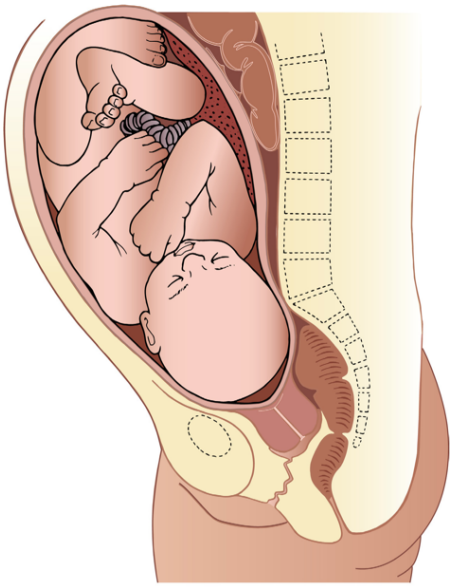
Induction of labour

Information for patients, relatives and carers

What is induction of labour?

Labour is a natural process that usually starts on its own between 37 and 42 weeks and leads onto the birth of your baby.



During pregnancy, your baby is surrounded by a fluid-filled membrane (sac), which protects your baby as it grows in the uterus (womb). The fluid inside the membrane is called amniotic fluid (your waters).

Towards the end of your pregnancy, the cervix (neck of the womb) softens and shortens. This is called the 'ripening of the cervix'. This process can occur over days or weeks.

Before or during labour, your sac of amniotic fluid ruptures. This is known as 'your waters breaking'. During labour your cervix dilates (opens) and your womb contracts to push your baby down and out.

Induction of labour (IOL) is a medical intervention intended to start labour.

Your midwife or doctor might advise an induction if they think that your baby's health or you are likely to benefit compared to pregnancy continuing. On average labour is induced in 3 to 4 out of 10 pregnancies across the country (NHS Digital 2022) and our local rates at Imperial are similar.

There are many reasons why induction of labour is offered or advised, and the timing will depend on this reason. The most common reasons include:

- To reduce the risk of stillbirth if your pregnancy is lasting longer than 41 weeks (called 'overdue' or 'postdates')
- To reduce the risk of infection if your waters have broken but labour has not started
- Because your baby's movements have changed, or there are other concerns about your baby's wellbeing
- Pregnancy concerns e.g. high blood pressure and/or protein in the urine (pre-eclampsia), or gestational diabetes

Deciding whether to have an induction

Your doctor or midwife will explain why they are recommending or offering an induction of labour, but it is your choice whether to go ahead with an induction.

Whilst making your decision about induction of labour you may find it helpful to use the BRAIN tool below to help you talk to your midwife or doctor.

Benefits What are the benefits of induction for me and my baby?
.....
Risks What are the risks of induction for me specifically?
.....
Alternatives What are the alternatives?
.....
Intuition How do I feel? What do my instincts tell me?
.....
Nothing What if I decide to do nothing for now and wait and see? What happens next?
.....

If you choose not to be induced, or to defer your induction, we will make an individualised plan with you. You could discuss the option of some extra appointments at the hospital, including an ultrasound scan to assess the fluid around your baby and monitoring your baby's heartbeat. This can help to tell you how your baby is at the time, but unfortunately cannot predict or avoid problems that might happen suddenly and cannot predict the risk of a stillbirth.

If you are choosing to watch and wait, please contact the maternity unit as soon as possible (**020 3312 6135**) if you have any concerns about your baby's wellbeing or if you change your mind and would like an induction.

The risks of an induction

- Tachysystole and hyperstimulation. This means over-contracting of the womb, which could cause distress to you and / or your baby with some methods of induction. There is a medication that can be given by injection to treat this by relaxing the womb (terbutaline).
- Women who have an induced labour tend to give lower birth satisfaction scores compared to women who spontaneously labour. Inductions are also associated with a longer hospital stay.
- Induced labours are reported as feeling more painful than spontaneous labours and are associated with higher likelihood of regional anaesthesia use.
- Early induction of labour (37-39 weeks) is associated with a slightly increased risk for babies, compared to babies where labour is induced labour from 39 weeks onwards. We do not recommend inducing labour at 37-39 weeks unless there is a particular clinical concern that outweighs this risk.
- The induction might be unsuccessful.

