



*National Institute for
Health and Clinical Excellence*

Quick reference guide

Antenatal care

Routine care for the healthy pregnant woman

Issue date: March 2008

NICE clinical guideline 62 (partially updates and replaces NICE clinical guideline 6)
Developed by the National Collaborating Centre for Women's and Children's Health

About this booklet

This is a quick reference guide that summarises the recommendations NICE has made to the NHS in 'Antenatal care: routine care for the healthy pregnant woman' (NICE clinical guideline 62). This guidance partially updates and replaces NICE clinical guideline 6 (published October 2003).

In the update, the recommendations on antenatal information, gestational age assessment, vitamin D supplementation, alcohol consumption, screening for haemoglobinopathies, screening for structural anomalies, screening for Down's syndrome, screening for chlamydia, gestational diabetes, pre-eclampsia, asymptomatic bacteriuria, placenta praevia, preterm birth, and fetal growth and wellbeing, as well as the schedule of antenatal appointments, have changed. In addition, some recommendations on smoking cessation and mental health have changed because NICE has produced public health guidance on smoking cessation (NICE public health guidance 10) and the antenatal and postnatal mental health clinical guideline (NICE clinical guideline 45). Following NICE protocol, we incorporated the relevant recommendations verbatim into the guideline and marked them clearly. No other recommendations are affected.

Who should read this booklet?

This quick reference guide is for midwives, doctors and other staff who care for healthy pregnant women.

Who wrote the guideline?







The guideline was developed by the National Collaborating Centre for Women's and Children's Health, which is linked with the Royal College of Obstetricians and Gynaecologists. The Collaborating Centre worked with a group of healthcare professionals (including consultant obstetricians, GPs and midwives), user representatives, and technical staff, who reviewed the evidence and drafted the recommendations. The recommendations were finalised after public consultation.

For more information on how NICE clinical guidelines are developed, go to www.nice.org.uk

Where can I get more information about the guideline?

The NICE website has the recommendations in full, reviews of the evidence they are based on, a summary of the guideline for patients and carers, and tools to support implementation (see inside back cover for more details).

Contents

Woman-centred care	4
Key priorities for implementation	5
 Women needing additional care	8
 Antenatal information	10
 Basic principles of antenatal care	12
 Schedule of appointments	13
 Antenatal interventions NOT routinely recommended	22
 Lifestyle advice	23
Implementation tools	26
Further information	27

NICE clinical guidelines are recommendations about the treatment and care of people with specific diseases and conditions in the NHS in England and Wales.

This guidance represents the view of the Institute, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. The guidance does not, however, override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer, and informed by the summary of product characteristics of any drugs they are considering.

Woman-centred care

Women, their partners and their families should always be treated with kindness, respect and dignity. The views, beliefs and values of the woman, her partner and her family in relation to her care and that of her baby should be sought and respected at all times.

Women should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If women do not have the capacity to make decisions, healthcare professionals should follow the Department of Health guidelines – ‘Reference guide to consent for examination or treatment’ (2001) (available from www.dh.gov.uk). Since April 2007 healthcare professionals should also follow a code of practice accompanying the Mental Capacity Act (summary available from www.publicguardian.gov.uk).

Good communication between healthcare professionals and women is essential. It should be supported by evidence-based, written information tailored to the woman’s needs. Care and information should be culturally appropriate. All information should also be accessible to women with additional needs such as physical, sensory or learning disabilities, and to women who do not speak or read English.

Every opportunity should be taken to provide the woman and her partner or other relevant family members with the information and support they need.

Key priorities for implementation

Antenatal information

- **New** Pregnant women should be offered information based on the current available evidence together with support to enable them to make informed decisions about their care. This information should include where they will be seen and who will undertake their care.

Lifestyle considerations

- **New** All women should be informed at the booking appointment about the importance for their own and their baby's health of maintaining adequate vitamin D stores during pregnancy and whilst breastfeeding. In order to achieve this, women may choose to take 10 micrograms of vitamin D per day, as found in the Healthy Start multivitamin supplement. Particular care should be taken to enquire as to whether women at greatest risk are following advice to take this daily supplement. These include:
 - women of South Asian, African, Caribbean or Middle Eastern family origin
 - women who have limited exposure to sunlight, such as women who are predominantly housebound, or usually remain covered when outdoors
 - women who eat a diet particularly low in vitamin D, such as women who consume no oily fish, eggs, meat, vitamin D-fortified margarine or breakfast cereal
 - women with a pre-pregnancy body mass index above 30 kg/m².

continued

Key priorities for implementation

Screening for haematological conditions

- **New** Screening for sickle cell diseases and thalassaemias should be offered to all women as early as possible in pregnancy (ideally by 10 weeks). The type of screening depends upon the prevalence and can be carried out in either primary or secondary care.

