NEPHRECTOMY PATIENT INFORMATION

The information contained in this booklet is intended to assist you in understanding your proposed surgery; some of the content may or may not apply to you. Feel free to discuss any issues and questions you may have about your surgery with the medical and nursing staff looking after you. If required, your nurse will arrange for an interpreter to assist with explaining the contents of the booklet. The interpreter can also be present for doctors' consultations. Please bring this book with you to hospital as it is a useful guide.

What are the Kidneys?

The kidneys are bean-shaped organs approximately 12cms long and are partially protected by the lower part of the rib cage. The main function of the kidneys is to produce urine. Urine travels through hollow tubes (one per kidney) called ureters to the bladder where it is stored and later passed. The kidneys also play a part in blood pressure control, the formation of red blood cells and the body's calcium balance.

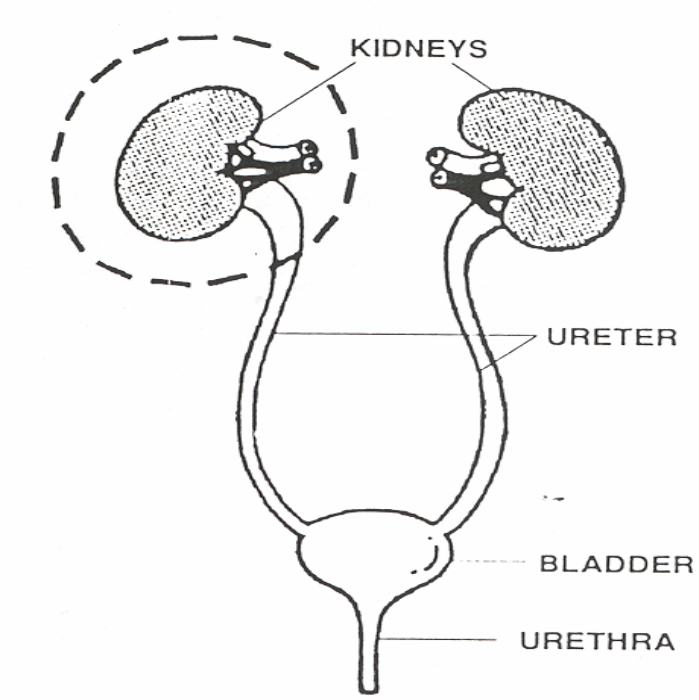
What is a Nephrectomy?

A Nephrectomy is the surgical removal of your kidney when disease or severe injury has caused permanent damage. A single kidney can carry on the functions normally managed by both kidneys and you can return to good health after the operation. Your doctors will have performed tests before this surgery was planned to ensure that your remaining kidney is functioning normally.

The reason for your Nephrectomy will indicate which one of three types of Nephrectomy will be performed – partial, simple or radical.

- A **Partial Nephrectomy** means that only part of the kidney is removed. This is usually done when a person has poor kidney function or only one kidney.

- A **Simple Nephrectomy** is the removal of the kidney only. The ureter is tied off and the adrenal gland that sits on top of the kidney is left behind. This is done for poorly functioning kidneys which are due to either large kidney stones, a lack of blood supply or abnormal kidney structure.



- A **Radical Nephrectomy** is the removal of the kidney and its surrounding fat. Sometimes the adrenal gland and/or the ureter is also removed. A radical nephrectomy is done to treat cancer of the kidney.

Why do I need a Nephrectomy?

Common reasons for a nephrectomy are:

- Cancer of the kidney
- Staghorn calculus where there is significant tissue damage and recurrent infection
- Very large, painful cysts
- Non-functioning kidney causing problems eg. high blood pressure
- Live donor kidney transplant
- Chronic infection which has led to kidney scarring and loss of function
- Kidney trauma with uncontrolled bleeding

Potential Complications

All urological surgical procedures carry a small risk of post-operative bleeding and wound, chest and urinary tract infection. You will be monitored for these risks and treated promptly if they occur.

- **Excessive bleeding**
  Your wound, drain(s) and vital signs (blood pressure and pulse) will be monitored for signs of excessive bleeding.

- **Infection**
  Your chest, wound and urine will be monitored for early signs of infection and intervention will be put in place if it occurs. To reduce the risk of infection antibiotics are given directly into your bloodstream during your operation and continued post-operatively if necessary. You can also assist with the

prevention of infection by maintaining good hygiene and doing your deep breathing exercises. Early mobilisation also helps.