What happens before an induction

Membrane Sweep

In the days before an induction, you may be offered a membrane sweep to help you go into labour. This involves your midwife or doctor performing an internal examination and placing a finger into the cervix and making a circular, sweeping movement to separate the membranes that surround the baby, or massaging the cervix. It may cause discomfort, pain or light bleeding. It will not cause any harm to your baby and will not increase the chance of you or your baby getting an infection. Membrane sweeping is not recommended if your membranes have ruptured (waters broken). You may be offered more than one membrane sweep.

What happens during an induction?

Induction of labour occurs in stages or as a 'stepped' approach. The induction process needs to happen gradually, so it is common for induction of labour to take two or three days (and up to five days) from the start of the induction to the birth of your baby.

- Step 1: Prepare or soften ('ripen') the cervix
- Step 2: Break the bag of waters around your baby (called 'ARM' artificial rupture of membranes)
- Step 3: Stimulate contractions with an oxytocin hormone drip into a vein in the arm

Monitoring your baby

Before we start the induction process, we recommend monitoring your baby's heartbeat for approximately 30 minutes. Two monitoring pads are positioned on your bump and held in place using wide elastic bands. The monitoring pads are attached to a cardiotogograph (CTG) machine, which records your baby's heart rate and your contractions.

Examinations

The midwife or doctor will usually offer a vaginal examination at the start of the induction and then at a few points throughout the induction process to check how prepared for labour your cervix is. This includes assessing how soft and stretchy your cervix is, how open it is, how long ('effaced') it is and how low down your baby's head is. If your cervix is already 'ready for labour' (this is more likely if you have had vaginal births before), you may be ready to proceed directly to step two and have your waters broken.

If your cervix is not ready for the waters to be broken, there are a variety of methods that can be used to prepare the cervix. Your options will depend on your individual circumstances and preferences.

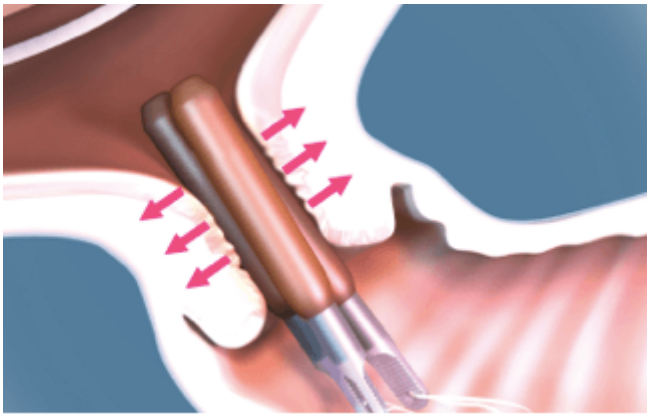
Step 1: Preparing your cervix

Your doctor or midwife will talk to you about your options for where this first step can take place. This may be on the labour ward or antenatal ward (for women having complications in their pregnancy), depending on the reason for your induction.

You may have the option of starting your induction in hospital and then going home until the first step is complete rather than remaining in hospital (this is called 'outpatient induction of labour').

There are two approaches to preparing the cervix.

Mechanical:



Dilapan-S (R) is the first-choice treatment for the mechanical approach. Dilapan are thin hydrogel rods that absorb fluid from the cervical tissue and expand within your cervix. This is a bit like how a tampon expands with moisture, but it expands in your cervix to dilate it. A midwife or doctor uses a speculum (as used for cervical smear tests,) to see the cervix and insert up to five rods. These can remain in for up to 24 hours but typically for 12 to 18 hours. They are then removed during a vaginal examination. The rods contain no medicine or drugs, and you will not need any medicines or drugs for this treatment, the focus is on expanding your cervix without them. Mechanical induction may stimulate your cervix to release hormones (prostaglandins) that naturally ripen the neck of your womb.