Screening for fetal anomalies

- **New** Participation in regional congenital anomaly registers and/or UK National Screening Committee-approved audit systems is strongly recommended to facilitate the audit of detection rates.
- **New** The 'combined test' (nuchal translucency, beta-human chorionic gonadotrophin, pregnancy-associated plasma protein-A) should be offered to screen for Down's syndrome between 11 weeks 0 days and 13 weeks 6 days. For women who book later in pregnancy the most clinically and cost-effective serum screening test (triple or quadruple test) should be offered between 15 weeks 0 days and 20 weeks 0 days.

Screening for clinical conditions

- **New** Screening for gestational diabetes using risk factors is recommended in a healthy population. At the booking appointment, the following risk factors for gestational diabetes should be determined:
 - body mass index above 30 kg/m²
 - previous macrosomic baby weighing 4.5 kg or above
 - previous gestational diabetes (refer to ‘Diabetes in pregnancy’ [NICE clinical guideline 63], available from www.nice.org.uk/CG063)
 - family history of diabetes (first-degree relative with diabetes)
 - family origin with a high prevalence of diabetes:
 - ◆ South Asian (specifically women whose country of family origin is India, Pakistan or Bangladesh)
 - ◆ black Caribbean
 - ◆ Middle Eastern (specifically women whose country of family origin is Saudi Arabia, United Arab Emirates, Iraq, Jordan, Syria, Oman, Qatar, Kuwait, Lebanon or Egypt).

Women with any one of these risk factors should be offered testing for gestational diabetes (refer to ‘Diabetes in pregnancy’ [NICE clinical guideline 63], available from www.nice.org.uk/CG063).

Women needing additional care

The guideline makes recommendations on baseline clinical care for all pregnant women. Pregnant women with the following conditions usually require additional care:

- cardiac disease, including hypertension
- renal disease
- endocrine disorders or diabetes requiring insulin
- psychiatric disorders (being treated with medication)
- haematological disorders
- autoimmune disorders
- epilepsy requiring anticonvulsant drugs
- malignant disease
- severe asthma
- use of recreational drugs such as heroin, cocaine (including crack cocaine) and ecstasy
- HIV or HBV infection
- obesity (body mass index 30 kg/m² or above) or underweight (body mass index below 18 kg/m²)
- higher risk of developing complications, for example, women aged 40 and older, women who smoke
- women who are particularly vulnerable (such as teenagers) or who lack social support.

In addition, women who have experienced any of the following in previous pregnancies usually require additional care:

- recurrent miscarriage (three or more)
- preterm birth
- severe pre-eclampsia, HELLP syndrome or eclampsia
- rhesus isoimmunisation or other significant blood group antibodies
- uterine surgery including caesarean section, myomectomy or cone biopsy
- antenatal or postpartum haemorrhage on two occasions
- puerperal psychosis
- grand multiparity (more than six pregnancies)
- a stillbirth or neonatal death
- a small-for-gestational-age infant (below 5th centile)
- a large-for-gestational-age infant (above 95th centile)
- a baby weighing below 2.5 kg or above 4.5 kg
- a baby with a congenital abnormality (structural or chromosomal).

Antenatal information

Give information that:

- is easily understood by all women, including women with additional needs such as physical, sensory or learning disabilities, and women who do not speak or read English
- enables women to make informed decisions
- is clear, consistent, balanced and accurate, and based on the current evidence
- is supported by written information and may also be provided in different formats.

Remember to:

- respect a woman's decisions, even when her views are contrary to your own
- provide an opportunity for her to discuss concerns and ask questions
- make sure she understands the information
- give her enough time to make decisions
- explain details of antenatal tests and screening in a setting conducive to discussions (group setting or one-to-one). This should happen before the booking appointment.

Information should cover:

- where the woman will be seen and who by
- the likely number, timing and content of antenatal appointments
- participant-led antenatal classes and breastfeeding workshops
- the woman's right to accept or decline a test.

The following pages contain details about information to give to pregnant women at specific times during their pregnancy. This information can be supported by 'The pregnancy book', other relevant resources such as UK National Screening Committee publications and the Midwives Information and Resource Service information leaflets (www.infochoice.org).

