



*National Institute for
Health and Clinical Excellence*

Quick reference guide

Issue date: July 2008

Induction of labour

Induction of labour

- In 2004 and 2005, one in five deliveries in the UK was induced.
- Induced labours have an impact on the birth experience of women, and on their health and that of their babies.
- This updated guideline reviews the policy and methods of induction, and the care of women being offered and having induction.

Woman-centred care

Women, their partners and their families should always be treated with kindness, respect and dignity. Good communication is essential, supported by evidence-based, written information. All information should be provided in a form that is accessible to women, their partners and families, taking into account any additional needs, such as physical, cognitive or sensory disabilities, and people who do not speak or read English. Women should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. Follow Department of Health advice on consent if needed.

National Institute for Health and Clinical Excellence

MidCity Place
71 High Holborn
London
WC1V 6NA

www.nice.org.uk

ISBN 1-84629-748-6

© National Institute for Health and Clinical Excellence, 2008. All rights reserved. This material may be freely reproduced for educational and not-for-profit purposes. No reproduction by or for commercial organisations, or for commercial purposes, is allowed without the express written permission of the Institute.

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. However, the guidance does not 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.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

Contents

Induction methods that are not recommended	5
Setting	5
Intrauterine fetal death	5
Care pathway	6
Implementation tools	9
Further information	9

Key priorities for implementation

Information

- Women should be informed that most women will go into labour spontaneously by 42 weeks. At the 38 week antenatal visit, all women should be offered information about the risks associated with pregnancies that last longer than 42 weeks, and their options. The information should cover:
 - membrane sweeping:
 - ◆ that membrane sweeping makes spontaneous labour more likely, and so reduces the need for formal induction of labour to prevent prolonged pregnancy
 - ◆ what a membrane sweep is
 - ◆ that discomfort and vaginal bleeding are possible from the procedure
 - induction of labour between 41⁺⁰ and 42⁺⁰ weeks
 - expectant management.
- Healthcare professionals should explain the following points to women being offered induction of labour:
 - the reasons for induction being offered
 - when, where and how induction could be carried out
 - the arrangements for support and pain relief (recognising that women are likely to find induced labour more painful than spontaneous labour)
 - the alternative options if the woman chooses not to have induction of labour
 - the risks and benefits of induction of labour in specific circumstances and the proposed induction methods
 - that induction may not be successful and what the woman's options would be.

continued

Key priorities for implementation *continued*

Preventing prolonged pregnancy

- Women with uncomplicated pregnancies should usually be offered induction of labour between 41⁺⁰ and 42⁺⁰ weeks to avoid the risks of prolonged pregnancy. The exact timing should take into account the woman's preferences and local circumstances.

Preterm prelabour rupture of membranes

- If a woman has preterm prelabour rupture of membranes after 34 weeks, the maternity team should discuss the following factors with her before a decision is made about whether to induce labour, using vaginal prostaglandin E₂ (PGE₂)¹:
 - risks to the woman (for example, sepsis, possible need for caesarean section)
 - risks to the baby (for example, sepsis, problems relating to preterm birth)
 - local availability of neonatal intensive care facilities.

Vaginal PGE₂

- Vaginal PGE₂ is the preferred method of induction of labour, unless there are specific clinical reasons for not using it (in particular the risk of uterine hyperstimulation). It should be administered as a gel, tablet or controlled-release pessary. Costs may vary over time, and trusts/units should take this into consideration when prescribing PGE₂. For doses, refer to the summaries of product characteristics (SPCs). The recommended regimens are:
 - one cycle of vaginal PGE₂ tablets or gel: one dose, followed by a second dose after 6 hours if labour is not established (up to a maximum of two doses)
 - one cycle of vaginal PGE₂ controlled-release pessary: one dose over 24 hours.

Failed induction

- If induction fails, healthcare professionals should discuss this with the woman and provide support. The woman's condition and the pregnancy in general should be fully reassessed, and fetal wellbeing should be assessed using electronic fetal monitoring.
- If induction fails, the subsequent management options include:
 - a further attempt to induce labour (the timing should depend on the clinical situation and the woman's wishes)
 - caesarean section (refer to 'Caesarean section' [NICE clinical guideline 13]).

