

Summer Meeting, 28 June–1 July 2010, Nutrition and health: cell to community

National Diet and Nutrition Survey: nutrient intakes and sources from the first year of the rolling programme

C. Roberts¹, C. Whitton², C. J. Prynne², B. Teucher², B. Bates¹, H. Henderson¹, E. Fitt², D. Cole², S. Pigott¹, C. Deverill¹, G. Swan³ and A. M. Stephen²

¹National Centre for Social Research, 35 Northampton Square, London EC1V 0AX, UK, ²MRC Human Nutrition Research, Elsie Widdowson Laboratory, Fulbourn Road, Cambridge CB1 9NL, UK and ³Food Standards Agency, 125 Kingsway, London WC2B 6NH, UK

The first year of dietary data collection of the new National Diet and Nutrition Survey (NDNS) rolling programme funded by the Food Standards Agency (FSA) and Department of Health (DH) was carried out from February 2008 to March 2009, covering the age range 1.5 years and above. Data were collected in the form of a 4-d estimated food diary, including both weekend days; nutrient intakes were calculated using DINO (Data In Nutrients Out), a dietary assessment system developed at MRC Human Nutrition Research, incorporating the FSA's Nutrient Databank. Results were compared with dietary intake data from the NDNS of Young People 4–18 years, carried out in 1997, and of Adults 19–64 years, carried out in 2000–01^(1,2). The 7-d intake data from these surveys was recalculated for 4 days to allow direct comparisons⁽³⁾. Differences in results from past NDNS surveys are observed differences, not statistically significant differences.

Energy intakes in all groups were similar to intakes seen in previous surveys, with means of 9.48 MJ (2255 kcal) for men; 6.92 MJ (1645 kcal) for women; 8.03 MJ (1906 kcal) for boys aged 4–18 years, and 6.75 MJ (1604 kcal) for girls aged 4–18 years. Cereals and cereal products remained the major contributor to energy. As in previous surveys, protein intakes were well above the reference nutrient intake (RNI)⁽⁴⁾ for both adults and children and an increase in mean daily intake was seen in the current data. For adults, protein provided 17.6% food energy, compared to 16.5–16.6% in the previous survey. Meat, meat products and dishes were the largest contributor to protein intake. Intakes of carbohydrate in all groups were similar to previous surveys, and cereals and cereal products remained the major contributor. In all groups except for women, intakes of non-milk extrinsic sugars (NMES) as a % food energy decreased compared to past surveys; the proportion of individuals below the dietary reference value (DRV)⁽⁴⁾ of no more than 11% food energy was little altered from past surveys for adults and those aged 11–18 years. But for younger children aged 4–10 years, there was an increase in the proportion of individuals below the DRV; for girls, the proportion increased from 15% in 1997 to 26% in the first year results and for boys, from 14% to 28%. However, in all age groups, the average intakes remained above the DRV. As in previous surveys, the major contributors to NMES were beverages (mainly from soft drinks), cereals and cereal products, and sugars, preserves and confectionery. The contribution of fruit juice to % energy from NMES was increased compared with previous surveys, particularly for younger children, although it remained a relatively small proportion. NSP intake in children was higher than in previous surveys but remained the same in adults. Mean intakes remained well below the DRV for all age groups. The % contribution of total fat to food energy fell slightly from the intakes in previous surveys in children, but remained very similar in adults. Intakes of all vitamins were similar to previous surveys except for vitamins A and C which were increased. The increase in vitamin A is likely due to an increase in β carotene as a result of higher intakes of vegetables on Sundays, which may also partly explain the observed increase in vitamin C. Increased fruit juice consumption is another likely cause. Fe intakes were unchanged for all age groups, meaning a large proportion of women (20%), and an even greater proportion of older girls remained below the lower reference nutrient intake (LRNI)⁽⁴⁾. Ca intakes in children were increased and as milk consumption has decreased in this age group, this may be due to the fortification of cereals and beverages.

In conclusion, nutrient intakes in the UK population have not changed dramatically since previous surveys. However, small changes have been seen, generally in a direction towards dietary recommendations, particularly in children. Further analysis between the first year of NDNS and previous surveys will reveal any other trend present.

1. Gregory JR, Lowe S, Bates CJ *et al.* (2000). *National Diet and Nutrition Survey: Young People Aged 4 to 18 Years. Volume 1: Report of the Diet and Nutrition Survey*. London: TSO.
2. Henderson L, Gregory J & Swan G (2002) *National Diet and Nutrition Survey: Adults Aged 19 to 64 Years. Volume 2: Energy, Protein, Carbohydrate, Fat and Alcohol Intake*. London: TSO.
3. Food Standards Agency. *Appendix K Conversion of previous survey data to four-day estimates*. Available online at <http://www.food.gov.uk/multimedia/pdfs/publication/ndns0809appendixk.pdf> (accessed 1 March 2010).
4. Department of Health (1991). *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom. Report on Health and Social Subjects No. 41*. London: HMSO.