



Introduction

This leaflet aims to provide you with the basic information about the central neuroaxial block that you are going to receive. If you have any questions about your anaesthesia that are not covered in this leaflet, please discuss with your anaesthesiologist who will be willing to answer your questions.

What is central neuroaxial anaesthesia?

Central neuroaxial anaesthesia involves blocking the sensation of the lower part of the body by injection a local anaesthetic into your dural space or epidural space. There are mainly three different types of central neuroaxial anaesthesia:

Spinal anaesthesia: A small amount of local anaesthetic drug is injected into your spinal canal so that there is loss of sensation and motor power of the lower part of your body.

Epidural anaesthesia: A local anaesthetic drug is injected into your back through a fine plastic tubing which is placed into your epidural space. Compared to spinal anaesthesia, this block takes effect more slowly but the effect can be continued for hours by injecting drugs through the catheter. It may be beneficial for long procedure.

Combined spinal epidural anaesthesia: The spinal and epidural anaesthesia can be done together using a specially designed needle set.

Which one is better? Spinal/ Epidural Anaesthesia or General Anesthesia?

There is no absolute answer as both carry their own benefits and risks. Choice of anaesthesia will depend on your general health, types and length of surgery and your anaesthesiologist and surgeon's preference.

In general, spinal / epidural anaesthesia have its own advantages:

- Avoid the risks and unpleasantness associated with general anaesthesia e.g. Nausea, vomiting, dizziness, sore throat etc.
- Avoid risks of airway obstruction, aspiration especially in general anaesthesia
- Readily resume diet after the operation
- Reduce blood loss in certain surgery
- Reduce risk of blood clots formation in lower limbs
- Better immediate post-operative pain control

How do I know whether spinal anaesthesia or general anaesthesia is more suitable for my operation?

Your anaesthesiologist will perform pre-anaesthetic assessment including enquiry about your medical, anaesthetic history, present health condition, perform physical examination and review your investigation results. Your anaesthesiologist will suggest the most suitable mode of anaesthesia after thorough consideration.

What will I expect during the operation?

In the theatre, your anaesthesiologist, surgeon and operation nursing staff will check your identity, the type of operation, the site of operation and the type of anaesthesia before the procedure. Various monitors will be attached to you. Your anaesthesiologist will insert a catheter/plastic tubing into your vein with a needle to give you intravenous fluid before performing central axial block. You may be asked to lie on your side or sit up to facilitate the block performance. The block will be done under sterile technique. It is important for you to follow your anaesthesiologist's instruction during the block performance. After injection of local anaesthetic, you may feel numbness and heaviness over your lower part of body. Your anaesthesiologist may give you sedative drugs to make you more relaxed and comfortable. In Caesarean Section, you may feel some stretching or tugging during delivery of the baby. In some occasion, you may experience involuntary shivering for a short period.

What if the spinal / epidural anesthesia does not work?

Spinal / epidural anaesthesia are usually 90-99% likely to work. If it does not work, you may need to convert to general anaesthesia. Moreover, if the length of surgery is prolonged or the surgery turns out to be a more complicated one, you may also need to convert to general anaesthesia.



What are the risks of central neuroaxial anaesthesia?

In general, central neuroaxial anaesthesia is very safe

Common side effects:

- Mild pain at injection site
- Transient lowering of blood pressure, may present with nausea and vomiting
- Self limiting headache (less than 1 in 100)
- Transient difficulty in passing urine (may need short term urinary catheterization)
- Itching associated with opioids use

Rare complications

- Spinal or epidural haematoma (Blood clot)
- Epidural abscess and infection
- Transient neurological symptoms (less than 1 in 5,000)
- Permanent neurological symptoms (less than 1 in 100,000 to 1 in 150,000)
- Local anaesthetic toxicity
- Cardiac arrest

Are there any conditions not suitable for central neuroaxial block?

Some conditions may make you unsuitable for central axial block:

- If you refuse
- If you have bleeding disorder: ease of bruising/prolonged bleeding
- If you are on anticoagulant or anti-platelet treatment
- If you have infection over your back around the proposed insertion site
- If you have operation of the back before, especially with the presence of implant
- If you have brain or spinal lesions
- If you have spine abnormality or deformity
- If you have history of hypersensitivity to the local anaesthetic drugs

Am I allowed to eat or drink before spinal / epidural anaesthesia?

Even though you are not going to have general anesthesia, in order to prevent aspiration of food or liquid into your lungs, you should not eat for at least 6 hours before your operation. You can safely drink small amount of water up to 2 hours before anaesthesia. If you have an emergency operation, special anaesthetic technique will be used to reduce the risk of aspiration. Your doctor and nurses will give you clear instructions about fasting and you should follow them strictly.

Should I still take my usual medications during fasting?

Your doctor will advise you on which usual medications you should or should not take on the day of your operation. You are allowed to take your medications with a mouthful of water while you are fasting.

When will my sensation returns after the operation?

Usually your sensation and power will return within several hours after the surgery. If there is any delay in return of sensation, please tell your doctor or nurses as soon as possible.

Would I experience severe pain after my sensation returns?

You will be given oral analgesics or intramuscular / intravenous analgesics after the operation.

Will I have low back pain afterwards after spinal / epidural anaesthesia?

There is no evidence that spinal or epidural anaesthesia will cause persistent low back pain.

Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

Reference

Smart Patient Website of Hospital Authority: Central Neuroaxial Block (Spinal/Epidural Anaesthesia) for Adults (8/2018)