Cook's Balloon Catheter
A thin flexible tube is inserted through the cervix with or without the use of a speculum. Two balloons sit at the top and bottom of the cervix and inflate with water to about the size of a golf ball. It can remain in place for 12 to 24 hours although it may fall out before this time as the cervix dilates. Again, there are no medicines involved and it is intended to help your cervix releases hormones that naturally ripen the neck of your womb.

Risks of the mechanical method (either approach above):

- The rods or tube could be uncomfortable to insert
- There's a higher likelihood of needing an oxytocin drip and a longer time on drip
- Small risk of cord prolapse or pushing baby's head up out of pelvis with the balloon

Benefits:

- Least risk of hyperstimulation or scar rupture if planning VBAC
- Can be used more widely for outpatient induction (where you go home after the treatment and don't need to stay overnight in hospital)

Hormonal
Prostin gel or misoprostol tablets are usually recommended as first choice approach if you are having your induction in hospital. Propess is used if you are having your induction as an outpatient (not staying overnight in hospital).

Prostin gel: A low dose prostaglandin gel (1-2mg Dinoprostone) that is released into the vagina using a slim plastic applicator. It can be given every six hours, and is typically given once or twice, depending on how favourable (ready for labour) your cervix is. Prostin gel will only be used while you are in the hospital.

Misoprostol: a tablet to be swallowed that can be taken every two hours until regular contractions start. It has the lowest likelihood of hyperstimulation. But if contractions do occur too frequently, they can be harder to stop. Side effects of misoprostol include nausea and vomiting, although these side effects are uncommon.

Propess: a vaginal pessary (10mg Dinoprostone) which continually releases low doses of hormone to prepare the cervix. It looks like a small tampon and is inserted by a midwife or doctor in the same way as an applicator-less tampon. The tape of the Propess can be felt at the opening of the vagina for easy removal and is intended to remain in place for 24 hours. Propess has a higher likelihood of causing hyperstimulation than prostin gel but has the advantage of being removable if this does occur. (Hyperstimulation is when the uterus contracts too frequently or contractions last too long, which can lead to changes to the baby's heart rate.)

Risks of the hormonal method (either approach):

- Hyperstimulation (uterus has too many contractions and may need treating with medication to slow them down)
- Not always suitable for an induction if you don't want to stay overnight in hospital
- Occasionally causes vaginal irritation or other side effects

Benefits:

- Less discomfort at insertion
- More chance of spontaneous contractions
- May reduce the chance of needing a caesarean or assisted birth

What happens next?

When you have completed step 1 (either on the antenatal ward or as an outpatient) and your midwife or doctor has found that your cervix is open enough to have your waters broken, we aim to transfer you to labour ward as soon as safely possible. Delays in transfer do happen and when they do, we will try to keep you informed of the reason for delay.

Sometimes the waters break, or established labour starts, earlier during the induction process. This might mean that you are ready to go to the labour ward before the 'end' of step 1 of the induction. This may be for additional pain relief beyond that available on the antenatal ward (i.e. regional anaesthesia such as epidural), because of concerns for your baby's wellbeing or because labour is progressing more quickly than anticipated.

It can be frustrating to see other women leaving the bay in labour when your contractions have not started. Everyone responds differently to the induction process and if your labour progresses more slowly, this does not mean you are doing anything wrong.

Step 2: Breaking your waters

This takes place on the **labour ward** during a vaginal examination. Your midwife or doctor will see if it is possible to break your waters, known as 'artificial rupture of membranes' or 'ARM'. A sterile plastic instrument is used to make a small hole in the membranes around your baby.

You will have your baby's heart rate monitored for around 30 minutes using a CTG before the ARM is done. You may be offered time after this to move around and encourage contractions to start. Most people having an ARM for their first baby will need the hormone drip to make labour start (1 in 7 will labour after an ARM without needing the hormone drip). If you have had a baby before (in the last 10 years), then about 1 in 3 or 4 will labour without needing the hormone drip.

