



Is a Sustainable diet also healthy for my child?

Alex Edwards MSc

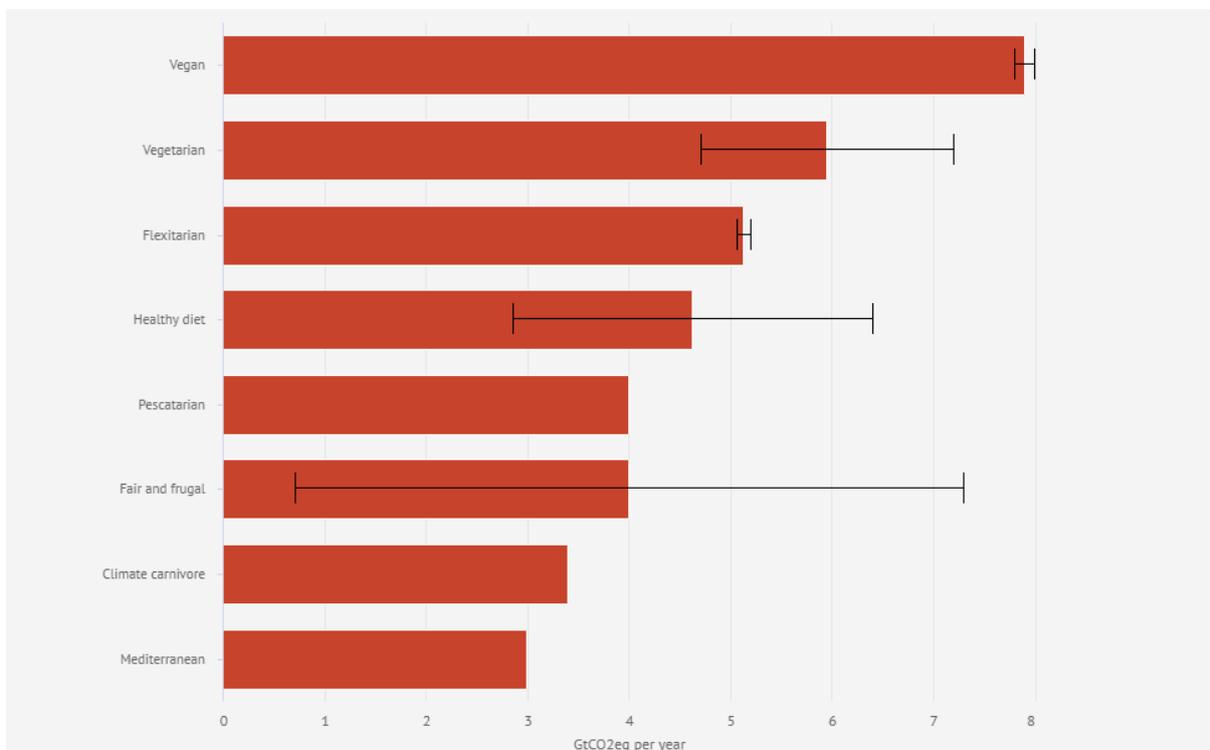
Is a Sustainable diet also healthy for my child?

There is a growing awareness that our diets can impact more than just our own health - they can have major consequences for the health of our planet as well. Globally, the production of food is responsible for an [astonishing 26%](#) of all human-caused greenhouse gas emissions (GHG) emissions. Although, this number [rises to approximately 34%](#) when you include the emissions related to the consumption as well as the production of food. But not all foods are equally responsible for these emissions, as a [recent study made clear](#). This study showed that animal-based foods are responsible for 57% of all emissions from the production of food – with beef the biggest contributor of all. The results from this study are nothing new though, but simply add to a growing body of evidence showing that [meat and dairy are significantly worse for the environment and climate than plant-based alternatives](#). The evidence is clear, [our current diets are not compatible with tackling the climate and ecological crises](#). So how will our diets have to change to be sustainable? And will they still be healthy for people and more specifically children?

To begin to answer this question it is important to first examine the current eating habits of the UK. The [National Diet and Nutritional Survey](#) (NDNS) aims to assess the diet, nutrient intake, and nutritional status of the general population in the UK. In their [latest report](#) (2016 – 2019), they found that in general we are overconsuming energy, saturated fats, and sugars, whilst the intake of fibre, fruit and vegetables, and essential micronutrients was insufficient. These eating habits are [major contributors to](#) obesity, types 2 diabetes, heart disease and several cancers. For example, [63% of adults and 28% of children](#) are classed as overweight or obese in the UK due to eating too much food – especially energy dense, micronutrient poor foods. In order to tackle these problems the [government](#), the [WHO](#) and many health organisations (e.g., [World Cancer Research Fund](#) and [Heart UK](#)) have recommended limiting red meat (especially processed meat) and/ or shifting to a diet consisting of more plant-based foods. It is clear therefore that our current diets are both bad for our own health and the health of the planet, but what would a healthy and sustainable diet look like?

