Policy Statement

Environmentally Sustainable Diets

Summary

"What, and how much we eat directly affects what, and how much is produced. We therefore need to consume more 'sustainable diets' – diets that have lower environmental impacts, and are healthier."

- Tara Garnett, 2014 (1)

The current UK diet does not have the right balance of food recommended for a healthy, sustainable diet (2). It is estimated that overweight and obesity alone will cost the NHS £9.7 billion annually by 2050, with costs to wider society of nearly £50 billion (3). Of course, these UK issues are part of a wider global picture; as of 2018, over 820 million people globally are undernourished and this figure has increased since 2015 after many years of decline (4). Our current food systems are harming the environment. As much as 30 percent of UK greenhouse gas emissions come from our food system and meat and dairy are responsible for over half that amount (5).This is against a backdrop of increasing demand for food from the growing human population, and a challenged food system that is already stressed by the degradation of global ecosystems (6).

The COVID-19 pandemic has highlighted many weaknesses within food systems and exacerbated many of these issues both in the UK and worldwide. Food systems are globally interlinked and, although UK dietitians will ultimately focus on environmentally sustainable diets as they relate to their own country, their place of work and their patients, being aware of the wider food system context (7) is also important.

The BDA believes the profession should be leading discussions on how our food behaviours can affect both health and the environment. The BDA supports this through the delivery of the *One Blue Dot* toolkit (8), through regular member communications and campaigns and via the activities of our Sustainable Diets Specialist Group. Health and environmental sustainability can go hand in hand and there are many win-wins that can be achieved. Dietitians have an important role to play in supporting environmentally sustainable diets for a number of reasons. They have the expert knowledge to combine healthy eating messages and environmentally sustainable dietary advice, and support citizens to recognise that diets can be environmentally sustainable, healthy and affordable.

The BDA believes that:

- Everyone should have access to an affordable, nutritious. high-quality diet that is both good for health and the environment.

- Dietitians should be able to reconcile the nutritional and environmental science to give consistent, inclusive messages about a healthy, environmentally sustainable and varied diet. They should be aware of the challenges that may result for vulnerable groups and individuals (e.g., those suffering ill health, pregnant women, people on low incomes, and older adults) and be able to modify advice as appropriate.

- Meat and dairy products are leading contributors to Green House Gas (GHG) emissions (9) and other environmental impacts such as land use, water use and biodiversity loss. This varies dependent upon where and under what system these are produced, but overall emphasis at a population level should be on reduction of red and processed meat and moderation of dairy intake, in line with the Eatwell Guide (EWG) (10). These should be replaced with appropriate whole plant proteins such as beans, pulses, nuts and whole grains. The EWG also supports increased fruit and vegetable intakes, more wholegrain carbohydrates and reduced saturated fat, sugar and salt intakes.

- Dietitians should be proactive advocates for healthy, environmentally sustainable diets, seeking to influence a range of policy areas, including education, pricing and accessibility at a local and national level. They should use their skills in interpreting and translating the latest evidence and expertise on sustainability to inform their professional practice. They should implement practices in their home, workplace and communities to reduce the environmental impact of food whilst promoting optimum nutrition.

- Environmental sustainability should form part of dietetic training for all dietitians, both in a clinical or public health role. The BDA will ensure that sustainability forms part of the national curriculum, and support higher education institutions to deliver on this locally

- The BDA's Sustainable Diets Specialist Group should provide guidance and CPD to dietitians, dietetic students and the wider workforce on environmentally sustainable diets. This should be delivered in partnership with the BDA's other specialist groups, in particular the BDA Public Health Specialist Group.

- The BDA should develop and promote the *One Blue Dot* toolkit as an evidence-based source of information on environmentally sustainable diets for dietitians, including a full review in November 2021.

- The BDA needs to engage with key external partners with an interest in environmentally sustainable diets to grow the influence of dietetics within the wider sustainability and food policy landscape.