Basic principles of antenatal care

Midwives and GPs should care for women with an uncomplicated pregnancy, providing continuous care throughout the pregnancy. Obstetricians and specialist teams should be involved where additional care is needed.

Antenatal appointments should take place in a location that women can easily access. The location should be appropriate to the needs of women and their community.

Maternity records should be structured, standardised, national maternity records, held by the woman.

In an uncomplicated pregnancy, there should be 10 appointments for nulliparous women and 7 appointments for parous women.

Each antenatal appointment should have a structure and a focus. Appointments early in pregnancy should be longer to provide information and time for discussion about screening so that women can make informed decisions.

If possible, incorporate routine tests into the appointments to minimise inconvenience to women.

Women should feel able to discuss sensitive issues and disclose problems. Be alert to the symptoms and signs of domestic violence.

Schedule of appointments

First contact with a healthcare professional

Give specific information on:

- folic acid supplements
- food hygiene, including how to reduce the risk of a food-acquired infection
- lifestyle, including smoking cessation, recreational drug use and alcohol consumption
- all antenatal screening, including risks, benefits and limitations of the screening tests.

Give information (supported by written information and antenatal classes), with an opportunity to discuss issues and ask questions.

Be alert to any factors, clinical and/or social, that may affect the health of the woman and baby.

For further information about lifestyle see pages 23–25.

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Booking appointment (ideally by 10 weeks)

Checks and tests

- Identify women who may need additional care (see pages 8 and 9) and plan pattern of care for the pregnancy.
- Measure height and weight and calculate body mass index.
- Measure blood pressure and test urine for proteinuria.
- Determine risk factors for pre-eclampsia and gestational diabetes (refer to 'Diabetes in pregnancy' [NICE clinical guideline 63], available from www.nice.org.uk/CG063).
- Offer blood tests to check blood group and rhesus D status, and screening for anaemia, haemoglobinopathies, red-cell alloantibodies, hepatitis B virus, HIV, rubella susceptibility and syphilis.
- Offer screening for asymptomatic bacteriuria.
- Inform women younger than 25 years about the high prevalence of chlamydia infection in their age group, and give details of their local National Chlamydia Screening Programme.
- Offer screening for Down's syndrome.
- Offer early ultrasound scan for gestational age assessment and ultrasound screening for structural anomalies.
- Identify women who have had genital mutilation (FGM).

- Ask about any past or present severe mental illness or psychiatric treatment.
- Ask about mood to identify possible depression.
- Ask about the woman's occupation to identify potential risks.

Give specific information on:

- how the baby develops during pregnancy
- nutrition and diet, including vitamin D supplements
- exercise, including pelvic floor exercises
- antenatal screening, including risks and benefits of the screening tests
- the pregnancy care pathway
- planning place of birth (refer to 'Intrapartum care' [NICE clinical guideline 55], available from www.nice.org.uk/CG055).
- breastfeeding, including workshops
- participant-led antenatal classes
- maternity benefits.

Give information (supported by written information and antenatal classes), with an opportunity to discuss issues and ask questions.

Be alert to any factors, clinical and/or social, that may affect the health of the woman and baby.

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For women who choose to have screening, arrange as appropriate:

- blood tests (blood group, rhesus D status, screening for anaemia, haemoglobinopathies, red-cell alloantibodies, hepatitis B virus, HIV, rubella susceptibility and syphilis), ideally before 10 weeks
- urine tests (proteinuria and asymptomatic bacteriuria)
- ultrasound scan to determine gestational age using:
 - crown–rump measurement between 10 weeks 0 days and 13 weeks 6 days
 - head circumference if crown–rump length is above 84 mm
- Down's syndrome screening using either:
 - 'combined test' between 11 weeks 0 days and 13 weeks 6 days
 - serum screening test (triple or quadruple test) between 15 weeks 0 days and 20 weeks 0 days
- ultrasound screening for structural anomalies, normally between 18 weeks 0 days and 20 weeks 6 days.

16 weeks

Checks and tests

- Review, discuss and record the results of screening tests.
- Measure blood pressure and test urine for proteinuria.
- Investigate a haemoglobin level below 11 g/100 ml and consider iron supplements.

Give specific information on:

- the routine anomaly scan.

Anomaly scan: 18 to 20 weeks

Checks and tests

- If the woman chooses, an ultrasound scan should be performed between 18 weeks 0 days and 20 weeks 6 days to detect structural anomalies.
- For a woman whose placenta extends across the internal cervical os, offer another scan at 32 weeks.

