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Submission to the call for evidence on the links between food, diet and obesity from the House of Lords Select Committee on Food, Diet and Obesity.

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Conflicts of interest: my husband Paul Haggarty is a long-standing member of the UK Scientific Advisory Committee on Nutrition.

1. Key trends in food, diet and obesity and the primary drivers of obesity, including the evidence base for these trends.

There is no doubt that many aspects of the UK diet have changed since the 1960s. The best evidence on trends in foods consumed comes from the Family Food Survey, which provides food and nutrient intake at a per capita level on an annual basis. The information is based on household food purchase records from the Living Costs and Food Survey of the Office for National Statistics. Each year around 5,000 households across the UK keep records for a 2-week period. This survey and its predecessors e.g. the DEFRA-led Expenditure and Food Survey, have collected data on household food purchases annually since 1940. Note that this data is collected at household level so trends for population sub-groups e.g. children and adolescents cannot be shown in this survey. A report published in 2015 to mark 75 years of the series shows key trends since 1940 e.g. the decline in purchase of whole milk consumption in favour of semi-skimmed and skimmed milks, a decrease in bread purchases, an increase in poultry purchases and relative stability of fruit and vegetable purchases. The main food groups contributing to energy intake in 2015 were cereal-based foods other than bread and biscuits (pasta, pizza, rice, breakfast cereals etc) (13%), non-carcase and processed meats (10%); bread (9%); fats (butter, spreads and oils (8%) and milk and cream (8). Energy and nutrient intakes in 2015 were close to or above recommended levels, including sodium (salt) intake which was 80% above recommended levels. The report also shows that between 2001 and 2015 there was a decrease in sodium and free sugars intake. Alcohol intake per person remained stable over this period but the proportion purchased for out of home consumption fell.

https://assets.publishing.service.gov.uk/media/5a7f9a66ed915d74e33f770d/Family_Food_2015-09mar17.pdf

Other information on more recent trends comes from the National Diet and Nutrition Survey which has collected food intake data by 4-day food diaries from around 1500 individuals aged 1.5y and over each year from 2008/9 to 2018/19. Data collection was disrupted during the COVID19 pandemic but has since resumed and the report for 2022/3 is due to be published later in 2024. Trend analysis from 2008/9 to 2015/16 showed little change in energy, fat or fruit and vegetable intake but a decrease in free sugars intake, especially in children, and a more modest reduction in sodium and red and processed meat consumption, especially in adolescent boys. Intake of several minerals e.g. calcium, iron, iodine and zinc also fell slightly in this period.

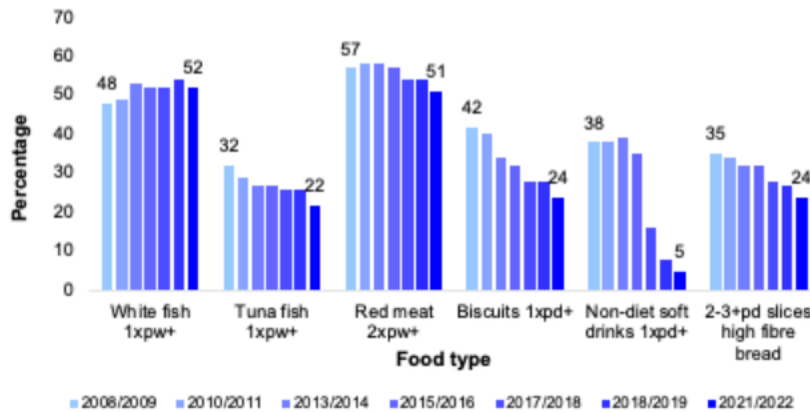
https://assets.publishing.service.gov.uk/media/5c45e22340f0b61704aec504/NDNS_UK_Y1-9_report.pdf

The NDNS data has recently been analysed to investigate UPF consumption in adolescents aged 11-18y from 2008/9 to 2018/19. The results suggest that around 2/3rds of energy intake in this age group came from UPF, with a decrease from 68% to 63% over the 9-year period. Those classified as obese consumed around 10% more UPF (by weight) than those classed as normal weight.

<https://www.medrxiv.org/content/10.1101/2023.06.05.23290977v1.full>

Comparison of diet in the devolved nations vs. the whole of the UK in the NDNS data show little difference between the different nations. In Scotland data on frequency of consumption of selected foods is collected for children and adults in the Scottish Health Survey. The 2022 report shows a decrease in consumption of sugar-sweetened soft drinks and biscuits in children 2-15y, and an increase in fruit and vegetable consumption since 2020, possibly related to increased provision of free school meals for primary school children in recent years.

