

About Anaesthesia

What is Anaesthesia?

Anaesthesia involves the administration of medications to reduce pain and discomfort, or provide loss of consciousness during surgery and other invasive procedures.

The anaesthetist also helps to ensure that you remain stable so that the surgery or procedure can be performed safely.

Why do I need Anaesthesia?

Your surgery or procedure requires you to be sedated or unconscious, or for certain areas of your body to be numb in order to be carried out safely and with as minimal discomfort as possible



What are the preparations?

Please provide your anaesthesia care team with accurate and complete information regarding your

- Medical issues
- Medications and other supplements
- Allergies
- Previous anaesthetic/sedation experience, and
- Possible pregnancy

You will be given instructions regarding your usual medications as well as the fasting time required prior to your surgery. It is important that you follow these instructions closely as they help to ensure that you have a safe surgery or procedure.

What are the options?

There are different types of anaesthesia available to facilitate your surgery:

1. General anaesthesia
2. Spinal/Epidural anaesthesia
3. Peripheral Nerve Block (PNB)
4. Monitored Anaesthesia Care (MAC) or moderate/deep sedation

The type(s) of anaesthesia provided to you is determined by many factors including your co-existing medical conditions, the type of surgery or procedure planned and the preference of the surgeon and anaesthetic provider.

You can make your preference known to your anaesthesia care team once the options have been discussed.



1) General Anaesthesia

It is an unconscious state with no awareness of your surroundings. You should not see, hear or feel anything during the surgery or procedure.

How is it achieved/performed?

Anaesthetic medications are administered, usually through the bloodstream, or by other routes to induce a state of unconsciousness. A breathing tube is commonly placed into the windpipe to assist your breathing. This is usually removed at the end of the procedure.

What are the risks and complications?

Common side effects:

- Mild and self-limiting side effects include sore throat, drowsiness, headache, nausea and/or vomiting, blurred vision, shivering, muscle aches, bruising or pain at injection sites.

Uncommon side effects:

- These include hoarseness/change of voice, injury to the lips and/or teeth, awareness during anaesthesia, aspiration, chest infection, heart attack and stroke.

Rare but serious complications:

- These include infection around the injection site, bleeding, injury of surrounding structures (kidneys, ureters), severe drug allergies, local anaesthetic toxicity and seizure.
- Inadvertent spinal or epidural block that causes difficulty breathing, numbness of the chest, trunk and limbs.
- Injury to surrounding nerves that results in anterior thigh pain syndrome or lower limb paralysis.



2) Spinal/Epidural Anaesthesia

A temporary decrease or loss of sensation and/or movement in the lower half of the body. Spinal/epidural anaesthesia may be used to facilitate procedures in the lower half of the body, or as a means of pain relief during and after surgeries.

How is it performed?

Anaesthetic medications are administered into/near the spinal canal through a needle or a catheter to cause numbness and/or temporary weakness in the lower half of the body.

What are the risks and complications?

Common and temporary side effects:

- Drops in blood pressure
- Shivering
- Itching
- Inability to pass urine

Uncommon side effects:

- Headache, backache
- Infection, bleeding, nerve damage resulting in persistent/prolonged weakness or numbness
- Partial or failed block requiring conversion to general anaesthesia



3)Peripheral Nerve Block

Administration of medications resulting in temporary loss of sensation and movement of all or part of the limb or trunk involved in the surgery or procedure.

How is it performed?

Anaesthetic medication is administered through a needle near nerves supplying the area of the body where surgery is to be performed. There will be a temporary loss of power and sensation in the area that has been anaesthetised.

What are the risks and complications?

Common side effects:

- Temporary numbness and/or paralysis of the area of body where the block has been performed.

Uncommon side effects:

- Pain and bruising at the injection site
- Partial/failed block with inadequate numbness requiring additional medications or conversion to general anaesthesia
- Infection, bleeding, nerve damage resulting in persistent/prolonged weakness or numbness, seizures



4) Monitored Anaesthesia Care (MAC) or Moderate/Deep Sedation

Medications are administered to reduced (but not complete loss of) awareness and discomfort, and partial or total amnesia of the surgery or procedure. It may be used alone, or in conjunction with regional anaesthesia (spinal/epidural/peripheral nerve block).

How is it performed?

Sedative / Anaesthetic medications are administered, usually via the bloodstream to reduce anxiety and discomfort surrounding the procedure.

What are the risks and complications?

Common side effects:

- Nausea and/or vomiting, slowed breathing
- Pain at surgical site
- Pain / bruising at injection sites

Uncommon side effects:

- Aspiration (saliva or vomitus being inhaled into the lungs resulting in a chest infection)



What are the other risks and complications of anaesthesia?

Although uncommon, unexpected severe complications can occur with all types of anaesthesia.

These include severe allergic reactions to drugs or blood products given infections, blood clots in the legs or lungs, permanent loss of limb sensation or function, blindness, stroke, heart attack, brain damage, need for a breathing tube and ventilator support after surgery, and possibly death.



Your surgery may require insertion of invasive lines, such as an Intra-arterial Line or a Central Venous Line.

These are used for monitoring you closely, for blood sampling during or after the procedure/surgery, and for administration of certain medication.

There is a small risk of bleeding, infection, and injury to the blood vessels or other surrounding structures during the insertion of these invasive line.

What can I expect after anaesthesia?

- For most procedures done under general anaesthesia or MAC/sedation, your medications will be stopped at the end of the procedure or surgery and you will regain consciousness shortly after.
- In the case of regional anaesthesia (spinal/epidural/peripheral nerve block), the numbness and weakness in the affected areas will slowly wear off after a period of time.
- Once the surgery or procedure is complete, you will usually be monitored in the post-anaesthetic recovery area for a period of time prior to being discharged home or to the ward.
- Depending on your medical history and the nature and complexity of your surgery, you might require monitoring in the High Dependency Unit (HDU) or Intensive Care Unit (ICU) postoperatively.



Postoperative analgesia/pain management

Your doctor will discuss appropriate forms of analgesia before your procedure/surgery.

- Spinal/epidural analgesia, as detailed in Page 4
- Peripheral nerve blocks, as detailed in Page 5
- Patient Controlled Analgesia (PCA), where a pump containing medication will be connected to you, allowing self-administration of pain medication
- Intravenous or oral analgesia, where painkillers are either administered to you via your bloodstream, or given to you to take orally



Contributed by Department of Anaesthesia

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