Give information (supported by written information and antenatal classes), with an opportunity to discuss issues and ask questions.

Be alert to any factors, clinical and/or social, that may affect the health of the woman and baby.

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25 weeks – *for nulliparous women*

Checks and tests

- Measure blood pressure and test urine for proteinuria.
- Measure and plot symphysis–fundal height.

28 weeks

Checks and tests

- Measure blood pressure and test urine for proteinuria.
- Offer a second screening for anaemia and atypical red-cell alloantibodies.
- Investigate a haemoglobin level below 10.5 g/100 ml and consider iron supplements.
- Offer anti-D prophylaxis to women who are rhesus D-negative¹.
- Measure and plot symphysis–fundal height.

¹ The technology appraisal guidance 'Guidance on the use of routine antenatal anti-D prophylaxis for RhD-negative women' (NICE technology appraisal 41) is being updated and is expected to be published in June 2008.

31 weeks – *for nulliparous women*

Checks and tests

- Review, discuss and record the results of screening tests undertaken at 28 weeks.
- Measure blood pressure and test urine for proteinuria.
- Measure and plot symphysis–fundal height.

34 weeks

Checks and tests

- Review, discuss and record the results of screening tests undertaken at 28 weeks.
- Measure blood pressure and test urine for proteinuria.
- Offer a second dose of anti-D prophylaxis to women who are rhesus D-negative¹.
- Measure and plot symphysis–fundal height.

Give specific information on:

- preparation for labour and birth, including the birth plan, recognising active labour and coping with pain.

Give information (supported by written information and antenatal classes), with an opportunity to discuss issues and ask questions.

Be alert to any factors, clinical and/or social, that may affect the health of the woman and baby.

¹ The technology appraisal guidance 'Guidance on the use of routine antenatal anti-D prophylaxis for RhD-negative women' (NICE technology appraisal 41) is being updated and is expected to be published in June 2008.

Give information (supported by written information and antenatal classes), with an opportunity to discuss issues and ask questions.

Be alert to any factors, clinical and/or social, that may affect the health of the woman and baby.

36 weeks

Checks and tests

- Measure blood pressure and test urine for proteinuria.
- Measure and plot symphysis–fundal height.
- Check the position of the baby. If breech, offer external cephalic version.

Give specific information (at or before 36 weeks) on:

- breastfeeding: technique and good management practices, such as detailed in the UNICEF Baby Friendly Initiative (www.babyfriendly.org.uk)
- care of the new baby, vitamin K prophylaxis and newborn screening tests
- postnatal self-care, awareness of ‘baby blues’ and postnatal depression.

38 weeks

Checks and tests

- Measure blood pressure and test urine for proteinuria.
- Measure and plot symphysis–fundal height.

Give specific information on:

- options for management of prolonged pregnancy².

² The clinical guideline ‘Induction of labour’ is being updated and is expected to be published in June 2008.

40 weeks – *for nulliparous women*

Checks and tests

- Measure blood pressure and test urine for proteinuria.
- Measure and plot symphysis–fundal height.
- Further discussion of management of prolonged pregnancy².

41 weeks

Checks and tests

For women who have not given birth by 41 weeks:

- offer a membrane sweep²
- offer induction of labour²
- measure blood pressure and test urine for proteinuria
- measure and plot symphysis–fundal height.

From 42 weeks, offer women who decline induction of labour increased monitoring (at least twice-weekly cardiotocography and ultrasound examination of maximum amniotic pool depth).

² The clinical guideline 'Induction of labour' is being updated and is expected to be published in June 2008.

Give information (supported by written information and antenatal classes), with an opportunity to discuss issues and ask questions.

Be alert to any factors, clinical and/or social, that may affect the health of the woman and baby.

Antenatal interventions NOT routinely recommended

- Repeated maternal weighing.
- Breast or pelvic examination.
- Iron or vitamin A supplements.
- Routine screening for chlamydia, cytomegalovirus, hepatitis C virus, group B streptococcus, toxoplasmosis, bacterial vaginosis.
- Routine Doppler ultrasound in low-risk pregnancies.
- Ultrasound estimation of fetal size for suspected large-for-gestational-age unborn babies.
- Routine screening for preterm labour.
- Routine screening for cardiac anomalies using nuchal translucency.
- Gestational diabetes screening using fasting plasma glucose, random blood glucose, glucose challenge test or urinalysis for glucose.
- Routine fetal-movement counting.
- Routine auscultation of the fetal heart.
- Routine antenatal electronic cardiotocography.
- Routine ultrasound scanning after 24 weeks.

