

Statistical Press Notice: National Diet and Nutrition Survey: Headline Results from Years 1 and 2 (combined) of the Rolling Programme 2008/09 - 2009/10 Supplementary report: Blood Analytes

Today, the Department of Health published the Supplementary report on Blood Analytes from the first two years of the National Diet and Nutrition Survey (NDNS) Rolling Programme (2008/09 - 2009/10).

The NDNS is a continuous cross-sectional survey, designed to assess the diet, nutrient intake and nutritional status of the general population aged 18 months upwards living in private households in the UK. The NDNS involves an interview, a four-day dietary diary and blood and urine samples. Results are used by government to develop policy and monitor progress on diet and nutrition and to assess whether the UK population is meeting expert recommendations on particular nutrients.

The results in the main report published in July 2011, were based on assessment of food consumption over four days and so tell us about diet over a short period. This supplementary report provides an analysis of blood samples which gives an indication of the nutritional status of the population over a longer period. The report presents descriptive statistics on a number of blood analytes including iron and vitamin D and focuses on respondents aged 11-18 and 19 to 64 years who consented to having a blood sample taken.

Key findings

The results suggest that the overall picture of the nutritional status of the UK population is broadly similar to previous relevant surveys in the NDNS series carried out in 1997 and 2000/01. The results are not inconsistent with the findings from the dietary data. The results do not indicate any new areas of concern in the nutritional status of these population groups.

Where there is evidence of low status, this does not necessarily mean people are deficient, but that they are at greater risk of deficiency.

- **Iron:** There is evidence of iron-deficiency anaemia and low iron stores in a proportion of adult women and older girls. This is in line with findings from previous surveys and does have health implications for these groups.
- **Vitamin D:** There is evidence of low vitamin D status in adults and older children, both male and female which has implications for bone health: in particular increased risk of rickets and osteomalacia.
- **Vitamin B₂:** A substantial proportion of adults and older children have low vitamin B₂ (riboflavin) status. The health implications of this are not known.
- **Other micronutrients:** There is no evidence of low status for other micronutrients for example vitamin C, B₆, B₁₂, thiamin, retinol and vitamin E.
- **Blood Lipids:** A proportion of adults had elevated levels of blood lipids, increasing risk of cardiovascular disease. This is well known and in line with findings from previous health surveys.

The full statistical release, including a summary, can be found at the following URL:

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_130728

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Notes to Editors:

- The NDNS is jointly funded by the Department of Health in England and the UK Food Standards Agency and carried out by a consortium of three organisations: National Centre for Social Research (NatCen) MRC Human Nutrition Research (HNR) and the University College London Medical School (UCL).
- The NDNS rolling programme has been commissioned to collect data over a five year period from 2008/09 to 2012/13. Prior to the rolling programme the NDNS comprised a series of cross-sectional surveys, each covering a different age group. The earlier programme was set up in the early 1990s and ended in 2000/01.
- The main report published in July 2011 can be found at:
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_128166
- This supplementary blood report includes results from the analysis of the blood samples taken during the nurse stage (stage two) of Years 1 and 2 of the rolling programme and collected between February 2008 and July 2010.
- Nutritional status means the level of nutrients available to the body (after absorption) for use in metabolic processes. For some micronutrients, status can be assessed by directly measuring the level of the nutrient in blood, while for others it is assessed by a functional measure such as the activity of vitamin-dependent enzymes.
- The previous relevant surveys in the NDNS series carried out in 1997 and 2001 are:
 - Gregory JR, Lowe S, Bates CJ, Prentice A, Jackson LV, Smithers G, Wenlock R, Farron M. National Diet and Nutrition Survey: young people aged 4 to 18 years. Volume 1: Report of the diet and nutrition survey. London: TSO, 2000
 - Ruston D, Hoare J, Henderson L, Gregory J, Bates CJ, Prentice A, Birch M. National Diet and Nutrition Survey: adults aged 19 to 64 years. Volume 4: Nutritional status (anthropometry and blood analytes), blood pressure and physical activity. London: TSO, 2004
- The report presents descriptive statistics on blood analytes for the following micronutrients: iron; vitamin C; vitamin B12; vitamin B1 (thiamin); vitamin B2 (riboflavin); vitamin B6; retinol; carotenoids; vitamin D; vitamin E; selenium; zinc. Results are also reported for blood lipids (eg cholesterol), homocysteine (a marker for some B vitamins) and C-reactive protein (a general marker for infection). These analytes are divided into the following main groups: a) haematology, including measures of iron status; b) water-soluble vitamins and total homocysteine; c) fat-soluble vitamins and carotenoids; d) blood lipids e) zinc and selenium.
- Normal ranges or threshold levels have been set for some analytes and these are referenced in the report.
- Severe vitamin D deficiency causes rickets in children and osteomalacia in adults, this is a condition characterised by pain, muscle weakness and bone fractures, Both conditions are rare in the UK although there is evidence of significant incidence in South Asian and Afro-Caribbean groups.
- Results for participants aged 1.5 to 10 years and 65 years and over will be reported at a later date when sufficient numbers have built up.
- Responsibility for nutrition policy in England and Wales transferred from FSA to Health Departments in 2010. Management of the NDNS also transferred to the Department of health in England at that time.