

Epidural for pain relief after surgery

An 'epidural' is a safe and effective method of pain relief that has been used in children for many years. This information sheet is to provide you with important information including why an epidural may be chosen, and what to expect when your child has an epidural for postoperative pain relief at Great Ormond Street Hospital (GOSH).

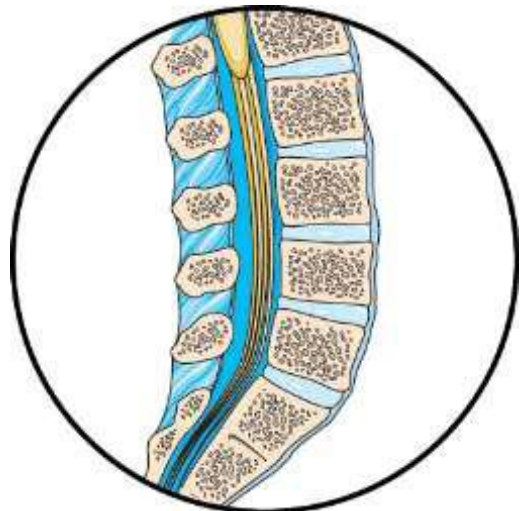
An epidural may be offered or recommended for your child; and if so, you will have an opportunity to discuss this with the anaesthetist prior to surgery.

What is an epidural?

An epidural is a continuous infusion of pain relief medicines given through a small plastic tube into the epidural space; an area near the spinal cord and close to the nerves that conduct painful sensations from the area of surgery.

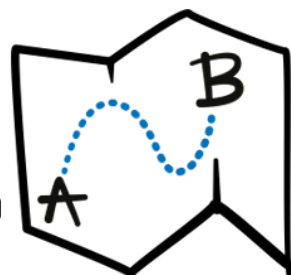
An experienced anaesthetist places the tube by passing it between the bones of the lower back whilst your child is asleep, under general anaesthetic. The tube is held in place with a sticky clear plastic dressing.

also be mixed with a small amount of morphine or other medicines which also help to relieve pain.



How does an epidural work?

Local anaesthetic solution in the epidural temporarily 'blocks' or numbs the nerves from the site of surgery, preventing pain messages getting through to the brain. The local anaesthetic can



When is an epidural chosen?

Epidurals are generally used after major operations that are expected to be quite painful and where pain would therefore be difficult to control, or need very high doses of other painkillers.

Advantages of an epidural include better pain relief with much lower doses of medicines like morphine that can have problematic side effects, better postoperative recovery of breathing and other body systems, and they can also be useful if a child will not be able to take medicines by mouth for a few days after surgery.

The anaesthetist will assess the balance of benefits and risks for your child, taking into account their general state of health and the type of surgery they will have, when deciding whether to offer or recommend an epidural.

Can any child have an epidural?

No, if your child has any of the following, an epidural may not be suitable:

- Problems with blood clotting, or if they are taking anti-coagulants (blood thinning) medicines
- Broken or infected skin on the back, or certain infections in other areas
- Some kinds of previous spinal surgery or spinal problems
- Previous allergic reaction to local anaesthetic medicine

If an epidural is not suitable for your child, a different method will be used to keep your child comfortable.

What to expect with an epidural?

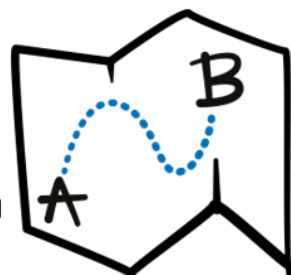
For most children, an epidural remains in place for three to four days after surgery. The local anaesthetic solution is delivered through a plastic tube by a special infusion pump. The rate of infusion can be changed by nursing staff to increase or decrease the amount of pain relief.

During the operation, while your child is asleep, a urinary catheter will be inserted into the bladder to drain urine while the epidural is being used. This will stay in place until the epidural is stopped.

The ward nurse will monitor the effectiveness of the epidural by regular pain assessment and may also do a 'sensory block check' which can help us to know whether the epidural block is working as it should. To do a sensory block check the nurse will touch various points on your child's body with ice and ask them what they can feel; obviously, this check can only be done with children that are able to cooperate and respond.

The local anaesthetic can sometimes make your child's legs feel heavy or numb, and so they will also check that they are able to move their legs, wiggle their toes, or bend their knees. If your child can't do this, the infusion rate will usually be reduced. The ward nurses also need to reposition your child regularly to ensure their skin does not get sore, check that the dressing over the epidural site is secure, and monitor for any signs of infection or other complications.

Pain Control Service staff will visit your child every day and, depending on how comfortable they are, will gradually reduce the amount of epidural solution infused. Before the epidural is stopped, we will make sure that your child is able to have other pain relief medicines to keep them comfortable. When your child no longer needs the epidural, the tube will be removed. This is not painful.



Risks and side effects

Serious problems with epidurals are rare or very rare, but side effects and problems can occur, so it's important to be aware of them. It's also important to be aware that alternatives to an epidural have many similar risks and side-effects.

Side effects that are very common include: feeling sick or itchy, legs feeling heavy or numb, or local anaesthetic solution leaking around the epidural at the skin which requires a new dressing. Less commonly, the epidural may fall out or not work properly. If either of these happens, different pain medicines will be given instead.

Skin infection can occur at the site of the epidural. This is also uncommon, but the epidural would be removed, and antibiotics might also be given.

Rarely or very rarely, damage to nerves can occur; this could be from when the epidural was put in, from a blood clot (haematoma) pressing on the nerves, or from a serious infection in the epidural space. All of these are very rare. If suspected, an MRI scan to investigate the problem (possibly under a general anaesthetic) might be needed and treatment with antibiotics and/or surgery, depending on the cause.

Nerve problems resulting from an epidural are rare. If they do occur, altered feeling or strength that persists after the epidural has been removed is possible. Symptoms range from altered feeling in a small patch of skin to numbness and/or weakness in one or both legs; any effects usually get better over days or weeks. It is very rare for this to be permanent. Long term nerve damage (a problem lasting more than 6 months) occurs in less than 1 in every 10,000 epidurals.

Other very rare problems that can occur include high levels of local anaesthetic in the blood (local anaesthetic toxicity), or slowing of breathing due to the morphine in the infusion.

All these risks must be mentioned, but are very

low risks indeed. An epidural will only be offered or recommended if your medical team (anaesthetist and surgeon) believe that the benefits outweigh the risks for your child. As mentioned above, alternatives to epidurals (including nerve blocks or morphine infusions) have many similar risks and side effects.

More information

More detailed information on interpreting and understanding risks can be found in the 'Your child's general anaesthetic' information sheet and in the 'Understanding risk' information sheet – both are available from the Anaesthetic Pre-Operative Assessment clinic (APOA) and on our website. In addition, for further information on how your child's pain will be managed after an operation or procedure at GOSH, please ask for a copy of our general 'Pain relief after surgery' information sheet, available from ward nurses, the Pain Control Service, the Pals Office, APOA, and also on our website.