¹ Vaginal PGE₂ has been used in UK practice for many years in women with ruptured membranes. However, the SPCs (July 2008) advise that in this situation, vaginal PGE₂ is either not recommended or should be used with caution, depending on the preparation (gel, tablet or pessary). Healthcare professionals should refer to the individual SPCs before prescribing vaginal PGE₂ for women with ruptured membranes, and informed consent should be obtained and documented.

Induction methods that are not recommended

Do not use:

Oral PGE ₂	Vaginal nitric oxide donors	Corticosteroids
Extra-amniotic PGE ₂	Intravenous oxytocin alone	Routinely – mechanical procedures (balloon catheters and laminaria tents)
Intravenous PGE ₂	Oestrogen	
Intracervical PGE ₂	Hyaluronidase	

Explain to women that available evidence does not support:

Acupuncture	Castor oil	Sexual intercourse
Homeopathy	Hot baths	
Herbal supplements	Enemas	

Setting

- There should be facilities for continuous electronic fetal heart rate and uterine contraction monitoring.
- In the outpatient setting:
 - only carry out induction with safety and support procedures in place
 - continuously audit.

Intrauterine fetal death

- Offer the woman and her partner/family support, and information about specialist support.
- If the woman is physically well, with intact membranes and no evidence of infection or bleeding, offer choice of immediate induction or expectant management.
- If there is evidence of ruptured membranes, infection or bleeding, immediate induction is preferred.
- If the woman chooses induction, offer oral mifepristone, followed by vaginal PGE₂ or misoprostol².
- If the woman has had a previous caesarean section, reduce prostaglandin doses to take account of the increased risk of uterine rupture (see footnote 6 on page 6).
- Misoprostol² should only be offered if there is intrauterine fetal death or in a clinical trial.
- Mifepristone should only be offered if there is intrauterine fetal death.

² At the time of publication (July 2008), misoprostol was not licensed for use for labour induction in fetal death in utero in the UK. Informed consent should be obtained and documented.

Care pathway

Uncomplicated pregnancy

- Give women every opportunity to go into labour spontaneously.
- Offer membrane sweeps:
 - to nulliparous women at 40 week antenatal visit
 - to all women at 41 week antenatal visit
 - if assessing the cervix.
- Offer additional membrane sweeps if labour does not start spontaneously.
- Offer induction between 41 and 42 weeks, depending on woman's preferences.

Discuss pain relief (see box 1).

Box 1: Pain relief

- Explain:
 - that induced labour is likely to be more painful than spontaneous labour
 - different pain relief options in different settings.
- Provide support and pain relief appropriate for the woman and her pain, as required³.
- Encourage women to use their own coping strategies.
- Labouring in water is recommended.

Complications

- Consider tocolysis for uterine hyperstimulation.
- If uterine rupture is suspected, deliver baby by caesarean section⁵.

³ See 'Intrapartum care' (NICE clinical guideline 55).

⁴ See 'Antenatal care' (NICE clinical guideline 62).

⁵ See 'Caesarean section' (NICE clinical guideline 13).

⁶ Vaginal PGE₂ has been used in UK practice for many years in women with ruptured membranes and history of previous caesarean section. However, the SPCs (July 2008) advise that:

- vaginal PGE₂ is either not recommended or should be used with caution in women with ruptured membranes, depending on the preparation (gel, tablet or pessary). Healthcare professionals should refer to the individual SPCs.
- vaginal PGE₂ is not recommended in women with a history of previous caesarean section.

Informed consent on the use of vaginal PGE₂ should be obtained and documented in these situations.

All stages

Provide information and support, invite questions, and allow women time for discussion with partners and for making decisions. See also key priorities on page 3 and guidelines on intrapartum and antenatal care^{3,4}.

Before induction

Induction may be offered if there is:

- Breech presentation: only if caesarean declined, and external cephalic version failed, declined or contraindicated. Fully discuss risks.
- Previous caesarean section: offer induction, caesarean section or expectant management on individual basis. Explain increased risk of caesarean section and uterine rupture with induction.
- Intrauterine fetal death (see page 5).
- Maternal request alone: only in exceptional circumstances, at or after 40 weeks.

Discuss pain relief (see box 1).

Induction may be offered if there is prelabour rupture of membranes:

- Before 34 weeks: only if there are other obstetric indications.
- Between 34 and 37 weeks: discuss with woman the risks to her and her baby, and neonatal intensive care facilities available.
- At or over 37 weeks: choice of induction or expectant management (induction appropriate after 24 hours).