Step 3: Hormone drip

A hormone is given intravenously (IV) via a 'drip' (cannula) in your hand or arm on the **labour ward**, with a midwife providing care.

Oxytocin is a hormone naturally produced in your body and helps to make your womb contract and open your cervix. Syntocinon is the manufactured version of oxytocin that is used to stimulate your contractions during the third step of the induction process.

Whilst you are on the drip, we advise monitoring your baby's heart rate continuously. This can be done wirelessly so that you can move around and change position as you wish. Some movements or positions can interrupt the recording of your baby's heartbeat so we will work with you to maintain safe mobility. It is not possible to use the birth pool or showers whilst on the oxytocin drip, but your midwife can help you find comfortable positions.

The baby's heart rate monitor (CTG) is also used to record how often you have contractions. Your midwife will adjust the amount of oxytocin that you receive to produce contractions three to four times every 10 minutes, mimicking natural labour.

Everyone responds differently. For some people a small amount is needed to begin having contractions whilst others need much higher doses. A small amount is given to start with and increased every 30 minutes to achieve a safe and effective rate of contractions. Therefore, the time taken from starting the drip to having regular contractions will vary and may take several hours.

Sometimes too many contractions can occur and affect your baby's heart rate. If this happens you may be asked to change your position (usually to lie on your left side) to improve the blood flow to your placenta, the rate can be reduced, or the drip may be temporarily stopped.

Your midwife or doctor will answer any questions you might have regarding the hormone drip and support you to make a decision that is right for you. If you choose not to have the hormone drip, or delay starting it, it may mean your labour could take longer. If your waters have already been broken, then the longer the time between breaking your waters and having your baby can increase your baby's chance of having an infection.

Spending time at home during an induction (outpatient IOL)

Depending on the reason for your induction, you may be able to have the first stage of the induction (cervix preparation) in hospital as an outpatient and then go home once step 1 (cervical preparation) is started. This is called an outpatient induction. You need to have another adult at home with you and a means of transport back to the hospital. If this is something that you would like to consider, ask your doctor or midwife if this option has not been offered.

The benefits of outpatient induction are:

- Being in your own home environment rather than in hospital
- Research suggests that people cope with early labour better at home
- People having an outpatient induction report a better birth experience than those remaining in hospital for the whole process.

What happens during an outpatient induction?
You will be advised to attend the Maternity Triage and undergo checks of the fluid around your baby and monitoring of your baby's heart rate (CTG). If these checks are normal, you will have either a Propess pessary or Dilapan inserted (depending on what you have discussed as appropriate with your doctor). You will have a further 30 minutes of monitoring of your baby's heart rate and then be able to go home.

If you have had Propess inserted, you will be advised to attend the hospital 24 hours after insertion unless you have concerns sooner.

If you have had a mechanical method of induction, you will be given a time to attend hospital approximately 12-18 hours later.

It is important that you contact the maternity unit as soon as possible if:

- Your waters break
- You have any bleeding
- You are concerned about your baby's movements
- You have regular, painful contractions
- You cannot pass urine
- Your pessary falls out
- You feel unwell or have any sudden onset of pain

Can I still give birth on the Birth Centre?

You may be able to give birth at the Birth Centre if active labour has started during the first step of the induction process and you have no significant risk factors, and there are no fetal wellbeing concerns. You can discuss this in advance with your doctor or midwife. If you don't meet the criteria above, national guidance (NICE) recommends that you have your baby on a consultant-led labour ward.

How long does an induction take?

The length of induction is different for every person and depends on how ready the neck of womb is for birth. In general, it may take two to five days from the start of the induction for your baby to be born.

There may be delays in the induction of labour process as we need to ensure safety in terms of staff availability and bed capacity before proceeding at each step of the induction process. If there is a high level of activity across the Maternity Unit or pressure on bed capacity, we may delay starting your induction until it is safe to do so. You may be offered an alternative such as moving to our sister hospital site for your induction and birth or re-booking your induction for a different day (if appropriate).