- This policy recommendation is applicable for the general healthy adult population and children over two, although there are some vulnerable groups with nutritional requirements that need special attention, including older people or patients with specific disease states.

Introduction

'Sustainable Healthy Diets are dietary patterns that promote all dimensions of individuals' health and wellbeing; have low environmental pressure and impact; are accessible, affordable, safe and equitable; and are culturally acceptable."

FAO and WHO, 2019 (11)

At both a UK and a global level we need to change dietary patterns to address environmental, health and inequality challenges. Nutrition is at the heart of many of the United Nation's 17 Sustainable Development Goals (12) (13), which set out the global blueprint for a better and more sustainable future for all.

We know the environmental sustainability of food systems is complex and dependent on a range of policy areas including those on climate change, water, ecosystems, land use, soil, food production and distribution and global economics. Nonetheless, the BDA believes the profession should be leading discussions on sustainability as it relates to food and nutrition choices.

Dietitians can influence what and how people are eating and purchasing food, which in turn can support behaviour change. This can include improving cooking skills, reducing food and packaging waste, influencing food choices and shopping habits and providing guidance and advice. Dietitians should look to provide leadership, offering their expertise in human nutrition and dietary behaviour to policy makers and those researching environmental sustainability.

Of course, this is a constantly evolving area. COVID-19 has highlighted weaknesses in our food system, has changed dietary habits with resultant impacts on health (14). These may result in long lasting changes even beyond the pandemic. Brexit and other global factors will likely have further impacts, and dietitians must also consider these.

This BDA policy statement is designed to support the dietetic profession by providing insight into the complex science behind the nutritional and environmental criteria associated with environmentally sustainable diets. More detailed information is included within the BDA's *One Blue Dot* toolkit (8), which is designed for dietitians to practically apply the comprehensive evidence base and provide specific tools and advice.

Background

The way we produce and consume food and drink creates a range of stresses for our planet. These include climate change, land and water use, loss of biodiversity, exploitation of species through overfishing, pollution and soil loss to name just a few (14) (15) (16). This policy recognises that accessible healthy eating is an integral aspect of environmentally sustainable diets.

Many evaluations, including the FAO (11) and our own *One Blue Dot* (8), draw similar conclusions; a shift towards a healthier diet containing more plant proteins[1] and less meat, in particular red meat, is required to reduce GHG emissions, improve land and water use and relieve other environmental pressures. A diet with more plant-based proteins, as well as increased fruit and veg intake and reduced high fat, sugar and salt foods is also recognised as being better for health, as outlined in the most recent iteration of the Eatwell Guide (see below). It should be noted that such a diet is not necessarily a vegan or vegetarian diet, although the term “plant based” is often used in relation to such diets.

UK agriculture alone is responsible for between 18-20% of the nation’s GHG emissions (19). The transportation of food nationally and internationally also contributes to GHG emissions. Wastage of food in the UK is stands at around 9.5 million tonnes annually, 70% of which is avoidable and the majority of which is caused by households (20). This needs to be addressed as part of any policy on healthy, environmentally sustainable food (21).

The UK has a target to reduce GHG emissions by 100% from 1990 levels by 2050 (18). The sixth Carbon Budget published by the Committee on Climate Change has ambitious targets to reduce meat and dairy intake by 20% by 2030.Government has also recognised the pressure on the availability of water for use in agriculture and the need to reduce this impact (22). Growing the amount of multipurpose land use, protecting important ecosystems and using more environmentally friendly land use methods can all have a positive impact (23).

Dietitians can build partnerships across the food system to strengthen our understanding of how different sectors interact and how food behaviours impact on health and the environment. This is important if we are to build upon the profession’s position as experts in the interpretation of nutritional science. It will mean dietitians can provide both consistent advice for citizens in a changing food environment and understand the structural and socio-cultural barriers and opportunities. Food habits reflect wider cultural beliefs and values, and dietitians are well placed to provide support and encouragement to change to food habits.

