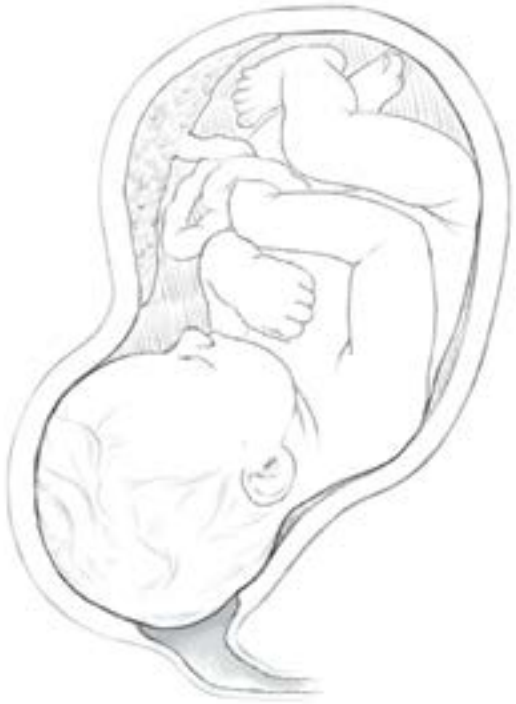
Epidural Anaesthesia During Childbirth

The aims of this pamphlet are to:

- ***Provide you with some basic information about having an epidural to assist with provision of pain relief during childbirth***
- ***Help you understand some of the main benefits and limitations with epidural pain relief***
- ***Encourage you to ask questions of your obstetric team and anaesthetist (if they are involved)***



Introduction

Childbirth is a natural process however women have sought pain relief in labour right throughout history from ancient times. Every woman experiences labour differently, and no two births are the same. Pain, discomfort, pressure are some of the ways women have described their experience during labour although how your labour feels to you is likely to be different to how other women experience their labour and we also know that there is no right way or wrong way to experience labour pains. Some will find labour more uncomfortable than others. As healthcare providers we want to support you to cope with and manage your labour experience. Having a sense of choice and control can help with this. Some women may want pain relief in their labour right from the start, some find they want it later, and some women choose to birth with none at all. It is very individual, and what works for you may not work for other women and vice versa.

What is an epidural?

An epidural is pain relief for labour that is delivered via a soft, flexible catheter or tube, which is placed in your lower back and is effective in relieving the pain or discomfort of labour. The fine tube remains in place during labour although the needle that is used to guide its insertion is removed.

Advantages of an epidural

Epidural pain relief has been used by millions of women around the world for many decades, and it is considered the most effective form of pain relief in labour.

Some women may be advised to have an epidural placed because of medical conditions (eg high blood pressure or heart problems) or as a result of complications of pregnancy such as pre-eclampsia. Your obstetrician will tell you if they think you will need an epidural in labour, otherwise it is a completely personal choice.

How does an epidural work?

The spinal cord is found in the back, enclosed by the bones in your back or vertebrae. It is a bundle of nerves carrying messages to and from the brain. A thick membrane encases the spinal cord and surrounding fluid. You can think of this as being like the plastic sheath surrounding an electrical wire. “Epi” means “on top of” or “outside”. Thus, the “epidural space” is the space outside the spinal cord and spinal fluid. The epidural catheter is placed in this space. A strong solution containing local anaesthetic or “numbing medicine” is trickled through this plastic tube to bathe the nerves coming to and from the spinal cord and prevents them from sending pain signals to the brain. Once the tube is in the correct space, the needle is removed and the epidural catheter is secured into place with strong tapes and dressings. The epidural catheter can be left in position for as long as it is required and is usually removed after your baby is born.