By their very [definition](#), sustainable diets are “low environmental impact diets consistent with good health”. Therefore, to be classed as sustainable, a diet has to be good not just for the planet, but for us as well as. Although a healthy diet is not always better for the environment, consumption data and models have consistently shown (for example see [here](#), [here](#), [here](#) and [here](#)) that diets with higher nutritional quality, based on lower meat and dairy intake and higher consumption of healthy plant-based foods are also better for the planet – in terms of reduced GHG emissions, reduced land use and reduced water use. This is why diets with lower intake of meat and dairy are being consistently recommended to help tackle climate change (e.g., [First Steps Nutrition Trust](#), [UK Health Alliance on Climate](#)

[Change](#) and, the [British Dietitians Association](#), among many others) The most sustainable diets have been shown to be [vegetarian and vegan diets](#); however, it must be emphasized that a sustainable diet is not synonymous with either a vegetarian or vegan diet and can still contain both meat and dairy. The Intergovernmental Panel on Climate Change (IPCC) published a report in 2018 which looked at climate change and land. In this [report](#), they examined the mitigation potential (how much GHG emissions could be reduced) by adopting different diets – all of which had to provide a full complement of nutritional quality, including micronutrients. Vegan and vegetarian diets had the greatest technical mitigation potential, but this was closely followed by flexitarian (75% of meat and dairy is replaced with cereal and pulses and there is no more than one portion of red meat a week) and healthy diets (global dietary guidelines for consumption of red meat, sugar fruits and vegetables, and total energy intake). This is shown in the graph below.



GHG savings potential from the global adoption of different diets. Error bars indicate spread of results from different studies. Where there are no errors, data is from only one study. Taken from [Carbon Brief – Food & Climate](#). Adapted from [IPCC \(2018\)](#).

Another [study](#) examined the mitigation potential and health benefits of three different diets in the UK – Scenario 1 (50% reduction in livestock product supply balanced by an increase in plant commodities), Scenario 2 (a shift from red meat to white meat, with no overall reduction in livestock consumption) and scenario 3 (a 50% reduction in white meat supply balanced by increases in plant commodities). They found that both positive climate and health outcomes are strongly linked, with the increased fruit and vegetable consumption and decreased meat consumption in Scenario 1 predicted to avert or delay 36,910 deaths per year, whilst concomitantly reducing GHG emissions by 19%. In contrast Scenario 2 only

resulted in the delay or prevention of 1999 deaths a year and reduction in GHG emissions of 9% and Scenario 3 delayed or averted 9297 deaths and reduced emissions by only 3%. The study concludes that “recommendations should encourage reduced consumption of all meat and dairy products and substitution with fruit, vegetables and cereals”.

In 2019 the [EAT-Lancet commission](#) convened [37 leading](#) human health, nutrition, agriculture, political science, and environmental sustainability scientists to try and define a sustainable diet. The commission reviewed global targets for healthy diets aimed at reducing premature deaths from chronic diseases. The commission also assessed [planetary boundaries](#) directly linked to food production (e.g., GHG emissions, land and water use, nitrogen and phosphorous application and biodiversity scores). The commission emphasized a ‘plant-forward diet’ with fruits, vegetables, whole grains, nuts and legumes comprising a large portion of foods consumed. Meat and dairy are still important parts of the diet but constitute a significantly lower proportion than plant-based foods. They coined this diet, the ‘Planetary health Diet’. In comparison to a typical UK diet, the ‘Planetary Health Diet’ contains more fruits and vegetables, more plant proteins, and more wholegrain starchy foods, but less meat and dairy, sugars, starchy tubers and processed foods. The commission also provided [specific quantities of foods](#) it recommends, at least 75g of legumes a day, at least 500g of fruit and veg a day and at least 232g of whole grains a day, but no more than 203g of white meat a week and moderate levels (250g a day) of dairy consumption is an option. Although the recommendations of the ‘Planetary Health Diet’ are more prescriptive than other guides (e.g., the BDA’s [One Blue Dot reference guide](#)), it clearly shows the degree of change that is required to minimize the impact of our food system on our health and the health of our planet.



The ‘Planetary Health Diet’. Taken from the [EAT-Lancet Commission](#) (2019).

It is clear, that a diet that is healthy for the planet can also be healthy for us. In fact, by their very definition sustainable diets have to be healthy for people. However, despite the vast amounts of scientific evidence in favour of reducing animal-based foods and increasing consumption of plant-based foods for both our own health and the health of the planet, there are still many myths and misconceptions floating around. I will try and address some of these below:

Nutrient deficiencies

It is true that a poorly planned vegan diet can result in various nutrient deficiencies that can have harmful health effects. However, many scientific societies (e.g., the [British Dietetic Association](#), [Academy of Nutrition and Dietetics](#), American Academy of Pediatrics, [Canadian Paediatric Society](#) and the [NHS](#)) have released favourable position statements on plant-based diets, provided they are well planned. [In most cases](#), vegan children have been demonstrated to show normal growth and were able to obtain most critical nutrients – although data is lacking for some key nutrients and further studies are needed. In vegan diets the most often lacking nutrients tend to be calcium, vitamin D and vitamin B12 (sometimes referred to as Cobalamin). If you wish to raise your child on a completely plant-based diet from birth, it is highly recommended that you seek the advice of a healthcare professional – the [University Hospitals Bristol](#) have a team of qualified Paediatric Dietitians who will be able to support you.