Discuss pain relief (see box 1).

Induction chosen

Offer membrane sweep (check for low-lying placental site first).

If labour does not start

Assess Bishop score and confirm normal fetal heart rate pattern with electronic fetal monitoring.

Normal fetal heart rate

Formal induction with vaginal PGE₂⁶:

- Inform women about the risks of uterine hyperstimulation.
- Induce in the morning.
- Check for low-lying placental site before induction.
- Offer vaginal PGE₂ as tablet, gel or controlled-release pessary:
 - tablet or gel: one dose, followed by a second dose after 6 hours if labour does not start (maximum two doses)
 - pessary: one dose over 24 hours.
- Reassess Bishop score 6 hours after each tablet or gel, or 24 hours after controlled-release pessary.
- If woman goes home after tablet or gel, ask her to contact her obstetrician/midwife:
 - when contractions begin
 - if she has had no contractions after 6 hours.

Contractions begin

- Confirm fetal wellbeing with continuous electronic fetal monitoring.
- Intermittent auscultation should then be used unless there are indications for continuous monitoring³.
- If fetal heart rate is abnormal, refer to 'Intrapartum care'³.
- When labour is established, monitor according to 'Intrapartum care'³.
- For pain relief, see box 1.

Induction chosen

Avoid induction:

- If there is severe fetal growth restriction with confirmed fetal compromise.
- If there is suspected fetal macrosomia with no other indication.
- To avoid unattended birth if there is a history of precipitate labour.

Induction declined

- Respect the woman's decision and discuss further care with her.
- From 42 weeks, at least twice-weekly cardiotocography and ultrasound estimation of maximum amniotic pool depth.

Abnormal fetal heart rate

Refer to 'Intrapartum care'³.

If specific clinical reasons not to use PGE₂

Amniotomy

- Do not use amniotomy, alone or with oxytocin, as a primary method of induction unless there are specific reasons for not using PGE₂.
- Avoid if baby's head is high.
- To avoid cord prolapse:
 - assess engagement of presenting part before induction
 - palpate for umbilical cord presentation during preliminary vaginal examination (avoid dislodging baby's head).

If no progress

Failed induction

- Reassess woman's condition and pregnancy in general.
- Assess fetal wellbeing with electronic fetal monitoring.
- Provide support, and make decisions in accordance with woman's wishes and clinical circumstances.
- Management options include:
 - a further attempt to induce labour (timing to depend on clinical situation and woman's wishes)
 - caesarean section⁵.

Implementation tools

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

These are available on our website (www.nice.org.uk/CG070).

- Slides highlighting key messages for local discussion.

- A costing statement explaining the resource impact of this guidance.
- Audit support for monitoring local practice.

Further information

Ordering information

You can download the following documents from www.nice.org.uk/CG070

- 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:

- N1625 (quick reference guide)
- N1626 (‘Understanding NICE guidance’).

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/CG070).

Related NICE guidance

For information about NICE guidance that has been issued or is in development, see the website (www.nice.org.uk).

- Antenatal care: routine care for the healthy pregnant woman. NICE clinical guideline 62 (2008). Available from www.nice.org.uk/CG062
- Intrapartum care: care of healthy women and their babies during childbirth. NICE clinical guideline 55 (2007). Available from www.nice.org.uk/CG055
- Routine postnatal care of women and their babies. NICE clinical guideline 37 (2006). Available from www.nice.org.uk/CG037
- 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
- Antenatal and postnatal mental health: clinical management and service guidance. NICE clinical guideline 45 (2007). Available from www.nice.org.uk/CG045
- Caesarean section. NICE clinical guideline 13 (2004). Available from www.nice.org.uk/CG013

About this booklet

This is a quick reference guide that summarises the recommendations NICE has made to the NHS in 'Induction of labour' (NICE clinical guideline 70).

This guidance is an update of 'Induction of labour', NICE inherited clinical guideline D (published June 2001).

Who should read this booklet?

This quick reference guide is for obstetricians, midwives and other staff who care for pregnant women who may be offered induction of labour.

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, midwives, and neonatal and anaesthesia consultants), women's representatives, service users 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 page 9 for more details).

**National Institute for
Health and Clinical Excellence**

MidCity Place
71 High Holborn
London
WC1V 6NA

www.nice.org.uk

N1625 1P 45k Jul 08

ISBN 1-84629-748-6