driving obesity rates. Alongside other stakeholders, all sectors of the food and beverage industry have an important role to play in tackling this major public health problem.

We are particularly concerned about the diets of adolescents. According to the National Diet and Nutrition Survey, 11-18 year-olds are the highest consumers of sugar sweetened drinks, have the highest intakes of free sugars and consume the least fruit and vegetables (on average, 2.9 portions per day) (Public Health England & Food Standards Agency 2020). Adolescents in the UK also consume the most ultra-processed foods, close to 70% of their total food intake (Office for Health Improvement and Disparities 2023). Supermarkets, convenience stores, fast food outlets and delivery platforms play a particularly influential role in shaping their food choices (Shaw et al. 2023).

In terms of changing the obesogenic food environment, we advocate for promotion of diets that are based on nutrient rich foods such as wholegrains, fruits and vegetables, fish, pulses, nuts, seeds and dairy foods and that respect cultural diversity. In addition, we believe that innovation, reformulation and new technologies (using new ingredients, changing recipes or adapting manufacturing processes to improve their nutrient composition) are essential for improving the nutritional value of the food that we eat for the future. This was highlighted within the National Food Strategy (Defra 2021) and has been emphasised by think tanks such as Nesta (2023) Importantly, improvements in the nation's diets have come from this approach e.g. the FSA's salt reduction programme, removal of trans fatty acids from the food supply and the recent decline in sugar intakes from soft drinks attributed to the Soft Drinks Industry Levy (Tedstone 2023). Reformulation alone cannot provide the whole solution but can make an important contribution to ensuring accessibility to healthier, sustainable products that meet the changing needs and tastes of consumers across socioeconomic strata and help bridge the gap between dietary intakes and dietary recommendations.

The definition of (a) ultra-processed food (UPF) and (b) foods high in fat, salt and sugar (HFSS) and their usefulness as terminologies for describing and addressing such products

Whilst there is widespread agreement on important issues to improve the food environment, clarity on actions to be taken risks being hampered by the debate around how best to describe less healthy foods, most notably in recent debates about high fat, sugar, salt (HFSS) foods, and 'ultra-processed' foods (UPF).

It is important to acknowledge the considerable overlap between these approaches and a need to focus attention on the importance of healthier dietary patterns (e.g. as depicted in the Eatwell Guide, Mediterranean diets, Dietary Approaches Stop Hypertension or DASH diet). There is good evidence that energy-dense, nutrient poor dietary patterns, with high intakes of foods high in saturated fat, sugars or salt, are detrimental to health (Mozaffarian 2016; Lichtenstein et al. 2012; Belardo et al. 2022). In contrast, dietary patterns higher in fibre, vitamins and minerals, based on nutrient-rich foods such as wholegrains, fruits and vegetables, fish, pulses, nuts, seeds and dairy foods, are associated with better health outcomes. Such diets are the basis of all national and international dietary guidelines.

In UK policy, HFSS foods and drinks are defined using the FSA's nutrient profile model which considers beneficial nutrients/food components (i.e. fibre, protein, fruit, vegetables and nuts). Nutrient composition is also the basis for front-of-pack labels where multiple traffic lights (FOPL MTL) score thresholds on products for these nutrients of concern. Reducing consumption of HFSS products has been the cornerstone of the government's reformulation programmes and promotion restrictions, although the latter have been hampered by delays in implementation of legislation.

Most studies assessing the role of UPF in health have used the NOVA classification (Monteiro et al, 2019a, 2019b), although there is, as yet, no universally agreed definition.