Consideration of specific foods

We outline below some food groups linked to more environmentally sustainable diets. More detail can be found in the BDA *One Blue Dot* toolkit (8).

Plant proteins

Increasing the proportion of proteins consumed from plant-sources is an important means of improving sustainability. Many dietary recommendations focus on this for both health and environmental reasons, including EAT-Lancet, EWG, World Cancer Research Fund (44) and Heart UK (45).

The inclusion of plant proteins from whole sources such as legumes, nuts, pulses and grains has been shown to result in an improved fat profile, lower energy density and significantly increased fibre content (46). Processed plant-based protein sources are growing in popularity but can be high in fat and salt, so consumers should consider this when adding them to the diet, as an environmentally sustainable diet is not necessarily a healthy one (27).

Protein quality and quantity is not compromised when switching to more plant sources. Plants contain all essential amino acids and diets entirely based on a variety of plant proteins which meet daily energy requirements can also meet all essential amino acid requirement (47) (48).

Red and processed meat (RPM)

Dietary modelling suggests that the largest improvements in terms of both improving public health and reducing the impact of climate change (and water and land use) are gained by reducing consumption of RPM (49) (50).

Red meat is a source of protein, iron, zinc, Omega 3 and vitamins A, D, and B12. It will be important to provide guidance on alternative dietary sources of these nutrients, especially to higher risk groups such as girls and women of reproductive age to prevent nutritional deficiencies resulting from any planned reduction of red meat and dairy (51). The Scientific Advisory Committee on Nutrition (SACN) has recommended that those eating more than 90g of red or processed meat a day should reduce intake to 70g (the current UK average), and can do so without increasing the number of people at risk of insufficient iron intake (52)

However, there is evidence of the link between the consumption of large amounts of RPM and poor health outcomes. This may be related to the high saturated fat in animal products, high salt levels in processed meats and/or the displacement of fruit and vegetables and cereals by high meat consumption (46). Current UK intakes of saturated fat are considered too high across all age groups and genders. For all children aged over 11 years, and all adults, meat products and dairy produce each provide 22% of saturated fat in the UK diet (53). Higher intakes of RPM are also linked to an increased risk of some cancers (54). Milk and other dairy products

Dairy products make a valuable and affordable contribution to the nutrient content of the diet, in particular calcium, iodine, Vitamin A and riboflavin. It is advised that people consume a moderate amount of dairy or alternatives as part of a healthy, balanced diet. However, it is recognized that some reduction in dairy consumption could further contribute to a reduction in emissions (57). Intake of dairy should focus on healthier forms, such as lower fat and unsweetened milk and yoghurt, with reductions in dairy intake from cheese, ice cream and other dairy based desserts. Evidence shows current purchasing habits have been away from plain milk and towards cheese and deserts (56).

UK dietary surveys show the adult population meets calcium requirements. However, there are significant numbers of young females (22%) and young males (11%) with intakes below the lower reference nutrient intake (LNRI) for calcium. Plant-based alternatives to milk are growing in popularity (56), so it is important that consumers are advised to purchase fortified versions. The marketing of these products and the variation in their composition and fortification (the latter from nil to fairly comprehensive) is a matter for concern, especially if they are replacing reliable sources of key nutrients, in which they are lacking.

Government nutrition guidelines encourage the consumption of fish and fish oil, specifically two portions of sustainably sourced fish per week, one of which is oily (7). However, the latest report by the Food and Agriculture Organization (FAO) finds that 90% percent of all fish stocks are fully exploited or overfished (59). The UK also sources fish in an inefficient manner, throwing away significant quantities of edible fish as a result of quota restrictions.