- **Prolonged bowel inactivity (paralytic ileus)**
  There is a small risk of paralytic ileus following any major surgical procedure that involves handling of the bowel, prolonged anaesthetic time or large amounts of strong pain killing medication. This means the intestinal tract is very slow to return to its normal function. If a paralytic ileus occurs you are likely to experience nausea, vomiting, a bloated abdomen and/or intestinal cramps. These symptoms can be relieved by the use of a nasogastric tube to drain the stomach's normal secretions while the bowel rests and recovers.

- **Incisional hernia**
  As a wound heals, scar tissue forms creating a bond between the two sides of the incision. The scar tissue is strong but can still occasionally tear or give way. This leads to a bulge developing along the scar (incisional hernia) usually within one to five years after surgery. A hernia may not cause any discomfort but if it is troublesome it may require repair.

Length of Stay

The usual length of stay is four to seven days. However, if you need to stay longer for a medical reason, your doctor will discuss this with you.

Before Surgery

Informed consent

After consultation with the doctor you will be asked to sign a form to give written consent for the surgeon to perform the operation and for an anaesthetic to be administered. Relevant sections of

the form must also be completed if you agree to a blood transfusion and/or if your particular surgery involves the removal of a body part and you wish to have this returned. Our expectation is that you feel fully informed about all aspects of your surgery before giving written consent.

The following health professionals are available to help you with this process.

Medical staff

Your surgeon will explain the reason for the Nephrectomy and the risks associated with the surgery. Your doctors will visit you every day while you are in hospital to provide medical care and answer questions about your surgery and progress.

Nurses

A nurse will explain what to expect before and after surgery. Please ask questions and express your concerns; your family or people close to you are welcome to be involved.

When you are discharged from hospital your nurse will arrange for you to receive ongoing support, advice and practical help if needed.

Cancer Society

You may wish to contact the Cancer Society if you are being operated on for a cancer. This organisation can provide information, counseling and arrange help such as nursing care and involvement in support groups.

Tests

Blood samples

Samples of your blood will go the laboratory to check your general health before surgery.

Blood transfusions

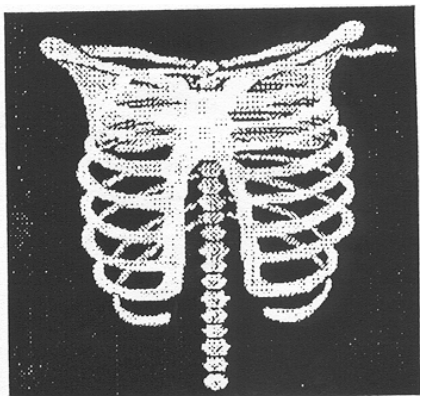
A sample of your blood will go to the blood bank to identify your blood type so this can be matched with donated blood. This donated blood is then ready for transfusion during or after surgery if required. **We will need your written consent before a transfusion is able to take place.**

Midstream urine

A sample of your urine is sent to the laboratory to check that there is no bacteria.

Chest x-ray

If requested by the doctor or Anesthetist, a chest x-ray will be performed to check on the health of your lungs.



ECG

An electrocardiogram (ECG) of your heart may be required depending on your age and any diagnosed heart conditions.

CT scan

If you have not had a recent CT scan prior to your surgery, the surgeon may request one.

Other measures

Nil by mouth

As your stomach should be empty before an anaesthetic, you must not eat anything or drink milk products six hours prior to surgery. You may, however, be able to drink clear fluids up to two hours before surgery - the Pre-Admission Clinic or ward nurse will clarify this with you.

If required for your surgery, you will have been given an enema to use at home. This empties the lower bowel and helps to prevent constipation after your surgery.

Breathing exercises

Breathing exercises will be taught to you by your nurse or physiotherapist pre-operatively. They are important as they help to keep your lungs clear of fluid and prevent chest infection. They should be carried out regularly after surgery by supporting your abdomen with a soft pillow, taking four to five deep, slow breaths, then one deep cough.

Leg exercises

Leg exercises help keep muscle tone and promote the return of blood in your leg veins to your heart. These include pedalling the feet, bending the knees and pressing the knees down into the mattress.

