Induction of labour

Many women worry about the idea of having an induced birth and what it entails. Mary Newburn provides answers to common questions about labour, enabling practitioners to have the latest information at their fingertips.

Q Who might be offered induction of labour?
A Around one in four pregnant women in the UK have their labour induced; the rates are 23-24% in England, Scotland and Wales, and 30% in Northern Ireland where maternity services are more medicalised. Common circumstances leading to an offer of induction are prolonged pregnancy, spontaneous rupture of the membranes (SRM) at term without onset of labour, and more complex pregnancies.

Prolonged pregnancy – after around 42 weeks (also see below) there is a very small but statistically significant increase in adverse outcomes for babies (increase in serious illness, stillbirth or early neonatal death). 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 three alternatives (described in more detail below):

- membrane sweeping
- induction of labour between 41 and 42 weeks
- Expectant management.2

Spontaneous rupture of the membranes at term - If a woman’s membranes rupture at term (37 weeks) and she does not go into labour spontaneously within 24 hours, NICE recommends that induction be offered as a precaution against developing an infection, such as group B strep.7

More complex pregnancies – If SRM occurs at 34-37 weeks, a woman may be offered induction as if the pregnancy was at term. If the baby is younger, she will be advised to take steroids to mature the baby’s lungs before birth, as well as drugs to prevent labour while these take effect and antibiotics to reduce the risk of infection. Induction may be necessary if a woman has severe hypertension, severe pre-clampsia or eclampsia, or if she has a twin pregnancy at around 37 weeks (following a course of steroids).4

Induction of labour may also be offered to women with diabetes or gestational diabetes at between 38 and 40 weeks, if they do not go into spontaneous labour, depending on the size of the baby and other indications.5

Q How is labour induced?
A The first option for induction of labour is a membrane sweep (see below) to release natural hormones (prostaglandins) which prepare the cervix for labour, making it ‘favourable’ or ‘ripe’ (tilted forwards, soft and short). Contractions of the uterus may begin soon after, or many hours later. If this procedure does not induce labour, a woman will be offered a pharmacological induction using synthetic hormones.

Prostaglandins may be inserted into the vagina in the form of a slow-release gel, tablet or pessary (a repeat dose may be needed to initiate labour).2 If there is a possible risk of uterine hyperstimulation, however, synthetic hormones will be avoided.

If a prostaglandin pessary or gel does not trigger labour, or if there is the need to speed up contractions, a woman may receive a controlled infusion of synthetic oxytocin, given as a drip into a vein in her arm which remains in place throughout labour. To safeguard the mother and the baby, there is continuous electronic monitoring of the strength and rate of contractions and the baby’s heart rate. The mother will also have her membranes ruptured deliberately by a midwife or doctor, as part of her usual package of care, which is referred to as surgical or artificial rupture of the membranes (noted on maternity records as ARM), as opposed to spontaneous rupture (SRM or SROM). This procedure can also be used alone. Around a third have an oxytocin drip to strengthen the power of their contractions (augmentation).6

Q How does induction of labour affect women?
A Induction can have a big impact on a woman’s experience of labour. First is the inconvenience and uncertainty of coming into hospital for induction and being sent home again if the labour ward is busy. Second, induced labour ‘is usually more painful than spontaneous labour, and epidural anaesthesia and assisted delivery are more likely to be required.’2 Third, women often feel less in control. Support and good communication are therefore especially important.

NICE recommends that ‘Open, clear communication and involvement in decision making is highly important to enable women to feel in as much control as possible.’ When raising the issue of induction, healthcare professionals ‘should explain:’

- the reasons for induction being offered
- when, where and how induction could be carried out
- the arrangements for support and pain relief
- 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 is not always successful and what the woman’s options are in those circumstances (try again or have a caesarean, depending on the wellbeing and obstetric history of the mother and baby).2

Q What is membrane sweeping?
A Sweeping the membranes, or a ‘stretch and sweep’, involves a midwife inserting her finger into the cervix during an internal examination, and moving it in a circular action to separate the membranes of the amniotic sac from the cervix. This helps to release natural prostaglandins which can initiate labour within a few days or less if the cervix is already ripe. If the cervix is still tilted backwards and firm it may be difficult to reach and the procedure more uncomfortable.

NICE recommends that in a first pregnancy, a sweep is offered at 40 weeks and again at 41 weeks, and for a second or subsequent baby, a first sweep at 41 weeks. Several sweeps can be given a few days apart.

Sweeping the membranes is considered less invasive than surgical or pharmacological induction, so is offered before other options, and seems to reduce the need for induction. In prolonged pregnancy, if labour has not started after three membrane sweeps, hospital staff will tend to offer a date for induction. However, expectant management is another option.
Q What is expectant management?

A If a woman prefers not to be induced she can receive additional monitoring from 42 weeks to check her baby’s wellbeing. This involves both regular checks of the baby’s heartbeat with an electronic fetal heart rate monitor (e.g. every 3 days),3 and an ultrasound scan to check the depth of amniotic fluid round the baby.

In theory an early ‘dating scan’, carried out before 20 weeks, can be helpful for reducing the sense of need, or pressure, for post-term induction. However, anecdotally, many women question the accuracy of scan assessments. Gestational days can be ‘added’, as well as ‘taken off’, potentially adding pressure ‘post-term’ for women with long menstrual cycles. According to NICE, only a comparatively small proportion of post 42 week pregnancies are at ‘particular risk’ of foetal compromise or stillbirth, because compromise is rare.

Q Does maternal age make a difference?

A Obstetricians in Britain are exploring the safety of induction for older mothers. An initial small (n=630) randomized controlled feasibility study aims to find out whether the induction of labour at 39 weeks in first-time mothers aged over 35, increases (or decreases) the rate of caesarean birth.4 If the study shows that caesarean births are not more common, a larger study (n=10,000) will compare stillbirth rates for early versus late induction. This investigation was prompted because women aged over 35 seemed more likely to have poor outcomes. The study protocol states that ‘women over 40 years old have a similar stillbirth risk at 39 weeks as women who are between 25 and 29 years old have at 41 weeks’.5

Q Can women induce their own labour?

A Women may want to induce labour themselves, in their desire to see and hold their baby or to avoid medical induction. There is some evidence that loving intimacy, involving breast, clitoral or cervical stimulation, or bathing the cervix in semen (which is rich in prostaglandins) may help ripen the cervix and trigger labour if a woman is already at term. Loving, physical stroking and sex stimulate release of maternal oxytocin which may contribute to the effect.

Further research is needed on the effectiveness, safety and maternal satisfaction in using the following for induction of labour:

• herbal supplements
• acupuncture
• homeopathy
• use of castor oil, hot baths and enemas
• sexual intercourse
• breast stimulation.

The main source material for this Q&A is the NICE induction of labour guidance.2

References