The impact of reduced consumption of marine products would mean a reduction in protein, iodine, long-chain omega 3 fatty acids and other key nutrients. White fish offers a good low-fat source of protein, depending on how it is prepared, while oily fish are useful sources of omega-3 fatty acids and Vitamins A and D. Since other sources of protein are plentiful in the UK, consumption of marine foods should generally be primarily for their omega 3s and iodine content. All fish and aquatic products should be consumed in small quantities and from certified fisheries, and people encouraged to eat a diverse range of fish, especially from more sustainable populations.

Hydration

Sugary drinks in particular are poor sources of nutrition and require significantly higher water use than tap water. Government policy is directed, via the soft-drinks industry levy and other interventions, to reducing their intake. Replacing sugary drinks and indeed all packaged beverages (with their associated packaging waste) with tap water is the cheapest and most environmentally benign way of delivering hydration (62). Dietitians should play a role to advocate for improved hydration from these sources, both in workplaces and the home.

Wider Considerations

Food cost and food security

Many consumers are becoming increasingly interested in the provenance and environmental impact of their food (24); but price (and taste) remains one of the strongest influencing factors that governs choice (25). For various reasons there are limits to how much we really choose our diets and adults with lower income are most likely to cite cost as an important influence on their eating habits (27). The perception that healthier and more environmentally sustainable diets are more expensive may be a key barrier to adoption.

Dietitians should have the skills to show how a more environmentally sustainable diet need not cost more than a ‘traditional’ diet, especially by replacing meat with plant proteins such as beans and pulses. A recent costing based on the Eatwell Guide suggested making changes to the diet to improve sustainability would not lead to significant change in the price of the diet (28). Others have analysed the EAT-Lancet “Planetary Health Diet” and assessed it to be less expensive than typical diets (29). The BDA has produced an example “basket” with a major discount food retailer to highlight how swaps can make a basket healthier, more environmentally sustainable on no more expensive (30).

There is a wider conversation to be had about why a healthy, environmentally sustainable diet may be unaffordable for some (45). Dietitians are already involved in the national conversation about food and nutrition insecurity. More information regarding these issues can be found in the BDA’s Food Poverty Policy Statement (31). This issue has been

exacerbated and brought to public attention as a result of the increased hardship resulting from the COVID-19 pandemic. The UK's *National Food Strategy: Part One* has specifically recognised the issue of food insecurity and has given consideration to the influence of COVID-19 on these matters (47).

Food Waste

The majority of food waste in the UK is produced in our homes. Reducing food waste should be a focus for individual change. Food that is not eaten has no nutritional value, and all the energy expended in its production, manufacture and transport is wasted. The current 9.7 million tonnes of food waste in the UK is estimated to contribute 25 million tonnes of GHGe. The significant majority of such waste is not in the manufacturing or retail sectors, but in homes. Positively, a 28% reduction has been achieved already between 2007 and 2018 (20). Improved methods of measuring and monitoring of food waste need to be developed across the supply chain.

Dietitians have already implemented a range of projects to reduce plate waste in hospitals or reduce unnecessary prescribing of Oral Nutritional Supplements. Dietitians should continue to build on this to help minimise food waste in a wider range of contexts, such as part of public health messaging and in work with industry. The WRAP Courtauld Commitments, now in their third phase, are targeting a 1.1 million tonne reduction in food waste that would deliver £1.6bn in benefit to consumers, and a 2.9 million tonne reduction in CO_2e (35).

Cultural considerations

Dietitians also need to be aware of the cultural aspects that make a move towards more environmentally sustainable diets more or less difficult. The BBC's Good Food Nation Survey 2016 found that many people still regard meat as a core part of every meal with 49% stating that 'a meal isn't a meal without meat' (38). Some people are unwilling to accept the role of meat in contributing to climate change and are resistant to changing their own meat consumption (39).

However, research have shown most (74%) Britons are concerned about climate change (36). A ComRes survey has found over half of respondents stated that they were likely to consider changes to their diets if doing so would reduce their impact on climate change (37). Evidence indicates that it will be small changes by a wide number of people that has the necessary impact, rather than expecting a small number of people to make radical changes (52). Behaviour change approaches will be key in achieving such changes. However, the COVID-19 pandemic has demonstrated the resilience of the UK population in accepting and acting upon necessary behaviour change for the greater good.