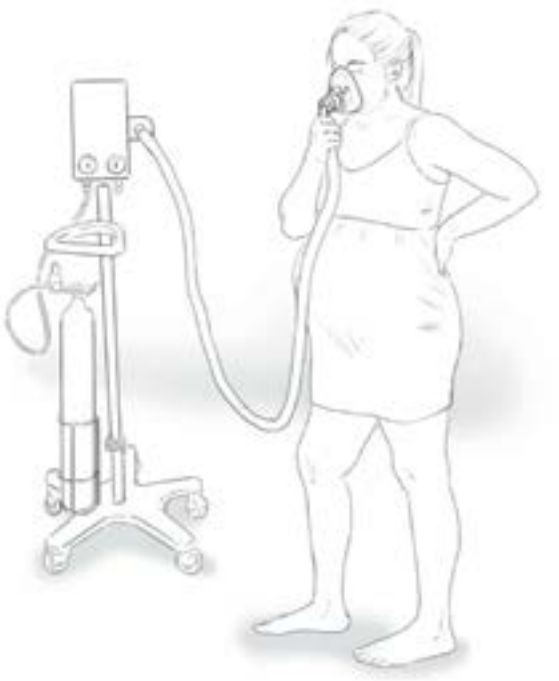
The epidural does not normally give complete pain relief instantly. You may feel that your next few contractions are shorter, or slightly less intense. Gradually the discomfort will improve although it is very common for a pressure sensation to remain. This is more common with some particular positions of the baby in the birth canal.

How is the epidural done?

If you decide that you want an epidural, your midwife will contact a specialist anaesthetist. Your anaesthetist will come to the room and talk with you about the epidural, and ensure you have understood about the potential risks of having an epidural. They will also ask you about previous reactions to anaesthetics or other medicines and about your general health. You will need an IV (intravenous line, cannula or 'drip') put in before your epidural is inserted for safety reasons. You may also need to have a blood test performed to check your blood is clotting correctly.

Your anaesthetist and midwife will help you get into position for your epidural. This is often a sitting position however some anaesthetists will place an epidural with you lying on your side. Of course having contractions is normal in labour, and your midwife and anaesthetist are used to working around those and with you to get you into position. You will need to be able to sit still.

Your lower back will be cleaned with an antiseptic solution. Preventing infection is important and your anaesthetist will also perform a special hand wash, wear a surgical gown, gloves and mask, and keep all their equipment sterile on a special tray. Then a strong local anaesthetic or 'numbing' medicine is injected into the skin of the lower back. This allows your epidural to be placed more comfortably. Your



anaesthetist will locate the exact place to insert your epidural and then the epidural catheter is placed. The position of the epidural is identified by feel alone in most cases and knowledge of expected anatomy so it can take some time to perform effectively. Remember that the needle does not remain in your back. Once it has been placed correctly the needle with be removed and only a thin flexible catheter (tubing) will remain.

Just as everyone is different in their appearance, no two women have identical spines and epidural spaces. It may be harder to find the exact gaps between the backbones to place the epidural in some women than others. Sometimes several injections may be needed. Getting into a good position can really help, by opening up the spaces between the backbones. The lower back (or lumbar spine) needs to be pushed backwards in a curving or "C" shape to open up these spaces. The better the gaps between the bones, the easier it is to place the epidural, and the more quickly you can start to feel the benefit of pain relief.

What are the alternatives?

There are many ways of supporting women through their birthing journey. Experience and research tells us that support during labour and also perception of control and choice during labour is very powerful with respect to how we cope with our labour pain and how positively we recollect our birth experience later. There are many choices about how you manage your

experience of pain during labour. Techniques for managing pain in labour can be divided into relieving pain or coping with pain techniques. For example, water immersion, relaxation and acupuncture can for some women improve pain and improve satisfaction with pain relief. There are also pharmacological, or techniques using drugs and medicines. These include using gas to breathe, opioids and other painkillers. Breathing gas helps many women however some women will also experience vomiting nausea or dizziness. Of course it makes sense that no one technique will be right for all women, and all technique have their benefits and disadvantages. It is important to tailor methods used to each woman's wishes, needs and circumstances.

What are the risks of epidurals?

