

NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

PUBLIC HEALTH GUIDANCE

DRAFT SCOPE

1 Guidance title

Prevention of excessive weight gain in pregnancy

1.1 *Short title*

Excessive weight gain in pregnancy

2 Background

- a) The National Institute for Health and Clinical Excellence (NICE) has been asked by the Department of Health (DH) to develop guidance on a public health intervention aimed at preventing excessive weight gain in pregnancy.
- b) NICE public health guidance supports the preventive aspects of relevant national service frameworks (NSFs), where they exist. If it is published after an NSF has been issued, the guidance effectively updates it. Specifically, in this case, the guidance will support the NSF on children, young people and maternity services (DH 2004a).
- c) This guidance will support a number of related policy documents including:
 - 'Choosing a better diet: a food and health action plan' (DH 2005a)
 - 'Choosing activity: a physical activity action plan' (DH 2005b)
 - 'Choosing health: making healthier choices easier' (DH 2004b)
 - 'Healthy weight, healthy lives: a cross-government strategy for England' (Cross Government Obesity Unit 2008)
 - 'Maternity matters' (DH 2007)

- 'Tackling obesities: future choices' (Government Office for Science 2007)
 - 'Saving mothers' lives' (Confidential Enquiry into Maternal and Child Health 2007)
 - 'Teenage parents next steps' (Department for Children, Schools and Families 2007).
- d) This guidance will provide recommendations for good practice, based on the best available evidence of effectiveness, including cost effectiveness. It is aimed at professionals, commissioners and managers, with public health as part of their remit, working within the NHS, local authorities and the wider public, private, voluntary and community sectors. It is particularly aimed at: GPs, obstetricians, midwives, and all those working in antenatal services. It will also be of interest to pregnant women and those planning a pregnancy as well as their partners, families and other members of the public.
- e) The guidance will complement NICE guidance on antenatal, intrapartum and postnatal care; diabetes in pregnancy; maternal and child nutrition; behaviour change; physical activity and obesity. For further details, see section 6.

This guidance will be developed using the NICE public health intervention process.

3 The need for guidance

- a) Fifty percent of women of childbearing age are either overweight (body mass index [BMI] 24.9–29.9kg/m²) or obese (BMI >30kg/m²) and 18% of women are obese at the start of pregnancy (The Information Centre 2008). Maternal obesity is related to socioeconomic deprivation and other inequalities within ethnic groups (Heslehurst et al. 2007a).
- b) Pregnant women who are overweight or obese and their babies face an increased risk of complications during pregnancy and childbirth. For the mother, these risks include: impaired glucose tolerance and gestational diabetes, miscarriage, pre-eclampsia, thromboembolism and death. In addition, she is more likely to have an instrumental delivery or caesarean section. The baby faces a higher risk of macrosomia, congenital anomaly, obesity (in later life) and fetal death. A recent report found that over half of mothers who died during pregnancy, childbirth or within 42 days of childbirth were either overweight or obese. It concluded that pregnant women with a BMI greater than 30kg/m² are more likely to die than women who had a BMI less than 30kg/m² (Confidential Enquiry into Maternal and Child Health 2007).
- c) Dealing with pregnant women who are overweight or obese causes practical problems for the NHS midwifery and obstetric services. Larger medical equipment is required (for example, larger operating beds and measuring scales). In addition, greater clinical support is needed to manage diet and diabetic problems and to provide physiotherapy support. Managing epidurals and other forms of anaesthesia is also more complex and more dressings are required due to the longer time it takes for wounds to heal (Heslehurst et al. 2007b).
- d) UK recommendations on appropriate weight gain during pregnancy vary from 7–15kg but there is no national, evidence-based

guidance. The American Institute of Medicine (IOM) recommends that women with a pre-pregnancy BMI greater than 30kg/m² should gain around 7kg. It also recommends that women with a pre-pregnancy BMI between 19.8 and 25.9kg/m² should gain between 11.5 and 16kg (IOM 1990). Recent studies show that 20–40% of pregnant women in the US and Europe are gaining more weight than is recommended (Cedergren 2006). Women who gain weight within the IOM ranges are more likely to have better maternal and infant outcomes than those who gain more or less weight (Viswanathan et al. 2008). Among obese women, those who do not gain more than 7kg during pregnancy have fewer complications (Cedergren 2006).

- e) Women in the UK are not given information about the risks of obesity when pregnant or the importance of avoiding excessive weight gain during pregnancy. Pregnant women are advised to have a 'healthy and varied diet'. They are also advised not to diet while pregnant (Food Standards Agency 2008).
- f) The Royal College of Obstetricians and Gynaecologists and the American College of Obstetricians and Gynecologists (Artal and O'Toole 2003) recommend 30 minutes or more moderate physical activity per day for pregnant women. Women who were not physically active before pregnancy are advised to plan a safe exercise programme with their GP. About 30% of women of child-bearing age achieve the nationally recommended minimum level of activity (30 minutes of moderately-intense physical activity on five or more days a week [DH 2004]) (The Information Centre 2008).