Procurement

The Government Buying Standards for food and catering services (GBSF) (40) provide a set of mandatory standards for public procurement, as well as some voluntary best practice standards. They are included in the NHS standard contract and are also a hospital food standard (41). Although not comprehensive, and concerned with only some aspects of sustainability, the GBSF offer a platform for further government intervention on sustainability. Dietitians should have a good understanding of the GBSF and their impact, including the capacity for government and healthcare procurement and catering to drive change in diets and production methods. It has been recognised that there is a larger role for dietitians in hospital catering, and if governments follow through on recommendations this will present dietitians with a particularly good opportunity to influence the procurement process (42).

Some local authorities already provide useful pre-COVID models for taking such matters forward. The sorts of networks they engage in (e.g. Food Active) have the potential especially with the engagement of Dietitians to facilitate such changes not only in the NHS, but also more broadly.

Relevance of the Eatwell Guide

Simply moving from current 'typical' eating patterns to the existing healthy eating recommendations would also have a significant impact on environmental sustainability. In March 2016 Public Health England incorporated aspects of environmental sustainability into the updated Eatwell Guide (EWG) (10). Analysis by the Carbon Trust concluded that the EWG "shows an appreciably lower environmental impact than the current UK diet." (43) The shift to consider environmental aspects included greater emphasis on plant proteins. The protein segment was updated to 'Beans, pulses, fish, eggs, meat and other proteins' to highlight the contribution of non-meat sources to protein intake and place emphasis on those foods considered more environmentally sustainable. The fruits, vegetables and starchy carbohydrates sections have increased and the dairy section has reduced.

Conclusion

Dietary recommendations based on the Eatwell Guide, aiming to increase plant proteins (such as legumes and pulses), starchy carbohydrates, whole fruit and vegetable intake and reduce red meat, saturated fat, sugar and salt intakes remain consistent with the recommendations to achieve an environmentally sustainable diet (64). Increasing plant protein intake as a substitute for red meat remains the single biggest way to improve the environmental sustainability of diet. Key messages for the citizen need to be carefully managed to ensure that the recommendations are seen as a development of the emerging science and environmental needs rather than a change in the fundamental advice on healthy diets.

Significant progress has been made in this field since the previous policy statement (2017-2020). The BDA has launched and continues to develop the *One Blue Dot* toolkit, which has had international impact, and the dietetic curriculum now contains explicit references to environmental sustainability. The BDA Sustainable Diets specialist group has been launched and has already developed new resources and events, while Sustainable September (2020) was the BDA's first dedicated campaign on the topic of environmentally sustainable diets.

This is a growing area of knowledge for dietitians, and it will be important to balance nutritional and sustainability priorities and identify opportunities to improve both. The BDA will continue to contribute to the debate about the how we can improve the environmental sustainability of the UK diet. Dietitians will need to consider the cultural and social norms in the UK which offer opportunities and challenges to moving to more environmentally sustainable diets. Dietitians have diverse roles in many areas including research, education, academia and public health and should utilize this broad base of expertise to be agents of behaviour change and influence policies at both local and national level, using a whole systems approach.

The BDA's *One Blue Dot* toolkit (8) provides much more detailed information and advice on the practical application of this policy.

Further Information and Reading

- PEN - Food Security:
- DEFRA Green Food Project
- Government Buying Standards: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/418072/gbs-food-catering-march2015.pdf and https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/595126/Healthier_and_more_suistainable_nutrition_principles.pdf
- The Live Well Report (WWF 2011):
- Eating Better, for a fair, green, healthy future
- Food Climate Research Network
- Sustain: The alliance for better food and farming -
- Food Systems Academy
- Medact
- WRAP
- BDA and Aldi Sustainable Baskets
- Food Active

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