Do not cross your legs - this squashes your veins causing obstruction to the blood circulation

Anti-embolus stockings

These are special stockings that help prevent clotting of the blood in your veins while you are less mobile. The stockings are used in combination with leg exercises and are fitted by your nurse before your surgery. If you currently have leg ulcers, please let your nurse know as the stockings may not be suitable for you.

Wound site - What to expect

Partial and Simple Nephrectomy - The suture line (stitches or staples) will be directly below your ribs (on the left or right side of your abdomen, depending on which kidney is removed) and will run from front to back.

Radical Nephrectomy - An abdominal incision (wound) or combined abdominal and chest incision may be used. As the wound is close to your lungs this may make breathing and coughing painful. Physiotherapy and nursing staff will assist you.

After Surgery

You are transferred to the Recovery Room next to the operating theatre. Your condition is monitored and when you are awake and comfortable a nurse and an orderly will escort you back to the ward on your bed.

On the ward

Your nurse will check the following regularly:

- Vital signs - your blood pressure, pulse, respiration rate and temperature
- The severity and location of any pain or discomfort
- The amount of urine you are producing
- The wound site and wound drains
- The level of numbness that an epidural is producing
- The effectiveness of pain relief
- The amount of oxygen in your blood

You may have

Intravenous (IV) fluids

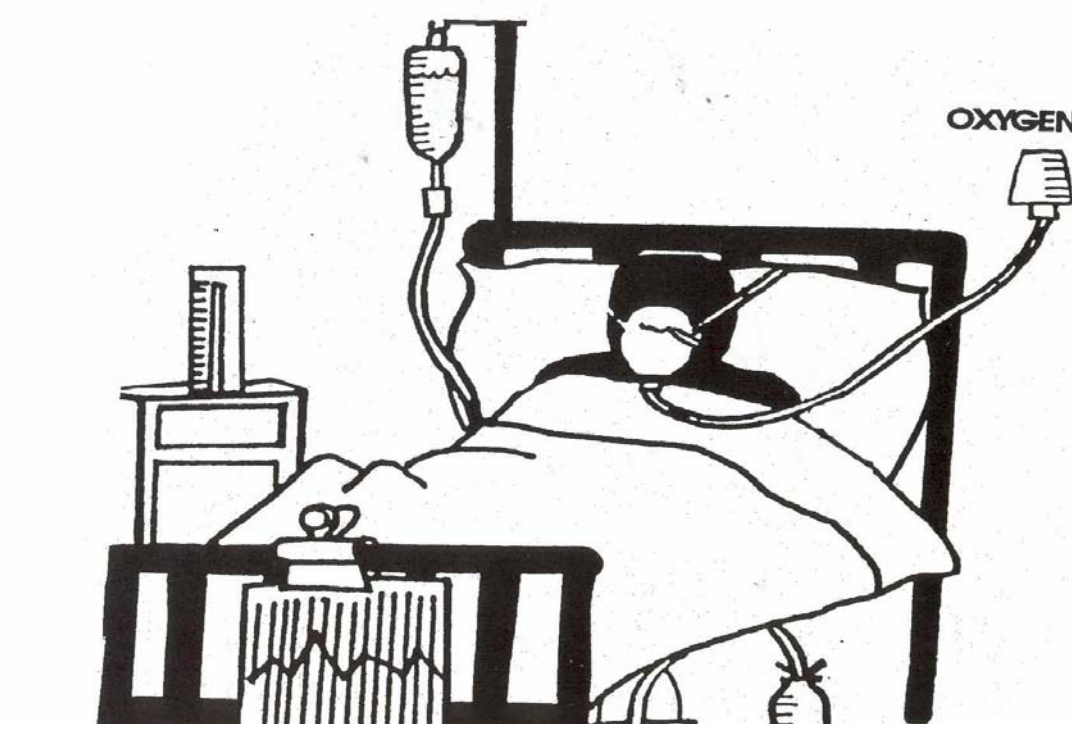
To give you fluids and medications a tube may be placed in a large vein in the neck (central venous line) and a smaller tube will be placed into a vein in the forearm.

Oxygen

Oxygen is often given for the first 24 hours after surgery via nasal prongs or a facemask to help with breathing and healing.

Urinary catheter

You will have a tube in the urethra that will drain the urine from your bladder. This can be secured to your leg for comfort. It is particularly important after a Nephrectomy that your urine output is monitored closely as it indicates the health of your remaining kidney after surgery.



