

Substantial benefits for health and environment through realistic changes to UK diets

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Credit: Wikipedia.

Making a series of relatively minor and realistic changes to UK diets would not only reduce UK diet-related greenhouse gas emissions [1] by nearly a fifth, but could also extend average life expectancy by eight months, according to new research led by the London School of Hygiene & Tropical Medicine.

The findings are outlined in two papers. The first, published in *Climatic Change*, estimates the [greenhouse gas emissions](#) associated with current UK diets and with diets modified to meet World Health Organization (WHO) dietary recommendations, and the second, in *BMJ Open* (1 May 2015) models the impact these dietary modifications would have on the

health of the UK population. The researchers ensured that the proposed dietary changes were realistic and resulted in diets likely to be acceptable to the general public; an often overlooked step that is critical in producing relevant population guidance.

Study author, Dr Alan Dangour, Reader in Food and Nutrition for Global Health at the London School of Hygiene & Tropical Medicine, said: "This is the most detailed analysis to date for the UK and our findings show that even making relatively small changes to current diets would have a tremendous impact on both the environment and population health. It's clear from our analysis that we do not need to make radical changes to our dietary habits to bring about substantial benefits."

Current average diets for men and women in the UK do not meet WHO nutritional recommendations, and it is estimated that diet-related ill-health costs the NHS around £6 billion annually. [2]

Researchers used high quality data from food diaries for 1,571 adults in the UK to estimate the effect on diet-related [greenhouse gas](#) emissions and on population health of modifying current diets to meet WHO dietary recommendations. Data on consumer behaviour was used to define dietary changes likely to be acceptable to the public. The researchers modelled the changes in health outcomes such as coronary heart disease, stroke, type II diabetes and a number of diet-related cancers, and in [life expectancy](#) resulting from the revised diet.

They found that bringing UK diets into line with WHO [dietary recommendations](#), while maintaining a dietary pattern familiar to UK adults, would reduce UK diet-related greenhouse [gas emissions](#) by 17%.

Their analysis also showed that if adopted, these dietary changes would have important benefits for the health of the UK population, saving

almost seven million years of life lost prematurely in the UK over the next 30 years, and extending [average life expectancy](#) by approximately eight months (12 months for men and four months for women). These health gains would come mainly from reductions in coronary heart disease and stroke.

The modified diet that could achieve these environmental and health benefits would contain fewer animal products, especially red meat, fewer savoury snacks and more fruit, vegetables and cereals. While the modified diet would require many minor adjustments, overall it would not be substantially different to the current average UK dietary pattern.

Further analysis showed that greater environmental and [health](#) benefits could be achieved by making additional changes to UK diets, although as these changes become more extreme they would likely limit the public acceptability of the diets.[3]

Dr Dangour said: "We hope the detailed information we've compiled about the composition of healthy and low-emission diets will help to prioritise policies and interventions aimed at promoting healthier and more environmentally-sustainable diets."

The researchers note some study limitations mainly linked to the available data on food consumption and greenhouse gas [emissions](#) related to [diet](#). They state that their estimates on mortality should be treated as indicative of broader patterns rather than precise estimates of the total potential impact.

More information: Paper one: James Milner, Rosemary Green, Alan D Dangour, Andy Haines, Zaid Chalabi, Joseph Spadaro, Anil Markandya, Paul Wilkinson, Health effects of adapting low greenhouse gas emission diets in the UK, *BMJ Open*. [DOI: 10.1136/bmjopen-2014-007364](#)

Paper two: Rosemary Green, James Milner, Alan D Dangour, Andy Haines, Zaid Chalabi, Anil Markandya, Joseph Spadaro, Paul Wilkinson, The potential to reduce greenhouse gas emissions in the UK through healthy and realistic dietary change, *Climatic Change*. DOI: [10.1007/s10584-015-1329-y](https://doi.org/10.1007/s10584-015-1329-y)

[1] The production of food gives rise to greenhouse gas emissions (largely in the form of carbon dioxide, methane and nitrous oxide) from the processes of agricultural production, processing, transport, storage, cooking and disposal of waste.

[2] Rayner M, Scarborough P. The burden of food related ill health in the UK. *J Epidemiol Community Health* 2005; 59: 1054-7

[3] The research suggested that in order to reduce diet-related greenhouse gas emissions by more than 40%, major dietary changes would be required which would likely limit the health benefits and acceptability of the diets to the public.

Provided by London School of Hygiene & Tropical Medicine

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