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What is anaesthesia?

Anaesthesia is a medical procedure to make a patient comfortable during surgery. A doctor specially trained in anaesthesia normally performs this procedure.

What are the different types of anaesthesia?

Anaesthesia is broadly divided into general anaesthesia where the patient is asleep and regional anaesthesia, where only a part of the body is made numb. In practice, the two techniques are often combined. For many procedures such as endoscopies, full unconsciousness is not required. These techniques may be called deep sedation or monitored anaesthesia care. It is very rare for the patient to have any recollection during these procedures.

General anaesthesia

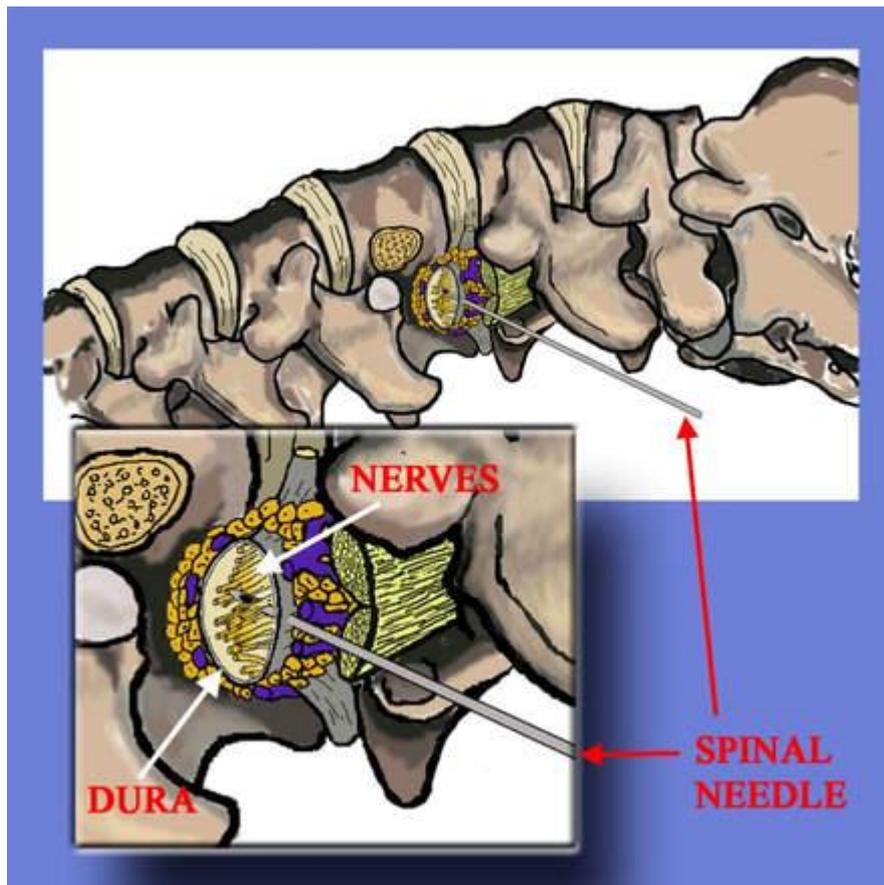
This involves drugs to produce unconsciousness given through the lungs as a gas or through the veins. The breathing is usually controlled by a device in the back of the throat called a laryngeal mask or via a tube in the windpipe. While unconscious the muscles may sometimes be relaxed to reduce muscle tension, in which case the breathing is taken over by a ventilating machine.

Regional anaesthesia

Regional anaesthesia is the use of local anaesthetics to produce numbness over an area of the body, most often in the limbs although sometimes in the abdomen. Common types are spinal, epidural and nerve block anaesthesia

Spinal anaesthesia

Spinal anaesthesia involves injection of local anaesthetic into the spinal fluid. It produces numbness and weakness in the lower part of the body. Sometimes non painful feelings may be felt. The local anaesthetic is given via a lumbar puncture using a special fine needle after local anaesthetic is placed into the skin of the lower back.



