

Can a healthy diet be environmentally sustainable?

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In a review published in the Proceedings of the Nutrition Society, Dr Macdiarmid from the Rowett Institute of Nutrition and Health (Aberdeen), addresses the question whether a healthful diet can also be environmentally sustainable. While she finds that it may be possible to achieve a diet that is both healthful and sustainable, one should not automatically assume that they go hand in hand. Consumer understanding of sustainable diets is often poor and a more effective combination of research and communication is needed to establish dietary recommendations which can fulfil both of these societal goals.

Of the total annual greenhouse gas emissions (GHGE) that contribute to climate change, about 20-30% in the UK originates from dietary intake, which is mainly due to a higher than adequate consumption of meat and dairy products. Dietary changes considered to help mitigate the impact on climate change include reducing the intake of these products, and limiting energy intakes to what is required to maintain a healthy body weight. However, the feasibility of such approaches as well as their unintended consequences, both for health and the environment, should be considered before jumping to early conclusions.

From a consumer perspective, literature shows that there is resistance towards reducing the intake of meat. A plant-based diet is seen as insufficient in protein, especially by men. In addition, there is a widespread tendency of people trying to increase protein in their diet although already overconsuming it, indicating a misconception about protein requirements. Reason for that might be the popularity of low-carb-diets.

From an environmental perspective, studies have shown that replacing meat in a diet does not necessarily result in less environmental impact. For instance, if meat is replaced by fruits and vegetables while keeping the total dietary energy constant, the resulting diet will actually have a higher GHGE. Furthermore, aspects such as farming method, geographic region, transport method and growing conditions strongly affect the environmental impact of food products.

From a nutritional perspective, any dietary changes should be considered in the context of the whole diet, alongside any possible nutritional consequences for health, e.g. dairy products bring essential nutrients like calcium to the diet. Focussing only on energy intake is also unlikely to reduce greenhouse gases, as the effect would be highly dependent on the types of food chosen, e.g. a weight loss diet low in carbohydrates and high in meat and dairy products is unlikely to reduce GHGE.

Although dietary changes, like reducing meat consumption to adequate intakes, could be beneficial both for one's health and the environment, there are other potential conflicts between health and environmental goals. On the one hand, fish is considered as very healthful because of being rich in omega-3 fatty acids. On the other hand, overfishing poses a serious threat to current fish stock. Another example is low fat products, where there is no use for the removed fat and innovative solutions are needed to reduce this food waste.

The question that arises is whether one's dietary lifestyle can be both healthful and sustainable at the same time. Even though this is achievable, a look into the literature shows that healthful diets are oftentimes not necessarily sustainable diets and vice-versa.

The notion of sustainable diet remains a complex one and not always well understood. While consumers are aware that food production has an impact on climate change, most research shows a clear lack of consumer knowledge of sustainable diets, as well as many misconceptions about them. These may constitute barriers towards changing their dietary behaviour. It is therefore important to help consumers understand what constitutes a sustainable diet by communicating in a way that enables dietary behaviour change in the population.

There is no easy answer to the question whether a healthy diet is an environmentally sustainable diet. This review outlines the importance of food choice in influencing two main challenges: health issues and climate change. Due to the complexity of the term sustainability and potential conflicts when looking at a healthful diet at the same time, a joint approach is necessary. This has to include all actors from farm to fork – the agricultural sector, the food industry and the consumer. Clear information and communication is needed to create awareness on the effects of our daily food choices not only on obesity, but also on climate change.

For further information:

[Macdiarmid JI \(2013\). Is a healthy diet an environmentally sustainable diet? Proceedings of the Nutrition Society 72:13-20.](#)