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Prepared by the Government Statistical Service

Statistical Press Notice: Diet and Nutrition Survey of Infants and Young Children, 2011

Today, the Department of Health published the results from the Diet and Nutrition Survey of Infants and Young Children (DNSIYC) 2011. DNSIYC is a one off-survey providing the only source of detailed information on the food consumption, nutrient intakes and nutritional status of infants and young children aged 4 to 18 months in the general UK population. 2683 children took part in the survey between January and August 2011. The survey complements the National Diet and Nutrition Survey (NDNS) rolling programme, which covers children and adults aged from 18 months upwards. DNSIYC involved an interview, a four-day dietary diary, blood samples and estimates of breast milk intake, fluid intake and body composition. Results are used by government to develop public health policy, monitor diet and nutrition patterns and assess whether these meet expert recommendations on infant feeding, diet and nutrient intakes.

The DNSIYC was jointly funded by the Department of Health in England and the UK Food Standards Agency and carried out by a consortium of organisations: the Medical Research Council Human Nutrition Research (MRC HNR), NatCen Social Research (NatCen), the MRC Epidemiology Unit and the Human Nutrition Research Centre at Newcastle University. The fieldwork in Northern Ireland (NI) was carried out by the Northern Ireland Statistics and Research Agency (NISRA). A boost sample was conducted of those in receipt of Healthy Start (HS) vouchers and a separate boost of Scottish infants and young children was undertaken (the latter is being published today by Scottish Government).

General findings

Overall, infants and young children aged 4 to 18 months in DNSIYC consumed a varied diet; and dietary recommendations were generally met by the majority of the population. The analyses presented in this report do not identify any new nutritional problems in this age group.

Food consumption patterns were broadly similar in the DNSIYC HS sample as for the DNSIYC UK sample.

Key findings on DH Recommendations

Breastfeeding: *DH recommend that Mothers exclusively breastfeed for around the first six months of the child's life.*

- Twenty two per cent had never been breastfed. Of those who were breastfed, 57 per cent were not breastfed beyond three months of age

Breast milk substitutes: *For those who choose to use breast milk substitutes, follow-on formula and 'goodnight' milks should not be introduced before the child is six months of age*

- Thirty two per cent of infants aged 4 to 6 months consumed follow-on formula

Complementary Feeding: *At around six months of age a variety of complementary foods should be introduced alongside continued breastfeeding (and/or breast milk substitutes, if used).*

- Complementary foods were introduced before the age of three months for 10 per cent of children, and before five months for 75 per cent of children. For 22 per cent of children, foods were introduced at six months and 3 per cent at seven months or more.

Cow's milk: *Cow's milk should not be introduced as a main drink until after 12 months. If provided, this should be whole (not semi-skimmed) milk until at least two years of age.*

- Children aged below one year generally consumed no more than a quarter of a pint (146g) of whole milk per day, in keeping with the recommendation. 15 per cent of those aged 4 to 6 months consumed whole cow's milk
- A small proportion of children consumed semi-skimmed milk, 5 per cent of infants aged 4 to 6 months and 13 per cent of children aged 12 to 18 months

Salt: *Salt should not be added to children's food.*

- For those children who had food other than milk, most parents (83 per cent) reported 'never' adding salt to the child's food.

Supplements: *Vitamin A, C and D supplements should be given from six months unless the child is formula fed and receiving more than 500ml of formula per day. Breastfed infants born to mothers with a low vitamin status may require supplements earlier, from the age of one month.*

- Over the four-day food diary period, the proportion of children given a micronutrient supplement ranged from 5 per cent for those aged 4 to 6 months to 10 per cent for those aged 12 to 18 months, most often a multi-vitamin supplement

Breastfeeding mothers should take vitamin D supplements of 10µg per day.

- Nearly half (46 per cent) of breastfeeding mothers took supplements, most often a multi-vitamin and mineral supplement, which were taken by 27 per cent of all breastfeeding mothers. The proportion taking supplements containing 10µg vitamin D is not known.

Other key findings

Energy:

- Seventy five per cent of boys and 76 per cent of girls exceeded their estimated requirement for energy.

Protein:

- Mean protein intakes were well above the Reference Nutrient Intake (RNI) in all age groups.

Fruit and vegetables:

- The mean total fruit and vegetable consumption, including contribution from mixed dishes, ranged from 100g per day for children aged 4 to 6 months to 170g per day for those aged 12 to 18 months.

