- Anesthetics

SCIENCE

WHAT ARE EPIDURALS?

How drugs injected into the spine can have a powerful anaesthetic effect

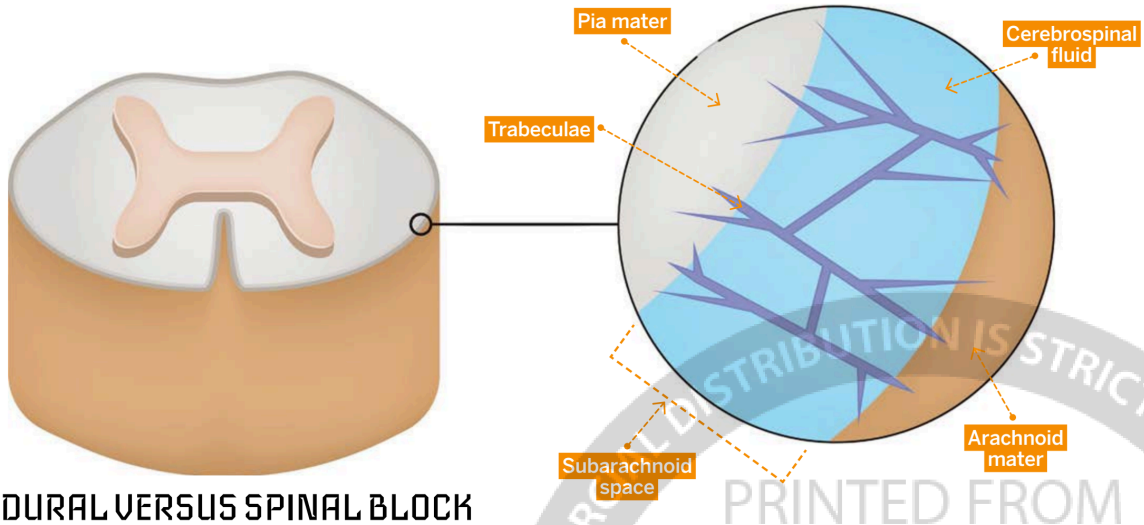
WORDS AILSA HARVEY


Numbness is felt between the belly button and upper legs

Around 60 per cent of pregnant patients going into labour receive an epidural for childbirth. This is a common form of pain relief for labour and involves receiving medication just outside the membrane surrounding your spine. An epidural is given as an injection of medicine into the lower back, delivered to the major nerve in the spine. The exact height on the spine where the medicine is injected depends on where in the body needs pain relief. After the medicine is injected, sensation from below the waist is either lost or greatly reduced. In childbirth, the sensation of pressure can still be felt so that a pregnant person can push to deliver a baby. Epidurals are also used to relieve pain for conditions such as a herniated disc, a pinched nerve and some surgeries.

When receiving an epidural, a patient typically stays awake. An intravenous drip is put into their arm so that they can receive fluids during the procedure, as an epidural can affect a person's blood pressure. First, a smaller needle is used to apply local anaesthetic to the area that the main needle will be inserted into. Then a larger needle is used to inject the back, close to the spinal cord. When the needle is removed, a catheter remains in the spine with medicine that's released for the time required. 10 to 20 minutes after receiving a dose of anaesthetic, the pain relief should come fully into effect.

"An epidural is given as an injection of medicine into the lower back"

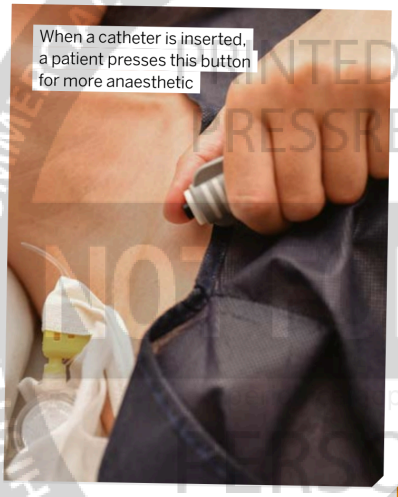


EPIDURAL VERSUS SPINAL BLOCK

Although epidurals and spinal blocks are similar and can be used in the same situations, there are differences between them. Both are used in childbirth, with a spinal block completely numbing the body below the chest. Meanwhile, epidurals can be administered to provide different levels of relief depending on the circumstance. A spinal block delivers anaesthetic into the cerebrospinal fluid, which surrounds the spinal cord, while an epidural is inserted into the epidural space outside the membrane that contains cerebrospinal fluid. A spinal block is quicker to relieve pain, but an epidural maintains pain relief for longer. An epidural is usually chosen for labour pain relief, while surgeries below the waist, such as C-sections, favour spinal block treatment.

