

Childbirth - medical interventions

The onset of natural labour is triggered by the hormone oxytocin, which prompts the uterus to contract. These contractions also soften and widen the cervix (neck of the womb), so that the baby can exit the uterus via the vagina. The opening of the cervix is known as the first stage of labour. Pushing the baby out of the vagina is the second stage, and the delivery of the placenta is the third and last stage.

A normal, problem-free labour is every pregnant woman's wish, but medical intervention is needed to help the birth of the baby in around one third of cases. Some of the techniques used include induction, augmentation, episiotomy, forceps delivery, vacuum delivery and caesarean section. There are some concerns that medical intervention rates in Australia are too high, which suggests that procedures are being used when they are not always necessary. For example, intervention rates in private hospitals are higher than in public hospitals. On the other hand, mortality rates for both mothers and their babies are exceptionally low, thanks to medical intervention techniques. A pregnant woman should discuss her concerns with her doctor and consider making a 'birth plan', which outlines her preferences.

Induction

Induction means to bring about labour before it spontaneously occurs. Around 20 per cent of pregnancies are induced. Reasons for induction may include multiple births, gestational diabetes, maternal high blood pressure, a pregnancy well past its due date, or slowed growth of the baby. Some methods of inducing labour include:

- **Vaginal prostaglandin gel** – a hormonal gel which is applied to the cervix to encourage it to soften and open. It can take between six and 18 hours for the gel to take effect and trigger labour. Dilators inserted into the cervix may also be used.
- **Amniotomy** – or breaking the waters. The membrane holding the baby and amniotic fluid is punctured with a slender instrument, inserted into the vagina and through the opened cervix. Labour usually begins around 12 hours after the procedure.
- **Oxytocin** – this hormone is produced by the mother's pituitary gland and prompts the uterine contractions during labour. A synthesised version of the hormone is given via an intravenous drip to stimulate contractions.

Augmentation

Contractions of the uterus during labour generally take about 40 to 60 seconds, spaced two to five minutes apart. Sometimes, labour begins naturally but the contractions aren't effective. A labour that's progressing slowly can be augmented, which means certain techniques are used to speed it along. These techniques include:

- **Amniotomy** – breaking the waters
- **Oxytocin** – this hormone is administered via an intravenous drip to stimulate uterine contractions.

Episiotomy

The area between the vagina and anus is called the perineum. Once the baby's head starts to crown (appear), the perineum will tear if it can't stretch enough. These naturally occurring tears can be difficult to stitch and may not heal very well. In around three or four per cent of cases, the vagina tears right through to the anus. An episiotomy is an intentional cut of the perineum, using a pair of scissors. This clean cut is much easier to control and repair, tends to heal better than a tear, and is less traumatic to the underlying muscle and tissue.

Forceps delivery

If the baby is in the vagina, but can't seem to progress any further, forceps may be used. These are like giant salad-serving spoons that are gently inserted into the vagina and cupped around the baby's head. An anaesthetic may be used for the mother. American research has found that the use of forceps is no riskier for the mother and baby than a caesarean section, provided the doctor is experienced.

Vacuum delivery

Similar to the use of forceps, a vacuum delivery aims to help the baby out of the vagina. A giant suction cup is placed on the baby's head. An anaesthetic may be used for the mother.

Caesarean section

A caesarean section (or c-section) is the delivery of the baby through an incision in the mother's abdomen. This operation can be planned well before the birth, or may need to be performed as an emergency during labour. Around one in four Australian babies are delivered by caesarean section, and the risks are relatively low compared to other types of major surgery. A caesarean section is needed if a vaginal birth isn't possible; some of the reasons for this may include:

- **Head size** – the baby's head is larger than the mother's pelvic opening
- **Breech presentation** – the baby is bottom or feet first, rather than head first
- **Transverse presentation** – the baby is lying sideways
- **Placental praevia** – the cervix is blocked by the placenta
- **Placental insufficiency** – the placenta is no longer providing the baby with enough oxygen
- **Multiple births** – in some cases, multiple babies are delivered by c-section
- **Dangerous maternal conditions** – such as pre-eclampsia or hypertension
- **Fetal distress** – the baby may not be receiving enough food or oxygen
- **Prolapsed umbilical cord** – the cord nourishing the baby has been pushed through the cervix into the vagina
- **Last resort** – when the baby can't be delivered any other way.

Improving the odds for a normal labour

There are certain things you can do during pregnancy to improve your chances of having a normal labour, including:

- Don't smoke.
- Don't drink alcohol, or drink moderately only on occasion.
- Don't take any 'social' drugs.
- Don't take any medications, unless prescribed by your doctor.
- Have regular medical checkups.
- Go to antenatal classes.
- Exercise gently and regularly throughout your pregnancy.
- Eat a well-balanced diet.
- Discuss any concerns or unusual symptoms immediately with your doctor.

Where to get help

- Your doctor
- Obstetrician
- Midwife

Things to remember

- Medical intervention is needed in around one out of every three births.
- Procedures can include induction, augmentation, episiotomy, forceps delivery or caesarean section.

- A pregnant woman should discuss her concerns and preferences about medical intervention with her doctor.

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