

# PUBLIC HEALTH PROGRAMME

## Synopsis introduction

### **1.1 Background**

In April 2005, NICE was asked by the Department of Health to develop guidance for the NHS and other organisations in the public, community, voluntary and private sectors on maternal and child nutrition.

The scope for this public health programme is available from the NICE website: [www.nice.org.uk/page.aspx?o=529430](http://www.nice.org.uk/page.aspx?o=529430)

This is a synopsis of the evidence collated by NICE so far. This will be used by the Institute's Programme Development Group (PDG) on maternal and child nutrition as part of the basis for making its recommendations. It comprises summaries of a series of reviews of effectiveness and cost effectiveness plus an economic appraisal on the cost effectiveness of breastfeeding.

The full reviews and other background material will be available on the NICE website. Any material submitted by stakeholders during this consultation will be assessed for its relevance using standard NICE criteria, as set out in the '[Methods for development of NICE public health guidance](#)'. Relevant material will be included in a supplementary report presented to the PDG.

The PDG will issue draft guidance on maternal and child nutrition for consultation in July 2007.

### **1.2 Context**

This introduction aims to highlight some of the main issues underpinning development of the maternal and child nutrition programme guidance. It focuses, in particular, on the diet and nutritional status of mothers (before, during and after pregnancy), infants and children under 5. It focuses particularly on mothers and children from low income families.

The nutritional status of pregnant women influences the physical and mental development of the fetus. It has a major impact on infant mortality, growth and development. It also forms the foundations of health in later life. Teenage girls who are pregnant and who have not completed the adolescent 'growth spurt' have higher nutritional requirements than other pregnant women (Department of Health 2004a).

Folic acid supplementation, both before and in the first 12 weeks of pregnancy, significantly reduces the risk of neural tube defects (NTD) (Department of Health 2000). Women from higher socio-economic groups are more than twice as likely to take folic acid supplements before pregnancy than women on low incomes. Women aged over 25 are more likely to follow this advice than younger women (Health Education Authority 1998).

In the UK, a higher proportion of low birth weight babies (less than 2500g) are born to families where the father is in unskilled or semi-skilled manual work, or where no father is registered. Teenage mothers are 25% more likely than average to have a low birth weight baby (Macfarlane et al. 2000).

Disease patterns and health status vary between different minority ethnic groups and the general population. For example, South Asian and Pakistani women are more likely to have low birth weight babies than white British women, even when the mothers are born in the UK (Bull et al. 2003). Also, poor iron status is common among pregnant women of South Asian origin who live in the UK (Thomas 2002).

In the UK, the quality of a woman's diet tends to relate to income. 'The national diet and nutrition survey' (Hoare et al. 2004) found that adults aged 19–64 years who were living in households in receipt of benefits had a lower average intake of energy, compared with those in non-benefit households. Women in benefit households also had lower intakes of vitamins and minerals from food sources. In addition, mothers from low income households may go short of food in order to feed their children (Dobson et al. 1994; Dowler and Calvert 1995).

There are also inequalities in the rates of breastfeeding. Mothers in low income groups are up to 25% less likely to breastfeed than those in higher income groups. Mothers from minority ethnic groups are considerably more likely to breastfeed compared with white mothers, but they are more likely to introduce early mixed milk feeding (Hamlyn et al. 2002). The 'Infant feeding survey' (Hamlyn et al. 2002) showed that mothers aged 30 plus who have reached higher educational levels and are feeding their first baby are most likely to breastfeed.

In the UK, levels of breastfeeding drop sharply in the weeks following birth, especially among lower socio-economic groups. There is a strong relationship between the duration of breastfeeding and the mother's socio-economic status, with mothers from higher occupational groups breastfeeding for longer (Hamlyn et al. 2002).

Pre-school children with poor diets have a greater risk of developing obesity and chronic non-communicable diseases in later life (Department of Health 2004b; Department of Health 2004c). The 'National diet and nutrition survey' (NDNS) conducted in 1994 found that 16% of 1.5 to 4.5 year olds in Britain ate more than the daily recommended salt and sugar, and they did not have enough fruit, vegetable and iron-rich foods. In this sample of over 1500 children, 16% were anaemic and 17% had active tooth decay (Gregory et al, 1995).