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DID YOU KNOW? During a labour epidural, a patient receives one to two litres of intravenous fluids


When a catheter is inserted, a patient presses this button for more anaesthetic

TWO DIFFERENT EPIDURAL TYPES

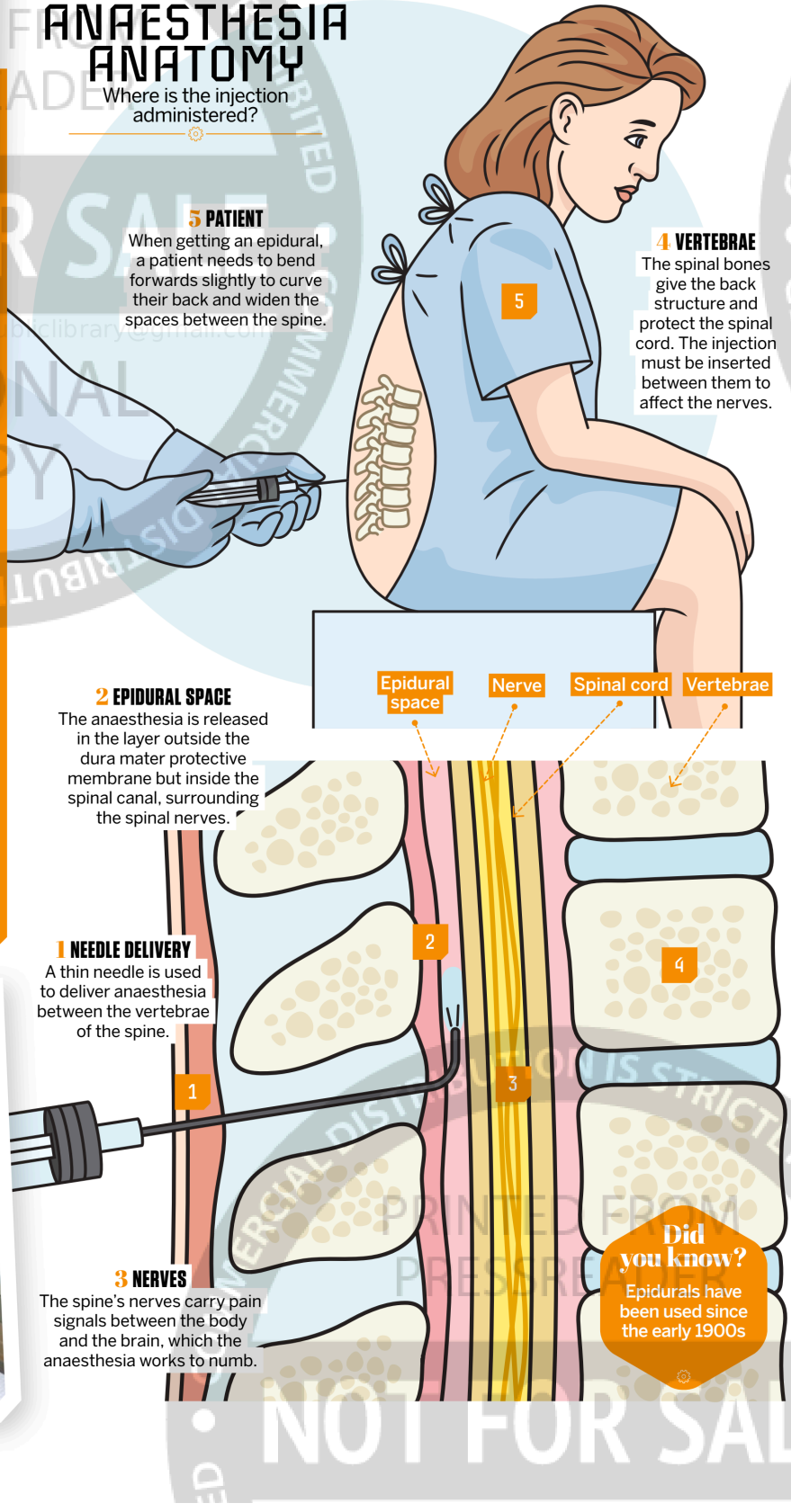
There are two types of epidurals – epidural anaesthesia and epidural steroid injections. The anaesthesia blocks feeling and pain in the body, while the steroid injections control inflammation and chronic pain. A steroid is injected into the same epidural space as the anaesthesia, but the effects can last for weeks or months in some instances.

When multiple doses are needed, a catheter can be inserted into the epidural space. This is useful for longer surgeries when one injection wouldn't be enough. In cases of chronic pain, there are catheters that are designed to stay in the body. The patient uses a device to control when medication is released.


Epidurals are usually given before active labour

ANAESTHESIA ANATOMY

Where is the injection administered?



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