Children’s services

Nephrectomy/ hemi-nephrectomy – in children

What is a nephrectomy?
A nephrectomy is an operation to remove the entire kidney.

What is a hemi-nephrectomy?
A hemi-nephrectomy (also known as a partial nephrectomy) is an operation to remove either the upper or lower part of the kidney.

Why is my child having a nephrectomy/hemi-nephrectomy?
There are a number of reasons why your child may need to have all or just part of their kidney removed:
1. If all or part of a kidney is not working properly it may increase the risk of your child having urinary tract infections
2. Having part or all a kidney not working can increase the risk of high blood pressure
3. Having part or all of the kidney not working may be causing other symptoms that cannot be controlled without part/full removal of the kidney.

During your clinic appointments your surgeon will discuss the reason that nephrectomy/ hemi-nephrectomy is being advised in your child and also any alternative treatments.

What happens when my child is admitted to hospital?
Most children will be reviewed 7-14 days prior to admission in our ‘pre-operative assessment clinic’. The purpose of the clinic is to ensure:
- you and your child are fully informed
- your child’s hospital stay is as straightforward and seamless as possible

You will be asked to bring your child to one of our children’s wards, usually on the morning of surgery. You will be seen by nursing staff, your doctors and an anaesthetist. Usually a urine specimen will be collected from your child before the operation and blood tests may also need to be performed. Where possible these specimens will be collected during the pre-operative assessment clinic visit but if this has not been possible, these tests will be completed on the morning before surgery. You will be able to be present while your child goes to sleep for their operation and also in the recovery area when your child wakes up.
What happens during the operation?

The operation will be carried out under a general anaesthetic.

A nephrectomy/hemi-nephrectomy may be undertaken as an ‘open’ operation or using ‘keyhole’ surgery. There are different reasons why each type of operation is chosen and your surgeon will discuss the choice of operation with you and the reasons that apply to your child.

During ‘open’ surgery an incision (‘cut’) will be made, usually on the child’s side. The affected part/whole kidney is removed and then dissolvable stitches are used to close the wound. Paper tapes (‘steri-strips’) are often also applied but usually there is no large dressing.

During the ‘keyhole’ technique a small incision (‘cut’ or ‘keyhole’) is made on the child’s side through which a camera is inserted. Other small incisions (usually two others) are then made at other sites through which the instruments will be inserted. This is all visualised on a TV screen by a miniature camera which is inserted through one of the ‘keyholes’. The operating instruments are used to mobile (‘free up’) the kidney/affected part of the kidney from the surrounding structures and then remove it. Sometimes it is necessary to make one of the keyholes a bit larger to remove the kidney/affected part of the kidney. Once the kidney/affected part has been removed the keyhole incisions are closed with dissolvable stitches.

Sometimes, although the operation is started using the keyhole technique, it is not possible to complete the operation this way and so the operation is converted to open surgery.

Whether open or keyhole surgery is undertaken, occasionally one or more small tubes (called ‘stents’ or ‘catheters’) will be left in place after the operation to drain urine. These tubes can be removed with ease on the ward by a member of nursing staff once they are no longer needed.

What are the complications/risks?

Complications/risks are rare. They include:

- Bleeding (very occasionally a blood transfusion will be required).
- Urinoma. This means a leak of urine which collects outside the kidney.
- Damage to the ‘good’ part of a duplex kidney.
- The need to convert keyhole surgery to open surgery (see above).
What happens immediately after the operation?

- You will be able to be with your child as soon as they begin to wake in the recovery room; we provide you with a device called a ‘pager’ which will inform you when your child is in the recovery area and awake. Once your child has fully woken (s)he will be taken back to the ward. Very occasionally children (for example some children with known chest or neurological problems) will need to be monitored in the high dependency unit before then being transferred back to the ward.

- As well as experiencing pain over the operating site, some children that have had keyhole surgery also experience discomfort around their tummy muscles and shoulders from the gas that is used in laparoscopic surgery. At the end of the operation painkillers may be given as local anaesthetic, through a drip or as a suppository. On the ward children may have their painkillers via a drip but once your child starts drinking, medicine can be given.

- Children will usually start to take fluids and feed again very quickly (same day) but until your child is drinking normally again, fluid will be provided by a drip which will have been inserted during the operation.

How long will my child stay in hospital for and can I stay with him/her?

The length of stay will depend on each individual child but the average length of stay is two to five days. A parent will be able to remain resident on the ward in a bed at the side of the child’s bed.

How do I look after my child at home?

- All stitches used are dissolvable so these do not need to be removed.
- Your child may have some discomfort and should be given paracetamol (Calpol) or other painkillers as directed by the nursing/ medical staff.
- Your child should rest for the first few days at home and should avoid strenuous activities, for example PE (physical exercise)/ swimming, for two weeks.
- The wound site should be kept clean and dry. It should not be submerged (for example, bathed) in water for five days. If paper tapes were applied these should be allowed to fall off naturally or be removed when your child is allowed a bath.
- If your child develops a fever or has increased pain you should contact your general practitioner (GP)/ nurse specialist.
Follow up
Your child will have an outpatient appointment to provide follow up, usually three months after discharge. This appointment is sent to you in the post.

Chaperoning:
During your child’s hospital visits s/he will need to be examined to help diagnose and to plan care. Examination, which may take place before, during and after treatment, is performed by trained members of staff and will always be explained to you beforehand. A chaperone is a separate member of staff who is present during the examination. The role of the chaperone is to provide practical assistance with the examination and to provide support to the child, family member/carer and to the person examining.

For further information please contact
The ward you were on:

Your nurse specialist: 01223 586973

We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

Other formats:
If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.information@addenbrookes.nhs.uk. Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.