Many UPF have poor nutrient profiles and are high in ingredients widely recommended to be limited and low in ingredients we want to encourage (e.g. some biscuits, cakes and many fried/salty snacks). In addition, higher consumption of UPF displaces healthy foods from the diet and this displacement is detrimental to health. However, definitions of UPF also include foods such as sliced wholemeal bread and lower sugar wholegrain breakfast cereals which can contribute to a healthy, balanced diet, and foods and drinks needed for medical or nutritional purposes (e.g. gluten-free products, fortified plant-based milk alternatives) for which there are often no accessible or convenient substitutions. Moreover, other foods

that should be limited according to the government's healthy eating model, the Eatwell Guide (e.g. some processed meats, butter, cakes and biscuits made at home from minimally processed foods) are excluded from what is considered to be 'ultra-processed'. Concerns about the breadth of the NOVA 4 UPF category were supported by a recent multinational cohort study (Cordova et al. 2023). This study found higher UPF consumption to be associated with increased risk of multimorbidity of cancer and cardiovascular disease; positive associations were found with animal-based products and artificially and sugar sweetened beverages, sauces, spreads and condiments, but negative associations with breads and cereals. No associations were found for sweets and desserts, savoury snacks, plant-based alternatives or ready-to-eat/heated mixed dishes. This suggests that different types of UPF may contribute differently to the risk of ill health.

Whether application of the concept of UPF in advice to consumers will encourage positive dietary behaviour change remains unclear. The practicalities of developing and implementing such advice would be challenging, particularly in the short-to-medium terms as such foods currently comprise more than half of the UK diet (Office for Health Improvement and Disparities 2023).

Many people lack the inclination, time, resources or skills to cook from scratch and almost everyone in the UK is reliant on processed foods to some extent, particularly working parents who have limited time to prepare meals for their families (Brannen et al. 2013). The UPF concept may discourage food reformulation to improve nutrient composition of products as a means to improving national diets. For the reasons we have outlined above, we believe that reformulation/innovation will continue to be an important contributor to improving access to affordable, healthier, acceptable, convenient and sustainable foods that people want to eat.

To date, whilst the majority of studies investigating UPF and health have been observational studies (i.e. that cannot demonstrate cause and effect), we would emphasise that the concept of UPF and findings from epidemiological studies raise important questions around aspects of processing that may influence the healthiness of a food product. These must be a key priority for future research (British Nutrition Foundation 2023) and we are pleased to see that this is reflected in the recent report of a "rapid project" on UPFs carried out by the Government Office for Science in the UK and published very recently (Government Office for Science 2024).

Food processing encompasses a broad spectrum of processing techniques and a better understanding is needed as to which aspects may influence the healthiness of food products. Recent research, for example, suggesting that food texture may influence energy intake rate (with softer

foods being linked to faster eating rates for both UPF and non-UPF defined foods) (Teo et al. 2022) and/or changes to the food matrix (which might influence absorption of nutrients) (Forde et al. 2022) have important implications for healthier food innovation.

Whilst research to understand the mechanisms that might link processing and health continues, we must not allow the debate about HFSS and UPF to discourage action to reduce the proportion of 'unhealthy' foods on our shelves. This includes reformulation and innovation activities to produce convenient, affordable, desirable products with higher nutritional quality. Monitoring and measurement, alongside public reporting by the food industry, will be an important way to incentivise healthier production and promotion.

Policy tools that could prove effective in preventing obesity amongst the general population, including those focussed on the role of the food and drink industry in tackling obesity

Changing the nation's habits to tackle obesity is a complex challenge and has been estimated that there are 16 government departments involved (Parsons et al. 2020). The burden of obesity on our NHS and the wider economic cost-benefits of reducing obesity, including to productivity and employment emphasises the need for comprehensive, effective well-designed and cross-governmental policies.

To date individual policies and strategies to target obesity have had limited success in most countries. These policies have often been criticised for being fragmented, not readily supporting implementation, being poorly evaluated preventing us from learning from previous failures, and for making unsustainable demands on individuals rather than re-shaping the food environment (Thies and White 2021). This emphasises that Government initiatives will not affect meaningful dietary change without the active participation of all stakeholders in the food chain.

The National Food Strategy outlined several recommendations for UK food policymakers, only some of which have been implemented within the Government's Food Strategy. For example, the importance of improving the availability, quality and comparability of data on both the sustainability and health attributes of products across the food supply and for businesses to measure and share progress towards improving the healthiness of their portfolios will, we hope, be addressed by the Food Data Transparency Partnership. This is a positive and important step in providing investors and consumers with better, more consistent information about food products, and in driving reformulation towards healthier, lower energy-density foods. Accurate data will support informed policy action. However, some organisations have commented that

voluntary reporting may not have the same benefit as mandatory reporting, and we share this concern.