4 The guidance

Public health guidance will be developed according to NICE processes and methods. For details see section 5.

This document defines exactly what this guidance will (and will not) examine, and what the guidance developers will consider. The scope is based on a referral from the DH (see appendix A).

4.1 *Who is the focus?*

4.1.1 Groups that will be covered

- Women pregnant with one infant.
- Pregnant women who are socially and economically disadvantaged. This may include those:
 - from some black and ethnic minority groups
 - who are under 18
 - with learning and/or physical disabilities
 - in prison.
- Women planning a pregnancy.

4.1.2 Groups that will not be covered

- Pregnant women who are receiving treatment for diabetes.
- Women pregnant with more than one infant (for example, twins or triplets).
- Pregnant women who are underweight (BMI <18.5 kg/m²).

4.2 *Activities*

4.2.1 Activities/measures that will be covered

Interventions and activities to raise awareness of the risks of obesity in pregnancy and to prevent excessive weight gain among pregnant women. These may be aimed at the whole population, communities, families or individuals and could include:

- antenatal services
- assessment and monitoring of weight gain

- advice on diet and physical activity
- peer support
- mass-media and education campaigns.

4.2.2 Activities/measures that will not be covered

- a) Clinical interventions for pregnant women (such as surgery or drug treatment).
- b) Complementary therapies, treatments or practices (for example, hypnotherapy or acupuncture).

4.3 Key questions and outcomes

Below are the overarching questions that will be addressed along with the outcomes that would be considered as evidence of effectiveness:

Questions:

- What advice should women be given regarding weight gain during pregnancy?
- What are the most effective ways to raise awareness of the risks of obesity in pregnancy?
- What are the most effective and cost-effective ways of monitoring weight gain in pregnancy? Are there any adverse effects?
- Can the systems and processes used to identify mothers at risk of excessive weight gain – or to monitor maternal weight gain during pregnancy – be improved?
- Which interventions and activities (including participatory approaches) are effective and cost effective at preventing excessive weight gain during pregnancy in the NHS and other settings?
- Which interventions and activities are effective and cost effective at preventing excessive weight gain in pregnancy and lead to other positive

outcomes? (These outcomes might include, for example, an improved diet or increased physical activity during pregnancy).

- How accessible and acceptable to pregnant women, their partners and families are interventions (including participatory approaches) that prevent excessive weight gain in pregnancy?
- How does acceptability, accessibility and delivery impact on the effectiveness of interventions to prevent excessive weight gain during pregnancy?

Expected outcomes:

A range of outcomes will be considered:

- Changes in dietary intake and levels of physical activity.
- Changes in maternal weight gain using measures such as BMI, arm circumference and skinfold thickness.
- For the mother during pregnancy and childbirth: maternal glucose control and insulin resistance, the occurrence of gestational diabetes, pre-eclampsia, thromboembolism, haemorrhage and maternal death.
- Mode of delivery at birth.
- Measures of maternal psychological wellbeing and self-esteem.
- For the infant: the occurrence of macrosomia, hypoglycaemia or infant birth trauma (for example, shoulder dystocia, fractures, fetal or neonatal death).
- Access to, attendance, and use of appropriate health and support services.

4.4 Status of this document

This is the draft scope, released for consultation on 23 September 2008 until 21 October 2008, to be discussed at a public meeting on 8 October 2008.

Following consultation, the final version of the scope will be available at the NICE website in December 2008.

5 Further information

The public health guidance development process and methods are described in 'Methods for development of NICE public health guidance' (NICE 2006) available at www.nice.org.uk/phmethods and 'The public health guidance development process: An overview for stakeholders, including public health practitioners, policy makers and the public' (NICE 2006) available at www.nice.org.uk/phprocess

6 Related NICE guidance

Published

Antenatal care: routine care for the healthy pregnant woman. NICE Clinical guideline 62 (2008). Available from: www.nice.org.uk/CG062

Diabetes in pregnancy: management of diabetes and its complications from pre-conception to the postnatal period. NICE Clinical guideline 63 (2008). Available from: www.nice.org.uk/CG063

Improving the nutrition of pregnant and breastfeeding mothers and children in low-income households. NICE public health guidance 11 (2008). Available from: www.nice.org.uk/PH011

Promoting and creating built and natural environments that encourage and support physical activity. NICE public health guidance 8 (2008). Available from: www.nice.org.uk/PH008

Behaviour change at population, community and individual levels. NICE public health guidance 6 (2007). Available from: www.nice.org.uk/PH006

Intrapartum care: care of healthy women and their babies during childbirth. NICE clinical guideline 55 (2007). Available from: www.nice.org.uk/CG055

Four commonly used methods to increase physical activity: brief interventions in primary care, exercise referral schemes, pedometers and community-based exercise programmes for walking and cycling. NICE public health guidance 2 (2006). Available from: www.nice.org.uk/PH002

Excessive weight gain in pregnancy draft scope for consultation
23 September–21 October 2008

Obesity: guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. NICE clinical guideline 43 (2006). Available from: www.nice.org.uk/CG043

Postnatal care: Routine postnatal care of women and their babies. NICE clinical guideline 37 (2006). Available from www.nice.org.uk/CG037

Under development

The prevention of venous thromboembolism in all hospital patients. NICE clinical guideline (due September 2009).