There may be a delay once your cervix has opened enough for your waters to be broken and you are waiting for a bed on labour ward for the next stage. Moving to labour ward can only occur when there is both a room and a midwife available to look after you. The order in which people are transferred to labour ward is based on an assessment of their whole clinical background and prioritisation of safety rather than just length of time since admission.

It is impossible to predict how long delays may be due to labour ward being a high activity area accepting women who come in directly from home in spontaneous labour or with other critical conditions. Whilst every effort to minimise delays are taken when they do happen, we always aim to keep you fully informed, whilst continuing to monitor both you and your baby's health.

What to do on the day of induction

When you are admitted for your induction you will have your blood pressure, pulse and temperature checked. Your baby's heartrate will be monitored using a CTG before the induction starts.

Your birth partner can be at your initial induction assessment with you on the ward, and stay with you. They can also be with you when you are on the labour ward.

If you are staying in hospital on the antenatal ward for your induction, you will start in a four bedded bay area with other birthing people who may also be having an induction of labour. Once the induction has started, you are free to move around the ward and hospital area. We ask that you keep your midwife informed if you leave the ward. You will be given a call bell to alert a member of staff if you need. Please let your midwife know immediately if:

- You have any pain or tightening in your womb
- Your waters break
- You have any bleeding
- You are concerned about your baby's movements
- You cannot wee
- Your Propess or balloon falls out
- You have any other symptoms or concerns

What to bring with you into hospital

You may be in the hospital for a number of days during the induction process and you will spend time waiting, so please bring a book or something you can do while you wait.
Please bring your hospital bag with you when you come (even if you are planning an outpatient induction where you can go home afterwards). Please bring all your hospital notes.
You will be provided with breakfast, lunch and dinner as well as water, tea and coffee while you are staying in hospital. If you'd like specific snacks or drinks, please bring them.
We have a separate leaflet on what to bring in your hospital bag. As induction can be a long process, please do make sure you bring plenty of things to keep you comfortable and occupied.

The next steps if the induction doesn't work

If your cervix remains closed (not prepared for labour) and it is not possible to break your waters following a mechanical or hormonal approach in step 1 of the induction, your midwife and doctor will discuss your options with you. Depending on your wishes and circumstances you may be offered:

- Stop the induction and try again after a break (the next day or later, if appropriate)
- An alternative induction approach
- A caesarean delivery

Other resources:

NHS England - Inducing Labour: NICE Guidance for the Public:
https://www.nice.org.uk/guidance/ng207

Induction of labour Counselling Checklist
After reading the information leaflet and talking to your doctor or midwife, consider the discussion points below. You will have the opportunity at each appointment to review any areas that you would like to in more detail.

☐ Induction of labour is a medical intervention that will affect birth options and experience of the birth process
☐ Choice of place of birth may be limited, as interventions (eg, oxytocin infusion, continuous fetal heart rate monitoring and epidurals) that are not available for home birth or in midwife-led birth units may be recommended
☐ Limitations on the use of a birthing pool
☐ Hormonal methods of induction can cause hyperstimulation
☐ An induced labour may be more painful than a spontaneous labour
☐ Hospital stay may be longer than with a spontaneous labour.
☐ The reasons for induction being offered _____
☐ When, where and how induction could be carried out_____
☐ Outpatient Induction of Labour if appropriate
☐ Arrangements for support and pain relief
☐ The alternative options if choosing not to have induction of labour

How do I make a comment about my visit?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any **suggestions** or **comments** about your visit, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) on **020 3312 7777** (10.00 – 16.00, Monday to Friday). You can also email PALS at imperial.pals@nhs.net The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.
Alternatively, you may wish to complain by contacting our complaints department:
Complaints department, fourth floor, Salton House, St Mary's Hospital, Praed Street
London W2 1NY
Email: ICHC-tr.Complaints@nhs.net Telephone: **020 3312 1337 / 1349**

Alternative formats

This leaflet can be provided on request in large print or easy read, as a sound recording, in Braille or in alternative languages. Please email the communications team: imperial.communications@nhs.net

Wi-fi

Wi-fi is available at our Trust. For more information visit our website: www.imperial.nhs.uk

Maternity
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