Having an epidural increases the number of medical interventions that your midwife and doctors will need to do. For example you will need to have close monitoring of your blood pressure, baby and contractions. You won't be able to walk around, have a shower, sit in the bath or use a birth ball or stool because your legs will feel numb whilst your epidural is working and you will need increased monitoring. An epidural sometimes makes the second stage of labour longer and may increase the risk that your doctor may need to assist in your baby's birth with forceps or a vacuum cup on baby's head. Research shows there is no increased chance of needing a caesarean section due to having an epidural.

The epidural will have no effect or hardly any effect on your baby although some women find their labour is slowed down by having an epidural and some find it is "speeded up".

There are some relatively common and some uncommon risks or side effects of epidurals.

For example you may develop shivering, itchiness, low blood pressure or a fever during the epidural. Your body won't feel the urge to urinate so you will have a urinary catheter placed- a tube that collects urine from your bladder.

Epidurals sometimes don't work as well as we would like. Up to one in eight epidurals may not work successfully the first time they are placed and may need further intervention. They can be partially effective, never be effective, work on one side more than the other, 'wear off', need repeating or need another "top up" by an anaesthetist.

A severe headache related to your epidural is possible. This occurs somewhere between 1 in 100 and 1 in 200 patients. This type of headache occurs in the days following your epidural and may need treatment.

If you are overweight, it may take longer for the

Risk	How often does this happen?	How common is it?
Significant drop in blood pressure	1 in 50 women	Common
Not working well enough to reduce labour pain so you need to use other ways of lessening the pain or require additional anaesthetic	1 in 8 women	Common
Not working well enough for a caesarean section so you need to have a general anaesthetic or spinal	1 in 20 women	Sometimes
Severe headache	1 in 100 women	Uncommon
Nerve damage (numb patch on a leg or foot, or having a weak leg)	Temporary - 1 in 1,000 women	Rare
Nerve damage - lasting for more than 6 months	Permanent - 1 in 13,000 women	Rare
Epidural abscess (infection) / meningitis	1 in 50,000 women	Very rare
Epidural blood clot or unexpected anaesthetic spread	1 in 100,000 women	Very rare
Severe injury, including paralysis	1 in 250,000 women	Extremely rare

epidural to be put in, and the failure rate is higher- it may take more than one attempt to get it right.

Research shows that epidurals for childbirth do not have any increased chance of new long-term backache however there may be minor bruising or temporary tenderness over the insertion site. Backache is common after any pregnancy.

Serious risks

There are some more serious risks of epidurals, which are also very rare. For example a numb patch related to nerve damage, which may be temporary or permanent. The risk of this is very rare (less than 1 in 13,000) however it is increased in some specific circumstances eg abnormal bleeding or clotting conditions or with a pre-existing infection. Nerve damage resulting in severe injury including paralysis is extremely rare.

Who can't have an epidural?

A small number of women cannot have an epidural due to some pre-existing problems with the back such as spina bifida, previous types of back surgery for scoliosis ("curvature of the spine") or conditions where the blood does not clot properly- such as some forms of pre-eclampsia, blood disorders or some kinds of anti-clotting medications.

Because an epidural takes a short while to become fully effective, if you are very close to having your baby, it may be that having an epidural will be of limited value. In addition, you need to be positioned carefully for it to be put in, and this can be extremely hard once your body is preparing to push. (Some birth suites may reduce the epidural rate or epidural drip prior to pushing).

How long does it take?

It can take a while to safely set up and perform the epidural, as strict infection control needs to be used. Good pain relief can take about 20 minutes from the time the epidural is placed so 20 minutes to set up and 20 minutes to work. Be aware it may take a little time before an anaesthetist is able to attend to place your epidural: many patients may require attention at the same time or there may be someone having a delivery in the operating theatre. A doctor may need to be called in from home. Please be assured that someone will attend as soon as is possible.

What should I expect once the epidural is working?