Care of pregnant women with complex social factors. NICE clinical guideline (due June 2010).

Hypertension in pregnancy: the management of hypertensive disorders during pregnancy. NICE clinical guideline (due February 2010).

Appendix A Referral from the Department of Health

The Department of Health asked NICE to:

‘Produce intervention guidance for general practitioners, midwives and the antenatal services on the prevention of excessive weight gain in pregnancy.’

Appendix B Potential considerations

It is anticipated that the Public Health Interventions Advisory Committee (PHIAC) will consider the following issues:

- The action that those responsible for the health and care of pregnant women should take, at what level, how often and for how long.
- The effectiveness and cost effectiveness of different interventions and activities, delivered in different ways (for example, one-to-one, in groups or aimed at whole communities) and in different settings. Whether the effectiveness and cost effectiveness of interventions varies according to:
 - the status of the person delivering it
 - its frequency, duration and intensity
 - where it takes place.
- Whether interventions are transferable to other settings.
- How accessible and acceptable different interventions and approaches are to pregnant women, their partners and families.
- The needs of specific sub-groups of pregnant women, women planning a pregnancy, their partners and families. In particular, women:
 - from black, minority and ethnic groups
 - from traveller communities
 - who are refugees and asylum seekers
 - who are prisoners
 - who are under 18
 - with learning, physical or sensory disabilities
 - with communication difficulties.
- Impact of the guidance on equity and the extent to which it promotes equality and diversity.
- Evidence from practice.

- The barriers and opportunities perceived by practitioners and pregnant women for implementing the guidance.

Appendix C References

Artal R, O'Toole M (2003) Guidelines of the American College of Obstetricians and Gynecologists for exercise during pregnancy and the postpartum period. *British Journal of Sports Medicine* 37: 6–12.

Cedergren M (2006) Effects of gestational weight gain and body mass index on obstetric outcome in Sweden. *International Journal of Gynecology and Obstetrics* 93 (3): 269–74.

Confidential Enquiry into Maternal and Child Health (2007) Saving mothers' lives: reviewing maternal deaths to make motherhood safer. The seventh report of the confidential enquiries into maternal deaths in the United Kingdom. London: Confidential Enquiry into Maternal and Child Health.

Cross Government Obesity Unit (2008) Healthy weight, healthy lives: a cross-government strategy for England. London: Department of Health.

Department for Children, Schools and Families (2007) Teenage parents next steps: guidance for local authorities and primary care trusts. London: Department for Children, Schools and Families.

Department of Health (2004a) National service framework for children, young people and maternity services. London: Department of Health.

Department of Health (2004b) Choosing health: making healthier choices easier. London: Department of Health.

Department of Health (2005a) Choosing a better diet: a food and health action plan. London: Department of Health.

Department of Health (2005b) Choosing activity: a physical activity action plan. London: Department of Health.

Department of Health (2007) Maternity matters: choice, access and continuity of care in a safe service. London: Department of Health.

Food Standards Agency (2008) When you're pregnant [online]. Available from:

www.eatwell.gov.uk/agesandstages/pregnancy/whenyrepregnant/?lang=en#cat218295

Government Office for Science (2007) Tackling obesities: future choices – modelling future trends in obesity and their impact on health. London: Department of Innovation, Universities and Skills.

Heslehurst N, Ellis LJ, Simpson H, Batterham A, Wilkinson J, Summerbell CD (2007a). Trends in maternal obesity incidence rate, demographic predictors, and health inequalities in 36,821 women over a 15 year period. *British Journal of Obstetrics and Gynaecology*; 114: 187-194.

Heslehurst N, Lang R, Rankin J, Wilkinson JR, Summerbell CD (2007b). Obesity in pregnancy: a study of the impact of maternal obesity on NHS maternity services. *BJOG*; 114: 334-342.

Institute of Medicine (1990) Nutrition during pregnancy, weight gain and nutrient supplements. Washington DC: National Academy Press.

The Information Centre (2008) Health survey for England 2006: CVD and risk factors adults, obesity and risk factors children. London: The Information Centre.

Viswanathan M, Siega-Riz AM, Moos MK et al. (2008) Outcomes of maternal weight gain, Evidence report/technology assessment 168. Rockville USA: Agency for Healthcare Research and Quality.