Women who are pregnant or families with a child aged under 4 years may qualify for Healthy Start if they are in receipt of benefits. Under this scheme, recipients can obtain free vitamin drops and vouchers for £2.80 per week to spend on milk, fresh fruit, fresh vegetables and infant formula milk. All pregnant women under 18 qualify, whether or not they are receiving benefits. Families with babies under 1 year old receive 2 vouchers per week.

### **1.3 Reviews**

NICE commissioned reviews focused on the diet of women before and during pregnancy, and the diet of infants and children up to the age of 5 years.

The 12 reviews are:

- 'Review of the effectiveness of interventions to improve the nutrition of pregnant women with a focus on the nutrition of pregnant women in low income households'. This review was carried out from September 2005 – March 2006 with a supplementary review carried out from March – May 2006 by the Mother and Infant Research Unit at the University of York. These two reviews were integrated and updated in March 2007 by the University of York and NICE.
- 'The effectiveness of public health interventions to improve the nutrition of post-partum women'. This review was carried out between February and April 2006 by the Mother and Infant Research Unit at the University of York and updated in March 2007 by the University of York and NICE.
- 'The effectiveness of public health interventions to promote safe and healthy milk feeding practices in babies' This review was carried out from February– May 2006 by the Mother and Infant Research Unit at the University of York and updated in March 2007 by the University of York and NICE.
- 'The effectiveness of public health interventions to improve the nutrition of young children aged 6–24 months'. This review was carried out from April– June 2006 by the Mother and Infant Research Unit at the University of York and updated in March 2007 by the University of York and NICE.
- 'The effectiveness of public health interventions to improve the nutrition of 2 to 5 year old children.' This review was carried out from April– July 2006 by the Mother and Infant Research Unit at the University of York and updated in March 2007 by the University of York and NICE.
- 'The effectiveness of public health interventions to promote nutrition of pre-conceptual women.' This review was carried out from June– September 2006 by the Mother and Infant Research Unit at the

University of York and updated and updated in March 2007 by the University of York and NICE.

- ‘The effectiveness and cost-effectiveness of interventions to promote an optimal intake of vitamin D to improve the nutrition of pre-conceptional, pregnant and post-partum women and children in low income households.’ This review was carried out from April–July 2006 by the National Collaborating Centre for Women’s and Children’s Health.
- ‘Supplementary evidence review on the effectiveness of public health interventions to improve the nutrition of infants/children aged 6 months to 5 years.’ This review was carried out from July– September 2006 by the National Collaborating Centre for Women’s and Children’s Health.
- ‘Rapid economic review of public health interventions designed to improve the nutrition of pre-conceptual, pregnant and post partum women.’ This review was carried out from April–July 2006 by the National Collaborating Centre for Women’s and Children’s Health.
- ‘Rapid economic review of public health interventions designed to improve the nutrition of children aged 0–5 years’. This review was carried out from April–July 2006 by the National Collaborating Centre for Women’s and Children’s Health.
- An expert report on ‘Growth monitoring of infants and young children in the United Kingdom. This was prepared from September –October 2006 by Magda Sachs and Fiona Dykes from the Maternal and Infant Nutrition & Nurture Unit at the University of Central Lancashire.
- An expert report on ‘Handling and storage of expressed breast milk’. This was prepared from October –November 2006 by Paul Cook from the Food Hazards and Consumer Protection Branch, Microbiological Safety Division, at the Food Standards Agency.

Please note: some papers published between April 2006 and March 2007 may not have been covered in these reviews.

These reviews were conducted according to the principles set out in 'Methods for development of NICE public health guidance' at:

[www.nice.org.uk/page.aspx?o=299970](http://www.nice.org.uk/page.aspx?o=299970). A summary of each review is appended to this document. The full reviews are available on the NICE website:

<http://guidance.nice.org.uk/page.aspx?o=MaternalandChildNutritionMain>

## **1.4 References**

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