Wound drains
You may have a wound drain. This will drain blood and fluid from your operation site. Good drainage will promote healing.

Chest drain
If you have had a Radical Nephrectomy, you may also have a chest drain. The chest drain helps to remove any blood and fluid from around the lungs.

Pain relief after your surgery
Your nurse will work alongside your doctors and the anaesthetist to keep your pain at a minimum.

The **PAIN SCORE** is a way of your nurse establishing how much pain you are experiencing by asking you to grade your pain from 0 to 10 where 0 = no pain and 10 = the worst pain you can imagine.

The following methods of pain relief may be used singly or in combination with each other.

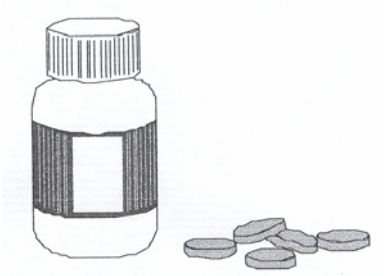
Patient controlled analgesia (PCA)
This infusion machine has a button you press each time you need pain relief. It will help your pain by immediately delivering a specific amount of pain relief into your blood stream. The pump is programmed according to your anaesthetist's instructions.

Epidural
An epidural is a very small tube inserted by your anaesthetist into the epidural space in your back. A local anaesthetic is infused through this tube via a pump for the first few days after surgery relieving pain at your operation site by numbing it.

Intravenous (IV) pain relief
Intravenous pain relief can be administered to supplement a PCA or epidural or on its own to manage pain that is not controlled by tablets or suppositories alone.

Rectal pain relief
Pain may also be controlled by the insertion of suppositories whilst you are not able to take tablets orally.

Oral pain relief
When you are able to drink, you may have tablets by mouth (orally).



Food and fluids

After your surgery your food and fluid intake will be increased as your bowel function returns to normal. Resumption of a full diet will be gradual starting with sips and progressing to light meals over a day or so. It is important to eat a balanced diet and chew thoroughly and eat slowly. If you have any special dietary needs, a dietician will be involved to assist in your recovery.

Mobility

You will usually be up in a chair for a short time and assisted to walk a short distance within a day or two of your surgery. Your level of activity will increase as you recover.

This is removed when you are drinking normally. The leur (plastic tube) is removed when you are no longer requiring intravenous medications.

Wound drain
This is removed when the amount of drainage is minimal and the operation area is healing.

Urinary catheter
The urinary catheter is usually removed a few days after surgery when close monitoring of your urine output is not so critical and your epidural (if present) has been removed.

Sutures (stitches or staples)
For this surgery, most suture material used is dissolvable and does not require removal. However, if non-dissolving suture material has been used, this will need to be removed approximately seven to ten days after surgery. If you are not going to be in hospital at this time, you will be given a date for you to arrange for your GP or practice nurse to remove them.

Discharge Advice

Even though one kidney functions as well as two, you may be advised to take some precautions to protect the remaining kidney. These precautions include:

- Increase your amount of exercise as tolerated.
- Aim for a fluid intake of one to two litres a day.
- Have regular visits to your GP to monitor your blood pressure and have blood tests.
- See your GP promptly if you experience chills, fever or pain in your bladder or back, or your urine is cloudy and offensive

smelling. These symptoms may be indicative of a urinary tract infection and require treatment.

- The majority of wound strength is reached within the first six weeks after surgery so it is important to avoid strenuous activity, heavy lifting and straining during this period. This includes such things as contact sports, mowing lawns, gardening, vacuuming and lifting heavy washing baskets.
- Sexual activity may be resumed after six weeks or when you feel comfortable to do so.

- Your hospital doctor will provide your first sickness benefit certificate/medical certificate and will advise you when to return to work.

Follow-up

Discharge letter

You and your GP will receive a copy of a letter outlining the treatment you received during your hospital stay. This will be posted to you if it is not completed by the time you leave hospital.

GP

When you are discharged from hospital you will be under the care of your GP who will look after your general health and monitor your progress.

Outpatients appointments

You will receive an appointment for Urology Outpatients approximately six weeks after discharge. This will be posted to you.

3 References: Mosby's Genitourinary Disorders, Clinical Nursing, Mikel Gray 1992
Urological Nursing 3rd Edition, Urological Nursing' 2004
Campbell's Urology 7th Edition, Urology, 1998