

Epidurals and childbirth

Questions

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How common is it for women to have an epidural in labour?

Regional anaesthesia (epidural, combined spinal-epidural or spinal) is used in approximately one third of labouring women (Pregnancy outcome in South Australia 2005, Adelaide Pregnancy Outcome Unit, Adelaide, South Australian Department of Health. Chan A, Scott J, Nguyen AM, & Sage L 2006).

Twenty five per cent of women in the United Kingdom and 66 per cent of women in the United States receive epidural analgesia in labour. In some European countries the number is as high as 98 per cent. (Differences in management and results in term delivery in nine European referral hospitals: descriptive study. *European J Obstetrics Gynaecology Reproductive Biology*: 2002; 103:4-13)

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How do epidurals compare in terms of providing pain relief with other options?

Epidurals are by far the most effective pain relief available to women in labour, though other options are available when an epidural is contra-indicated or otherwise unavailable. (Current opinion in Obstetrics and Gynaecology 2001, 13:583-587).

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What is the optimal timing of getting an epidural?

Should women wait until they are far into labour before asking for an epidural? There used to be a commonly held belief that women in labour should wait until the cervix was 4cm dilated before receiving an

epidural to reduce the risk of having a caesarean section (Halpern S, Abdallah F, Effect of labor epidural analgesia on labor outcome. *Current opinion in Anaesthesiology*: 23: 317-323, 2010). Numerous studies demonstrate that early placement of epidurals does not increase the rate of caesarean section. The article above concluded there is no need to deny women in labour adequate pain relief if required. There are a variety of factors that will determine the timing of the epidural. As a general rule, provided there are no contraindications for you to have an epidural, and upon consultation with the midwife and/or obstetrician, you can request the epidural at any stage during the labour.

There may be medical reasons for placement of an epidural such as having high-blood pressure prior to or during labour, the condition known as pre-eclampsia or toxæmia, or the need for use of medications that augment and speed up labour due to poor/slow progress.

The other factor that needs to be kept in mind is that usually but not always the length of labour is shorter with each subsequent pregnancy. If this is not your first labour, the window of opportunity may be shorter for the epidural to be inserted and have its effect before delivering the baby. You should discuss the desire to have the epidural with your obstetrician or midwife looking after you at the time of labour. They will be able to advise you on the timing depending on the progress and status of your labour and medical condition at the time.

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Will I need to have a caesarean section if I have an epidural?

Not necessarily. Epidural analgesia is not associated with an increased incidence of caesarean section when compared with other methods of pain relief such as morphine or pethidine injections into a muscle. Regional analgesia may be associated with increased duration of the second stage of labour and instrumental vaginal birth (delivery requiring use of forceps), but has no effect on the risk of caesarean section (Obstetric Anaesthesia, Scientific Evidence 2008). Prolonging the second stage of labour poses no significant risk to the mother and baby.

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Will an epidural affect my baby?

Epidural analgesia has no effect on the immediate status of the baby. (Obstetric Anaesthesia, Scientific Evidence 2008)

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Can epidurals cause back pain?

Epidurals are generally not associated with increased incidence of back pain after childbirth. (McGrady E,

Litchfield K, Epidural analgesia in labour, Continuing Education and Anaesthesia, Critical Care & Pain, volume 4 No 4, 2004)

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What are the risks associated with epidural?

Block failure

A retrospective analysis in the United States of 19,259 deliveries showed a failure rate of 12 per cent. (Pan PH, Bogard TD, & Owen MD 2004; Incidence and characteristics of failures in obstetric neuraxial analgesia and anesthesia: a retrospective analysis of 19,259 deliveries, International Journal of Obstetric Anesthesia 13:227-33).

Post-dural puncture headache

This occurs when the epidural or spinal needle inadvertently breaches the dura mater. Dura is a tissue cover, which surrounds and encases the spinal cord and the bathing cerebrospinal fluid. The spinal fluid leaks out of the hole made in the dura. Dural puncture occurs in approximately 1 per cent of epidural blocks, however, not all patients in whom dura has been punctured develop headaches. (Pan PH, Bogard TD, & Owen MD 2004, Incidence and characteristics of failures in obstetric neuraxial analgesia and anesthesia: a retrospective analysis of 19,259 deliveries, International Journal of Obstetric Anesthesia 13:227-33).

The likelihood of developing a headache is related to the size of the epidural or spinal needle used as well as the age of the patient, with younger patients having a higher risk. Of the patients that have had an inadvertent dural puncture, more than 50 per cent will develop what is known as a post-dural puncture headache (PDPH). The headache usually develops within 48 hours but may occur later.

The headache is characterised by its onset on assuming an upright position and resolving on lying flat. It is usually a dull, pressure-like headache affecting any part of the skull and can also extend to the neck and upper back. Other symptoms may include mild hearing loss or ringing in the ears, known as tinnitus, as well as double vision and neck stiffness. The headache can be associated with nausea, vomiting and pain in the eyes on looking at the light (photophobia).

Not every headache after labour in women who have had an epidural or spinal block is a post-dural puncture headache. There can be many causes, including tension headache and preeclampsia.

Most headaches will settle within a few days but some may last longer (Thew M, Paech, Jb, Management of postdural puncture headache in the obstetric patient. Current Opinion in Anaesthesiology Issue: Volume 21(3), June 2008, p 288-292). Management is divided into conservative and performing epidural blood patch. Your anaesthetist will explain and discuss these treatments with you.

Conservative treatment includes bed rest, adequate fluid intake either by mouth or by injection into a vein,

and oral analgesic medications. There is low-level evidence of the use of oral and intravenous caffeine (prepared for injection). If this approach fails and or the headache is severe then an epidural blood patch may be considered.

Epidural blood patch is by far the more effective treatment. It usually involves two anaesthetists, one who performs the epidural and the other who collects blood from the same patient. Blood is taken in an extremely sterile way with the arm washed with betadine solution to minimise the chance of contamination. The blood is then injected through the epidural needle. This treatment is thought to “patch” or “plug” the hole in the dura from the original labour epidural, when the blood clots.

Low blood pressure (hypotension)

Blood pressure may drop after the administration of local anaesthetic administered via the epidural or spinal route. For this reason, monitoring of blood pressure and of the foetal heart rate begins immediately prior to performing the epidural or spinal block and continues regularly throughout labour for as long as the local anaesthetic drugs are being given via the epidural.

Temporary leg weakness

Leg weakness is due to the effect of local anaesthetics on nerves controlling the movement of legs. It usually occurs with a prolonged duration of epidural drug administration. The effect is temporary and wears off within several hours.

Fever

Compared with narcotic drugs administered for pain relief, epidural analgesia is associated with up to four times the incidence of fever (temperatures above 38 degrees). It is not known why but is usually of no significance. (Philip J, Alexander JM & Sharma SK 1997, Epidural analgesia during labour and maternal fever, *Anaesthesiology* 90, 1271-5)

Permanent neurological injury

Neurological (nervous system) injury may include sensory loss, motor weakness and paraplegia. Data from a large recent audit published in *British Journal of Anaesthesia* in November 2006 showed the incidence of permanent harm (defined as symptoms persisting for more than six months), including death was 0.6 per 100,000 women who had an epidural for labour.

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