Vitamins and minerals:

- Mean daily intakes of key vitamins and minerals from all dietary sources (including supplements) were above or close to recommendations for all age groups with the exception of vitamin D, although reported vitamin D intakes are underestimates as they do not include the contribution of breast milk to vitamin D intake.
- The proportion of children with low intakes of vitamins and minerals from all sources was low (8 per cent or less) except for iron for all age groups (10 per cent to 14 per cent) and magnesium for infants aged 4 to 6 months (10 per cent).
- Mean daily intakes of sodium were equivalent to 2.3g salt per day for children aged 12 to 18 months, exceeding the population recommendation for this age group of no more than 2g salt per day.

Blood analysis

- **Iron status:** The majority of children had adequate haemoglobin and serum ferritin concentrations, with only about 3 per cent below the thresholds at which anaemia is indicated.

- **Vitamin D status:** Ninety four per cent of children aged 5 to 11 months and 98 per cent of children 12 months or over, had 25-hydroxyvitamin D (25-OHD) concentrations above the lower threshold for vitamin D adequacy.
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The full statistical release, including a summary, can be found at the following URL:

http://transparency.dh.gov.uk/category/statistics/ndns/

ENDS

Notes to editors

1. DNSIYC was commissioned to collect dietary and nutrition data on Infants and Young Children and includes children aged from 4 months up to 17 months and 28-31 days. Fieldwork was carried out in two waves for from January to March 2011 and from March to August 2011 using Child Benefit records as a sampling frame for the survey.
2. A boost sample was conducted of those in receipt of Healthy Start (HS) vouchers and a separate boost of Scottish infants and young children was undertaken (the latter is being published today by Scottish Government). http://www.scotland.gov.uk/Publications/Recent (search for DNSIYCS). Healthy Start is a Government scheme set up to offer a nutritional safety net for pregnant women, new mothers and children under 4 years of age in very low income families, and encourage them to eat a healthier diet.
3. The NDNS rolling programme assesses the diet and nutritional status of the general population aged over 18 months. Cross-sectional fieldwork is carried out each year. The most recent NDNS publication can be found at: http://transparency.dh.gov.uk/2012/07/25/ndns-3-years-report/
4. The Infant Feeding Survey (IFS) has been conducted every five years since 1975; the most recent publication is IFS 2010. http://www.ic.nhs.uk/article/2021/Website-Search?productid=9569&q=Infant+feeding+Survy&sort=Relevance&size=10&page=1&area=both#top
5. The DNSIYC report published today covers a range of topics including food consumption, intakes of energy, macronutrients and micronutrients, nutritional status (see note 8) including iron and vitamin D status and use of dietary supplements. Also reported are contextual information such as the height, weight and socio-demographic characteristics of the sample, including use of child care, smoking and drinking habits of family members, neurological development, medical history, sun exposure, feeding practices and an estimation of breast milk consumption.
6. Results for the dietary data are presented as UK averages for four age groups: 4-6 months, 7 to 9 months, 10 to 11 months and 12 to 18 months. Results for the data collected at the clinic, including blood sample analysis and measurements of breast milk consumption, will be presented for two age groups: aged 5 to 11 months and aged 12 months or over. This is due to the small sample sizes and the ageing of the child between the home and clinic visits.
7. As with all dietary surveys, mis-reporting of food consumption is known to be a problem; although it is not known to what extent it is a problem for infants and young children aged 4 to 18 months. In this age group there may be a particular risk of under or overestimating food wastage. The potential for some mis-reporting needs to be borne in mind when interpreting findings from this survey.
8. The results based on assessment of food consumption over four days indicate dietary intake over a short period. Analysis of blood samples provides an indication of the nutritional status of the population over a longer period. 'Nutritional status' means the concentration of nutrients available to the body (after absorption) for use in metabolic processes and in this age group includes any stores acquired in utero. Dietary intake cannot be compared directly to nutritional status, as status does not just reflect the intake of nutrients from the diet.
9. Dietary recommendations for infants and young children are set out in a number of national and international guidance documents including the Department of Health, Infant Feeding Recommendation, 2003 http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4096999.pdf; NHS Guide to Bottle Feeding 2011 http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_124526.pdf and Department of Health, Delivering Better Oral Health (2nd edition 2009). Available online: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_102982.pdf