Figure 8A
Child eating habits, 2008/2009 combined to 2021/2022



Mean number of portions per day



<https://www.gov.scot/publications/scottish-health-survey-2022-volume-1-main-report/>

In summary there is some evidence for improvements in diet in the past 10-15 years such as a decrease in salt and free sugar intake, particularly in children, but no change in fruit and vegetable consumption except in the recent Scottish data for children. Among other nutrients the greatest deficit compared to recommendations is fibre intake, reflecting low intake of fruit, vegetables and whole grain cereals in all age groups.

2. The impacts of obesity on health, including child and adolescent health outcomes, and the influence of pre- and post-natal nutrition on the subsequent risk of obesity.

While many studies have shown that children who are breast fed are less likely to become overweight or obese, direct causality cannot be inferred from those observations. Mothers who chose to breast feed are likely to be more committed to their children's diet and health. The best evidence comes from randomised controlled trials which are very difficult to do for diet, but one landmark study in Belarus in which breast-feeding rates at 3 months were increased in some hospitals randomly allocated to extra support for mothers found no effect on child obesity at age 6.5 yrs, with

further follow up to early adolescence also showing a benefit for child obesity or cardiovascular disease risk factors.. The authors of this study concluded that previous observations were likely to be the result of 'unmeasured confounding' i.e. influences on obesity risk in children who were breast vs formula fed which were not captured in the comparisons between the two groups.

<https://www.sciencedirect.com/science/article/pii/S0002916523276960?via%3Dihub>

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

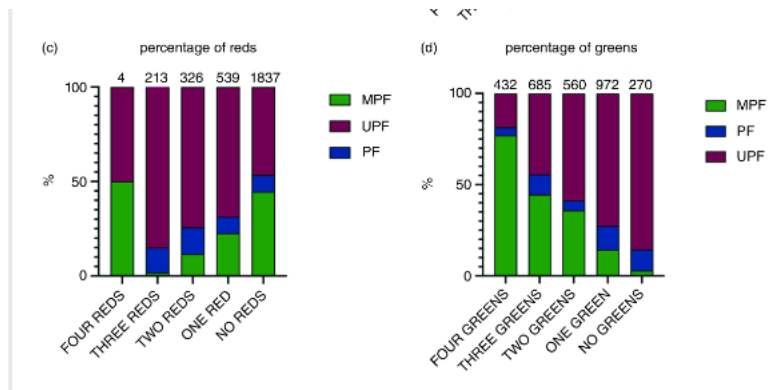
The NOVA classification for UPF has four categories: Group 1 (Unprocessed or minimally processed, e.g. grains, eggs, milk, vegetables); group 2 (processed culinary ingredients (e.g. sugar, salt, oil, butter); Group 3 (processed foods from groups 1 and 2, e.g. bread from flour and salt only, cheese) and group 4 (ultra-processed foods, produced by industrial processing e.g. sausages, biscuits, soft drinks, ready meals). Because the classification is based on the degree of manufacturing, some foods e.g. cakes could be in group 3 if home cooked but group 4 if shop bought, but by and large food groups which could be easily recognised by consumers fall clearly into one of the four categories. A recent analysis found that of almost 3,000 foods recorded in the UK diet, 55% were NOVA group 4; 10% were group 3; 33% were group 2 and 2% group 1.

<https://www.cambridge.org/core/journals/british-journal-of-nutrition/article/nutrients-or-processing-an-analysis-of-food-and-drink-items-from-the-uk-national-diet-and-nutrition-survey-based-on-nutrient-content-the-nova-classification-and-front-of-package-traffic-light-labelling/30C871960D54E76E292BC1DE97FC3A00>

This suggests that a diet free of UPF would be hard to achieve in the UK without cooking most meals from scratch, something which requires more time, skill and motivation than is realistic for most people.

HFSS foods are defined by chemistry so could be easier to use for regulatory purposes, and form the basis of front-of-pack traffic light labels. There is considerable overlap between UPF and HFSS but a few important differences e.g. sliced bread and unsweetened breakfast cereals are classed as UPF but not HFSS, and these foods provide significant proportions of energy and may be an important source of fibre, iron and other vitamins and minerals for many consumers. The study cited above found that of the four traffic light labels for fat, saturated fat, sugar and salt, foods which had four green traffic lights were unlikely to be UPF

while those with no green lights were highly likely to be UPF, but the relationship with red lights was more complex:



8 April 2024