



WN *The Food System*

Needed, food classification that works

[Access December 2012 The Food System position paper 2 here](#)

[Access November 2014 Int Journal of Obesity David Allison et al paper here](#)

[Access November 2014 Dietary Guidelines for the Brazilian Population here](#)

[Access April 2015 Update 'Lies, damn lies...' on dietary surveys here](#)

[Access April 2015 Anthony Fardet on nutrients, nutrition and nourishment here](#)

[Access this issue Raj Patel, Amit Srivastava on ultra-processing in India here](#)

Anthony Fardet writes:

The *Update* section of *WN* in April included an item on dietary surveys ('Lies, damn lies', accessible above), stating that data derived from food frequency questionnaires are bound to be inaccurate. Here are three statements made in the item:

Take dietary surveys, the basis for recommendations on which public policies on food, nutrition and health are based. Most of these are in the form either of 'food frequency questionnaires' posted to people, asking them what they ate, or '24-hour recalls', in which people are asked by telephone or interview what they ate. Both methods enable surveys of many thousands of people, which improve the chances of getting statistically significant results. Most leading nutritional epidemiologists, while accepting that these methods are rather crude, say that errors of recollection tend to cancel one another out and that the results are accurate.

But errors from self-reporting of energy intake are not likely to be random. The more worried people are about their habits and weight, the more they will – accidentally or on purpose – under-report consumption of food or products they believe to be fattening, like confectionery, sugared drinks or fast food, or which they believe to be bad for them, like alcoholic drinks, or which they eat compulsively or secretly, like chocolate?.

The issue is not just energy intake. As stated a decade and more ago by some distinguished rebels, food frequency questionnaires are liable to be grossly inaccurate records of diets in general, and can produce results on critical public health issues such as diet and cancer, strikingly different from results obtained by intensive measurements of smaller numbers of people involving biomarkers.

This is not all!

I agree with all this, and wish to go further and also to propose a solution. There is another main concern, surely fundamental, about such data collection. Food is now classified into 'classic food groups' such as cereals, vegetables, fruits, meat, dairy, fish, and so on, classified botanically or as groups of species. The original idea behind this grouping was that people usually ate whole or minimally processed foods as such, or else meals made from such foods, and that the 'classic' groups could be roughly

classified as sources of specific nutrients – vegetables and fruits for vitamins, meats, fish and dairy for protein, cereals for carbohydrates, for instance.

But such classification derives from a paradigm which is no longer useful. The increased prevalence of obesity and diet-related chronic diseases is not and never was driven by imbalances between food groups as such. It is largely driven by increased consumption of ultra-processed, refined and recombined food products, made from isolated culinary ingredients, themselves coming from original raw complex foods. (A full account is given in *The Food System* position paper published in *WN* in December 2012, accessible above).

The big issue is processing

The significance of ultra-processing cannot be discerned by dividing foods into the ‘classic’ groups. Within any of these groups there are very different foods and products with very different health potential. Thus, the health potentials of semi-skimmed milk versus cheese or sweetened yoghurt are very different, as is the frequency of their consumption. The same is true for unsweetened home-made muesli versus sugared breakfast cereals – and so on.

Clustering foods, food products and ultra-processed products within groups according to their botanical origin or types of species cannot be a basis for solid and strong epidemiological evidence. Classification used in dietary surveys need to be according to the nature, purpose and extent of processing, as recently realised in the new Brazilian *Dietary Guidelines* (English version accessible above). The shortcomings of food frequency questionnaires outlined in *WN* last month and quoted above, plus an obsolete classification of foods into the ‘classic groups’, make current epidemiological findings fragile.

I therefore propose that as soon as possible, classification used as a basis for dietary surveys be based in the nature, purpose and degree of processing. This will be a momentous development.

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Editor's comment. We agree! Momentous, yes, and now we think quite likely to occur. The NOVA food classification system used as a basis for the Brazilian dietary guidelines, also set out in a large number of international journals, is now specified in a publication from the UN Food and Agriculture Organization in the final stages of preparation. WN will be publishing a full account later this year. This is we think an idea whose time has come.