It is normal to have some concerns before your surgery. One concern you may have is the safety of anaesthesia. Will you lose consciousness? How will you feel afterwards? Is it safe?

**What is anaesthesia?**

Anaesthesia is a “loss of sensation”. It stops you from feeling pain and other unpleasant sensations and can be given in various ways. Not all anaesthesia makes you unconscious and it can be directed at different parts of the body. An anaesthetist will accompany you throughout the procedure to care for you.

**Common types of anaesthesia**

**Procedural sedation**
Used on procedures where general anaesthesia is not required, it allows patients to tolerate painful and uncomfortable procedures.

**Regional anaesthesia**
This involves injecting drugs around major nerve bundles. It may be used on its own or combined with general anaesthesia. Such anaesthesia may cause numbness or a tingling sensation in the area supplied by the nerves. The patient may also experience difficulty moving that part of the body temporarily.

**General anaesthesia**
This produces a drug-induced state in the patient, rendering him/her unable to respond to any stimuli, including pain. It may be associated with changes in breathing and circulation.

**Who are anaesthetists?**

Anaesthetists are fully qualified medical doctors with specialist training in anaesthesia. Your anaesthetist will be with you throughout the operation, from pre-operation assessment to the close monitoring of your health and well-being.
Your anaesthetic journey

Before the operation
A comprehensive health check will be performed to ensure your safety during anaesthesia and minimise the likelihood of any complications. You will be asked a series of questions about your health and blood tests, ECG check, X-Rays, and other tests will be advised as required.

After a complete assessment of your health, we will discuss with you your choice of anaesthetics, its benefits and risks. You are encouraged to ask questions and share any concerns you have with your anaesthetist.

How do I prepare for my operation?

Stop smoking
Smoking reduces oxygen in your blood and increases the risk of breathing difficulty during and after your operation.

Fast
You will be required to fast before an operation to prevent food and liquid in your stomach from choking and causing serious damage to your lungs. Please adhere to this strictly.

Medications
Your anaesthetist will advise you on the type of medications you can consume or stop taking before your operation. If you are unsure, please consult your anaesthetist.

Unwell
If you feel unwell, please inform our hospital before the operation. Depending on its severity, we may reschedule your operation until you feel better. Your anaesthetist will advise you accordingly.
In the operating theatre

Once you arrive at the operating theatre, your heart, blood pressure and oxygen levels will be monitored. A small plastic tube will be inserted into one of your veins to administer medications and fluids. You will then receive your choice of anaesthetics.

An operating theatre is a very busy place with staff preparing for your procedure. It may also get very noisy. Medications may be given to patients to relax and prepare them for the operation.

After your operation

You will regain consciousness in the recovery room as we continue to monitor your blood pressure, pulse rate and oxygen levels.

Ensuring your comfort is our topmost concern and our staff will care for you and relieve any pain or feelings of sickness after your surgery.

Once we are satisfied that you have safely recovered and your observations are stable, we will discharge you from the general ward. Depending on the nature of your operation, it may take about two weeks before you can return to normal eating and drinking.

Keeping you pain-free

It is important we keep you as pain free as possible. Your anaesthetist will discuss the types of pain-relieving methods to help you make a more informed choice.
What are my pain relief options?

There are many options available and combinations of treatment may be used for effective pain relief. This depends on the type of surgery, your doctor’s advice and your individual preference.

**Oral medicines**
These medications are useful to control mild to moderate pain after surgery (e.g. day surgery procedures). For effective pain control, these medications should be taken at set times. It may take about 20 minutes for the medication to work each time. Sometimes they are supplemented by other pain-relieving techniques.

It is important to let your doctor know if you have an allergy to a particular type of drug or prior discomfort with a painkiller.

**Suppositories**
These waxy pellets are inserted into your back passage and dissolved to allow medication to pass into your body. Suppositories are used when you cannot swallow a medication.

**Pain-relieving injections**
These medications are given through a plastic tube inserted into a vein in your hand. Occasionally, it is given through a muscle in your arm or buttock. This could provide faster relief for your pain.

It is important to let your nurse or doctor know when the painkiller is wearing off and you feel uncomfortable. Do not wait until pain is unbearable before alerting someone. Preparing another injection can take time and it is harder to control pain when it has become severe.
Patient-controlled analgesia
This method allows you to control the amount of medication required. It involves the use of a machine with a linked handset. By pressing the button, pain relief will be released.

Epidural analgesia
Epidural analgesia involves an anaesthetist placing a very fine tube (catheter) into your back. This procedure is usually done just before the operation or sometimes after the operation. This method provides very satisfactory pain relief.

Nerve blocks
This is commonly done on limb surgery and involves inserting a very fine tube (catheter) into the nerve sheath that supplies the limb. Painkillers in the form of local anaesthetics are given through a tube (catheter) to numb the area of your surgery for enhanced pain relief.

Benefits and risks of anaesthesia
Safety in anaesthesia
Anaesthesia has made much of today’s surgeries possible, bringing with it great benefits. However, these benefits need to be weighed against the risks in any anaesthetic procedure.