Once the epidural is effective, you can expect to feel more comfortable. Some women may still feel a sensation of their contractions, but without the same experience of pain. Some women describe this feeling as 'tightness' or a 'surge' sensation. Some women feel a pressure sensation. Some women may not feel their contractions at all. Most women are somewhere in between. Some people are able to get some rest, which can be helpful with managing the rest of your labour experience. The epidural can usually be used for the duration of your labour. This may be several hours. It will be connected via tubing to a pump and will either run continuously or give you top up doses from time to time. Different hospitals use different programs but there is some evidence that intermittent doses from the pump with a lower concentration than what we have used in the past can give more efficient pain relief. In some hospitals you will be given a button you can push from time to time which will give you extra doses of medicine down your epidural catheter. The catheter will be removed from your back once you no longer need it, usually after the birth of your baby.

If I need to have an emergency caesarean section can my epidural be used?

Yes. Having an emergency caesarean can be a confronting and overwhelming experience. Your midwife, anaesthetist and obstetrician will work with you to help you understand what your options are and why an emergency caesarean section is being recommended. If you need to have an unplanned caesarean section and you already have an epidural in that is working well then in most instances the same epidural catheter can be used to add a stronger local anaesthetic medication and "top up" your pain relief/numbness so you can have your procedure comfortably without repeating the epidural or spinal anaesthetic.

"I've heard epidurals makes breastfeeding less successful" – is that true?

Most women who have an epidural for childbirth are able to breastfeed successfully if that is what they want to do. There was one single study suggesting that when some opioid medications are used in an epidural that the rates of successful breastfeeding

are less. Repeated, larger studies have not been able to confirm this finding. It is likely to either not be true or be of minimal effect.

A positive labour experience

We have observed that preparing for your birth can help to reduce pain and anxiety, so talking to your midwife, doctor and attending antenatal classes are very good ways of helping you have a positive labour experience. Involving your support person(s) and partner where possible before you go into labour aids this. Experience and research tells us that support during labour and your feeling of control and choice during labour is very powerful in helping you manage your pain. Remember that your plans and preferences may change once you go into labour: it's important to consider that birth is a biological process and biological processes do not always follow our conscious plans no matter how much we want. Things change, and it's a good idea to consider that more than one option may be required.

Combine Spinal Epidural

There may be some circumstances where it is suggested that you receive a CSE or Combined Spinal Epidural. What does this mean? A CSE is standard epidural, which is combined with an extra dose of strong medication to be given at the start in a slightly different location: into the CSF or fluid that surrounds your spinal cord. This technique can help you achieve pain relief faster than an epidural alone, but it may also contribute to extra risks including being more difficult to assess whether your epidural itself is working correctly. In some circumstances a CSE will be recommended and used in a low dose for a particular purpose or due to anaesthetist preference. Your anaesthetist can tell you more about this technique if it is being used.

Where can I go to get more information?

This is general information only. If you have questions please ask- your anaesthetist will be able to answer any questions you have.

Please look at ***Pain Relief During Childbirth*** for more details on some of the other pain relief options during labour and childbirth.

Note that there is a lot of information about epidurals on the internet. Not all of it is trustworthy, based in research and evidence, or relevant to how anaesthesia is practiced in Australia. One trustworthy site which also includes information in more than 20 languages (via the 'translations' tab) is labourpains.com. Languages include Arabic, Farsi, Chinese, Somali, Punjabi and Tamil. Whilst it is from the UK, the procedures used and shown are very similar to those in Australia.

Glossary:

Anaesthetist: a fully trained medical doctor who has completed more than five years of extra training after medical school to become a fully qualified Specialist Anaesthetist. Many anaesthetists have done up to 15 years of training to become an expert in anaesthesia and pain management.

Catheter: a hollow tube. It can be used in many areas of the body such as a urinary catheter, or epidural catheter.

Local Anaesthetic: a medicine that is used to stop nerves carrying signals. It works by temporarily stopping the electrical signal being conducted along the nerve fibres. Commonly used local anaesthetics include Lignocaine/Lidocaine, Bupivacaine and Ropivacaine.

Opioid: a strong painkiller for example fentanyl, morphine or pethidine

Australian Society of Anaesthetists
PO Box 76, St Leonards, NSW 1590, Australia
1800 806 654 | asa@asa.org.au | ABN 16 095 377 370 | asa.org.au

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