This diagram shows the position of the needle for spinal anaesthesia within the spine. Some of the bony coverings have been removed to picture the spinal space. Lumbar puncture has had a reputation for being an uncomfortable experience however with modern techniques and needles it is often painless after the local anaesthetic is injected.

Epidural anaesthesia

Epidural anaesthesia involves the identification of the epidural space in the spine and the injection of local anaesthesia. The onset of anaesthesia is slower than with spinal anaesthesia and it is infrequently used alone. Most commonly a fine tube called an epidural catheter is passed into the epidural space to give pain relief after the operation, usually with major surgery. This is called epidural analgesia. Placement of an epidural is very similar to a spinal anaesthetic. Epidural infusions are sometimes used after major surgery for pain relief.

Nerve block anaesthesia

Nerve block anaesthesia is often combined with general anaesthesia to give long lasting pain relief after the operation, it may also give anaesthesia to enable surgery without general anaesthesia. A local anaesthetic injection is made near major nerves to produce the block. Ultrasound is usually used to guide the needle. Benefits include prolonged pain relief and the avoidance of general anaesthesia in some cases. Although permanent nerve damage is very rare following nerve blocks temporary tingling or other unusual sensation in the limb may occur. Fine catheters may also be placed and prolonged pain relief provided by a slow drip of local anaesthetic.

Common Problems

Post operative Nausea and Vomiting

Nausea and vomiting can be side effects of anaesthesia, but can also simply be related to the operation. The rate has reduced with modern anaesthesia and a number of special techniques are available to reduce the risk. Please advise me if you have had this problem in the past.

Sore throat

During general anaesthesia it is usual to have a device passed through the mouth to control the breathing. This procedure commonly leads to some soreness of the throat post-operatively.

Back discomfort

Anaesthetic techniques that involve an injection in the back may produce some temporary bruising and potential soreness. Positioning for surgery may also lead to back ache.

Headache

After spinal and epidural anaesthesia there is a small risk of a headache related to the technique. This is called post dural puncture headache and the risk is generally less than 1 in 100. Sometimes the headache needs another injection in the back to cure it. Other causes of headache after anaesthesia and surgery include caffeine withdrawal, stress and fasting.

Rare Problems

Heart and breathing disorders

Surgery, especially major surgery, places a strain on the body. This is particularly so if you have other illnesses such as heart or lung disease. I need to assess your health prior to your anaesthetic to minimise this risk. It is important to fast (stop eating and drinking) as instructed before anaesthesia to empty your stomach of food and fluid. This may otherwise cause problems by getting into your lungs during the anaesthetic. If you take tablets for reflux or heartburn you should take one of these tablets on the morning of surgery to help empty your stomach. You should take any blood pressure and heart tablets and asthma puffers as normal before anaesthesia, if you are diabetic you should receive special instructions. Stopping smoking for even 6 weeks before anaesthesia will reduce complications both during anaesthesia and after the surgery.

Nerve damage

Permanent nerve damage after anaesthesia is very rare, either with general or regional anaesthesia. Nerve damage may also be related to surgery or the position during the operation. The risk of permanent nerve damage after epidural injection is estimated at one in ten to twenty thousand and much lower than this after spinal injection. Nerve bruising may occur with nerve blocks (about 1 in 60), 99.9% of these recover within a few weeks.

Unintended awareness

Some anaesthetic techniques such as regional anaesthesia or intravenous sedation do not necessarily prevent you remembering the procedure. I will however always aim to ensure that you are comfortable. Unintended memories of your operation are extremely rare.

Dental damage

Instruments and devices in your mouth may lead to damage to the teeth, particularly when you are waking up. I will inspect your teeth pre operatively to assess this risk.

If you have any questions regarding your anaesthetic or post operative pain relief please discuss these with me during your pre-anaesthetic consultation.