Lifestyle advice

Work	<p>Reassure women that it is usually safe to continue working.</p> <p>Ascertain a woman's occupation to identify risk.</p> <p>Refer to the Health and Safety Executive (www.hse.gov.uk) for more information.</p> <p>Tell women about their maternity rights and benefits.</p>
Nutritional supplements	<p>Recommend supplementation with folic acid before conception and throughout the first 12 weeks (400 micrograms per day).</p> <p>Advise women of the importance of vitamin D intake during pregnancy and breastfeeding (10 micrograms per day). Ensure women at risk of deficiency are following this advice.</p> <p>Do not recommend routine iron supplementation.</p> <p>Advise women of the risk of birth defects associated with vitamin A, and to avoid vitamin A supplementation (above 700 micrograms) and liver products.</p>
Avoiding infection	<p>Advise women how to reduce the risk of listeriosis and salmonella, and how to avoid toxoplasmosis infection.</p>
Medicines	<p>Prescribe as few medicines as possible, and only in circumstances where the benefit outweighs the risk.</p> <p>Advise women to use over-the-counter medicines as little as possible.</p>
<p style="text-align: right;"><i>continued</i></p>	

Lifestyle advice

Complementary therapies	Advise women that few complementary therapies have been proven as being safe and effective during pregnancy.
Exercise	There is no risk associated with starting or continuing moderate exercise. However, sports that may cause abdominal trauma, falls or excessive joint stress, and scuba diving, should be avoided.
Sexual intercourse	Reassure women that intercourse is thought to be safe during pregnancy.
Alcohol	<p>Advise women planning a pregnancy to avoid alcohol in the first 3 months if possible.</p> <p>If women choose to drink alcohol, advise them to drink no more than 1 to 2 UK units once or twice a week (1 unit equals half a pint of ordinary strength lager or beer, or one shot [25 ml] of spirits. One small [125 ml] glass of wine is equal to 1.5 UK units). At this low level there is no evidence of harm.</p> <p>Advise women to avoid getting drunk and to avoid binge drinking.</p>
Smoking	<p>Discuss smoking status and give information about the risks of smoking during pregnancy.</p> <p>Give information, advice and support on how to stop smoking throughout the pregnancy. Give details of, and encourage women to use, NHS Stop Smoking Services and the NHS Pregnancy Smoking Helpline (0800 169 9 169).</p> <p>Discuss nicotine replacement therapy (NRT).</p> <p>If women are unable to quit, encourage them to reduce smoking.</p>

Cannabis	Discourage women from using cannabis.
Air travel	Long-haul air travel is associated with an increased risk of venous thrombosis, although the possibility of any additional risk in pregnancy is unclear. In the general population, compression stockings are effective in reducing the risk.
Car travel	Advise women that the seat belt should go 'above and below the bump, not over it'.
Travel abroad	Advise women to discuss flying, vaccinations and travel insurance with their midwife or doctor.

Implementation tools

NICE has developed tools to help organisations implement this guidance (listed below).

These are available on our website (www.nice.org.uk/CG062).

- Slides highlighting key messages for local discussion.
- Implementation advice on how to put the guidance into practice and national initiatives that support this locally.
- Costing tools:
 - costing report to estimate the national savings and costs associated with implementation
 - costing template to estimate the local costs and savings involved.
- Audit support for monitoring local practice.

Further information

Ordering information

You can download the following documents from www.nice.org.uk/CG062

- A quick reference guide (this document) – a summary of the recommendations for healthcare professionals.
- The NICE guideline – all the recommendations.
- ‘Understanding NICE guidance’ – information for patients and carers.
- The full guideline – all the recommendations, details of how they were developed, and reviews of the evidence they were based on.

For printed copies of the quick reference guide or ‘Understanding NICE guidance’, phone NICE publications on 0845 003 7783 or email publications@nice.org.uk and quote:

- N1482 (quick reference guide)
- N1483 (‘Understanding NICE guidance’).

Related guidance

NICE has published clinical guidelines on intrapartum care, postnatal care, caesarean section, antenatal and postnatal mental health, and diabetes in pregnancy; and public health guidance on maternal and child nutrition in low-income households and smoking cessation. NICE is updating its guidance on induction of labour and the use of routine antenatal anti-D prophylaxis for RhD-negative women.

Check our website for more information.

Updating the guideline

This guideline will be updated as needed, and information about the progress of any update will be posted on the NICE website (www.nice.org.uk/CG062).

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