Calcium

Milk and dairy products are often viewed as the only source of calcium in the diet; however, this is not the case. In the UK, [only 43% of calcium intake](#) is a result of consuming milk and dairy products – the rest comes from products made with white flour (which is fortified with calcium by law) and other fortified foods. The bioavailability of calcium in milk and dairy products tends to be around 30%, significantly higher than some vegetables (especially [high-oxalate vegetables](#) such as spinach and Swiss chard). However, low-oxalate vegetables (e.g., kale, pak choy and Chinese cabbage) have calcium bioavailability levels of around 50% and so can be considered good sources. Many soy foods, such as calcium-set tofu and calcium fortified soy drinks, [have similar levels and bioavailability to dairy](#) and so are considered good alternatives. Most non-organic plant-based dairy alternatives are also fortified with Vitamin D, which can further increase the bioavailability of calcium and contribute to bone health. [Alpro growing up milk](#) is fortified with calcium, iron, Iodine, vitamin D, vitamin C and vitamin B12.

Vitamin D

Vitamin D is produced naturally by our bodies when our skin is in contact with the sun, however there is a push by many countries for more foods to be fortified with Vitamin D,

due to [sub-optimal levels in most populations](#) and the difficulty in obtaining it from food sources. It is recommended by the Department of Health and Social Care that all children aged between 1 and 4 take a [daily supplement containing 10 micrograms of vitamin D](#).

B12 (Cobalamin)

B12 is often highlighted as one of the key nutrients lacking in an unplanned plant-based diet as it tends to only occur naturally in animal products. However, many everyday foods are fortified with B12, including breakfast cereals, plant-based drinks and fortified nutritional yeast products such as marmite. Supplements and fortified foods are believed to contain B12 in its free form and so may be [more readily absorbed](#). Many supplements have much higher dosages than recommended owing to the different rates of absorption required to meet different peoples needs.

Protein

It is true that plant proteins have a lower digestibility (on average about 20% lower) than animal derived protein, but protein requirements can be easily met on a plant-based diet with a variety of plant foods. Plants contain all essential amino acids and a diet containing a variety of plant foods which meet daily energy requirements will [meet all amino acid requirements](#). [Good sources of plant protein](#) include, legumes, grains, nuts, seeds, oats and soy products. Some have claimed that eating soy (which contains isoflavones, a phytoestrogen) can act an endocrine disruptor and influence key hormones. However, [research](#) has [consistently](#) found that neither soy nor isoflavones effect estrogen or testosterone levels in men or women and has no impact on sperm or semen parameters in men. In children it has been [shown that](#) “soy does not exert adverse hormonal effects in children or affect pubertal development”.

Iron

Iron is another key nutrient where the best source with the highest bioavailability is red meat. Although reducing meat is [unlikely](#) to have any impact on iron status, completely eliminating it can [increase the chances](#) of insufficient iron stores. Despite the lower bioavailability of iron (due to high levels of phytates in many plant proteins) and reduced iron store of people on predominantly plant-based diets, there is [no evidence](#) of iron deficiency anemia among these groups. It is suggested that this is because individuals are able to [adapt to inefficient iron absorption](#) and thus maintain iron status. For example, one [study](#) found that when placed on a high phytate diet for eight weeks, the absorption of non-haem iron increased by 41%. Sources of iron in a plant-based diet include, fortified breakfast cereals, nuts and seeds and some vegetables. [Research](#) has also shown that non-haem iron in soy has a high bioavailability.

It is clear that to tackle the climate crisis, it is going to require a transformation of almost all aspects of our lives, including the food we eat. But saving the planet does not mean we have to compromise our health. In fact, to the contrary, shifting out dietary patterns to one that is better for the planet (with lower meat and dairy intake and higher consumption of fruits and vegetables, and plant proteins) will likely be better for our health as well. Saving the planet does not mean we all have to go vegan, far from it. We can still enjoy meat, cheese, eggs, and milk, but simply not as often. For extra information, you can check out the [One Blue Dot report](#) which has been compiled by nutrition experts and provides an accessible summary of sustainable and healthy diets. In the report they provide recommendations on transitioning to a healthy sustainable diet. They have also supplied an [FAQ document](#) in which they provide their professional opinion on whether a sustainable diet can be applicable for children, to which their answer was a definitive YES.