In addition, delays in the implementation of policies relating to HFSS foods have contributed to a piecemeal approach which is unlikely to shift the dial (Tedstone 2023, McKinsey Global Institute 2014). We believe that a comprehensive, system-wide approach is needed.

The update of nutrition standards within the Government Buying Standards for Food and Catering Services (GBSF) (Defra 2021) is an opportunity to lead by example, providing a healthy food environment for those using or working in the public sector. There is evidence that healthy food procurement policies can increase the availability and purchases of healthier foods (and reduce less healthy foods) (Niebylski et al 2014) and these are being implemented in other countries (e.g. Denmark has identified public procurement as an opportunity for supporting vulnerable citizens and small businesses, shortening supply chains and enhancing access to healthier and more sustainable foods) (IFOAM Organics Europe 2020).

As recommended in the National Food Strategy, applying higher standards to the public sector and introducing a strong target around the contribution of food produced locally or to higher environmental production standards would showcase what can be achieved, although this would need to be underpinned by enforcement, monitoring and evaluation. Consideration needs to be given to the diverse needs of public sector settings, e.g. given the prevalence of malnutrition in hospitals, patient service procurement may differ from visitor services, whilst children living with neurodiversity may have different needs in school settings (e.g. require more flexibility with food choices) and early years sectors will benefit from standards that include full fat dairy products that may not be the optimal choices in other settings.

Other countries have adopted similar approaches to those outlined in the National Food Strategy to improve national diets to reduce obesity and other dietary-related ill health (e.g. restrictions on marketing of HFSS foods and drinks to children, improved food/menu labelling, improved school food regulations and social marketing campaigns). Whilst some success in influencing dietary preferences and behaviours has been demonstrated, a combination of policy, environmental, and educational interventions are required due to the complex and multifaceted nature of obesity and significant challenges in modifying individuals' dietary habits.

Local areas are often well placed to develop better food environments and respond to specific needs and barriers in their communities, and some regions/cities have achieved improvements in dietary intakes and declines in childhood obesity rates. Initiatives such as the Glasgow City

Food Plan and Birmingham Food Systems Strategy are likely to play a key role in improving diet and health at community level and may set a precedent for other Local Authorities to follow.

In a review by Public Health Wales, acknowledging that progress has been limited, it was recommended that actions to tackle obesity are multifaceted involving community, schools, and early years settings, as well as industry and local government, to address both individual and environmental factors (Public Health Wales 2018). This review emphasised the need for leadership and a clear vision, with strong community participation and a long-term approach with both short- and long-term goals. Clear communication and social marketing elements, which are flexible over time in terms of delivery, target groups and/or geographical area of focus, are also important.

Finally, we believe education has an essential role to play in ensuring children and young people develop a good knowledge of healthy eating, cooking skills and where foods come from. Our Food - a fact of life programme provides evidence-based resources for teachers and early years settings, but we often hear that food teaching is under-resourced and deprioritised in schools. The cost of ingredients is an important barrier to children and young people being able to access food education in schools. We welcome current campaigns for the extension to eligibility of free school meals and encourage schools to take whole school approaches to food. However, we believe that the School Food Standards should be reviewed for suitability to reduce weight gain/obesity risk and would like to see greater consideration of the physical environment for school food provision. Children require adequate seating and time built into the curriculum to promote the social aspects of eating, particularly considering the recent focus on speed of eating in relation to risk of weight gain). This would support a cultural shift that would facilitate a more positive relationship with food for the next generation.

Moving forward, holistic and evidence-based, well evaluated policies are needed to support long term action if we are to improve food systems and provide access to healthy, nutrient dense food, promote healthy eating habits and lifestyles, and address the root causes of malnutrition, notably poverty and food insecurity.

In addition, we need robust, long- and medium-term targets for reducing obesity and other diet-related ill health, backed up by robust data and analysis, with identification of the critical dependencies on which meeting those targets would rely (Institute for Government 2023). This must be supported by a cross-party strategy that results in an ambitious, nationally agreed and explicit long-term goal supported by policies that take a 'systems approach' as we have for the UK's net zero strategy.

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