<table>
<thead>
<tr>
<th>The risks to you as an individual will depend on:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Whether you have any illness</td>
</tr>
<tr>
<td>• Personal factors: do you smoke or are you overweight?</td>
</tr>
<tr>
<td>• Types of surgery: Is it complicated, long or done in an emergency?</td>
</tr>
<tr>
<td>• Pre-existing conditions: Do you have hypertension or sleep apnoea?</td>
</tr>
</tbody>
</table>
Side effects and complications of anaesthesia

Common (1 in 10 to 1 in 100)

- **Feeling sick and vomiting after surgery**
  - In some operations, anaesthetic and pain relief drugs are more likely to cause nausea. Such sicknesses last from a few hours to several days but can be treated with anti-vomiting drugs.

- **Sore throat**
  - If a tube was inserted into your airway at operation, a sore throat may happen. Such discomfort usually lasts from between a few hours to a few days.

- **Dizziness, blurred vision**
  - Your anaesthetic or loss of fluids during the procedure may lower your blood pressure and cause you to feel faint. Fluids and drugs will be given to you to treat this.

- **Shivering**
  - The Operating Theatre may be cold. Efforts will be made to keep you warm during your procedure.

- **Headache**
  - There are many causes of headaches, ranging from anaesthetic, operation, dehydration to anxiety. Headaches get better after a few hours and can be treated with pain-relieving medicines. Severe headaches rarely occur after a spinal or epidural operation.

- **Itching**
  - This is a side effect from opiates (morphine), but may also be caused by an allergy. Itching can be treated with medication.

- **Back and muscle aches**
  - During your surgery, you will lie down in the same position for a long time. At times, back and muscle aches could be a result of a muscle relaxant called succinylcholine. This is used at emergency surgeries or when your stomach cannot be empty before an operation.

- **Confusion or memory loss**
  - This is common among older people under general anaesthetic. Confusion and memory loss rarely persist beyond a few days and at most a couple of weeks.

- **Bladder problem**
  - After certain operations or regional anaesthesia, some patients experience problems passing urine. This is temporary and will go away. To prevent it from occurring, a urinary catheter may be inserted at suitable times to help the patient cope.

- **Pain during injection of drugs.**
- **Bruising and soreness around drip sites.**

Uncommon (1 in 1,000)

- **Chest infection and breathing difficulties**
  - A chest infection is more likely to occur in smokers. It is important to give up smoking for as long as possible before your anaesthetic. Some pain-relieving drugs can also slow down breathing, or cause drowsiness in a person. Such effects are usually treatable with drugs.

- **Damage to teeth, lips or tongue**
  - This is uncommon, but there is still a risk as a breathing tube is inserted into your airway and may occur in people with existing dental problems, a small mouth, stiff jaw or neck.

- **An existing medical condition that is worsening**
  - Your anaesthetist will ensure you are as fit as possible before a surgery. However, if you have had a heart attack or stroke before surgery, it is possible it may recur. Other conditions such as diabetes and high blood pressure also require close monitoring and treatment.

- **Awareness**
  - Awareness is the state of being conscious during an operation under general anaesthetic. Monitors used at operation show how much anaesthetic is in your body and how your body responds to it to allow your anaesthetist to decide how much anaesthetic you need.

Rare or very rare complications (1 in 10,000 to 1 in 100,000)

- **Damage to the eyes**
- **Serious allergy to drugs**
- **Nerve damage**
- **Death**
- **Equipment failure**
For more information

Ng Teng Fong General Hospital and Jurong Community Hospital
1 Jurong East St 21,
Singapore 609606
General enquiries: 6716 2000  Fax: 6716 5500
www.juronghealth.com.sg

Clinical and appointment line hours (closed on Sundays and public holidays)
For appointments, please call 6716 2222
Monday - Friday 8.00am - 5.30pm,
Saturday 8.00am - 12.30pm

For dental appointments, please call 6716 2233
Monday - Thursday 8.00am - 5.30pm
Friday 8.00am - 5.00pm

Jurong Medical Centre
60 Jurong West Central 3,
Singapore 648346
General enquiries: 6551 7888  Fax: 6551 7880
www.jmc.com.sg

Clinical and appointment line hours (closed on Sundays and public holidays)
For appointments, please call 6551 7828
Monday - Friday 8.00am - 5.30pm,
Saturday 8.00am - 12.30pm

For dental appointments, please call 6716 2233
Monday - Friday 8.00am - 5.30pm

Getting there

By train
Jurong East MRT Station

By bus
From Jurong East Bus Interchange
SBS 51, 52, 66, 78, 79, 97, 97e, 98, 98M, 105, 143, 143M, 160, 183, 197, 333, 334, 335, 506
Along Boon Lay Way
SBS 99, Private bus service 625

By train
Boon Lay MRT Station

By bus
SMRT 172, 178, 180, 187

Disclaimer:
The information in this brochure is meant for educational purposes and should not be used as substitute for medical diagnosis or treatment. Please seek your doctor’s advice before starting any treatment or if you have any questions related to your health, physical fitness or medical condition.