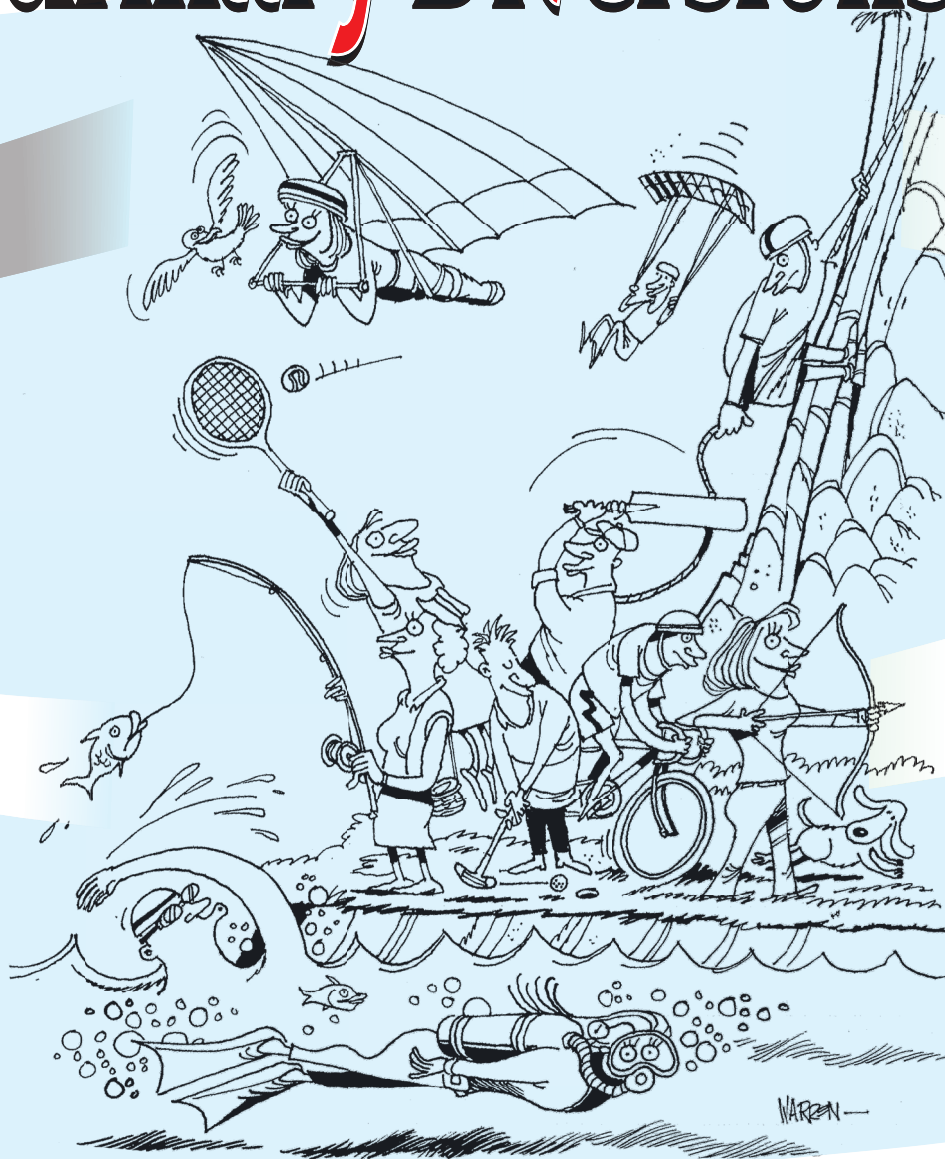


# Urinary Diversions



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# Urinary Diversions

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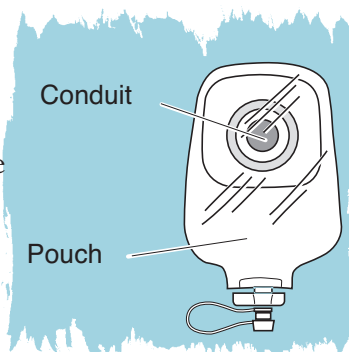
Consultant Urologist, Prince of Wales Hospital



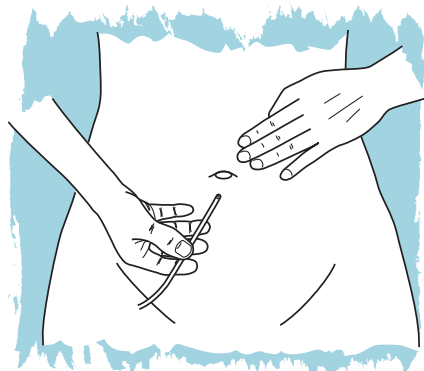
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## Summary of urinary diversion operations

**Ileal conduit** - many people refer to this as 'having a bag'. The urine is directed away from the bladder onto your abdomen or 'tummy' via a piece of bowel (the conduit<sup>3</sup>). The end of the conduit can also be called a stoma<sup>4</sup>. You wear a bag at all times to collect your urine. You need to learn how to empty and change the bag before you go home from hospital.



**Continent Urinary Diversion** - Your own bladder is replaced by a pouch or reservoir inside your abdomen or 'tummy' that stores the urine. This internal reservoir is made out of parts of your own bowel. There is no external bag. You will need to learn how to catheterise<sup>5</sup> and irrigate<sup>6</sup> your continent urinary diversion following your operation. You do this through a small hole or stoma which is usually hidden in your umbilicus (navel). A continent urinary diversion is more difficult to look after than an ileal conduit as you need to be very careful to empty the pouch properly and regularly. You will be taught how to do this before you leave hospital.



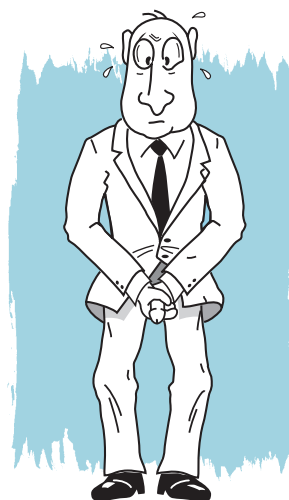
<sup>3</sup> **conduit** - pipe made of bowel that the urine passes through

<sup>4</sup> **stoma** - hole or opening. In this case also called ileal conduit, or urostomy

<sup>5</sup> **catheterise** - a special tube called a catheter is used to empty the pouch or reservoir

<sup>6</sup> **irrigate** - fluid (usually normal saline) is put into the pouch via a catheter in order to clear out mucus

**Neobladder** - With this operation the bladder is removed and a pouch made of bowel is joined to your urethra. Most of the time after this operation the pouch can be emptied by 'bearing down' with your abdominal muscles. Occasionally however, this does not empty the neobladder completely. If this is the case, you would have to learn to catheterise and irrigate via your urethra in order to completely empty your Neobladder. The Neobladder operation is only possible if your urethra works properly and is able to be left in place, when you have your urinary diversion.



## More about urinary diversion operations

All the urinary diversion operations are big operations. You will be in hospital for between 12 and 14 days. Sometimes the bladder is left in place because it is difficult to remove, and no purpose is served by removing it. It has been found that when urine is redirected away from the bladder, such things as bladder pain and bleeding do stop.

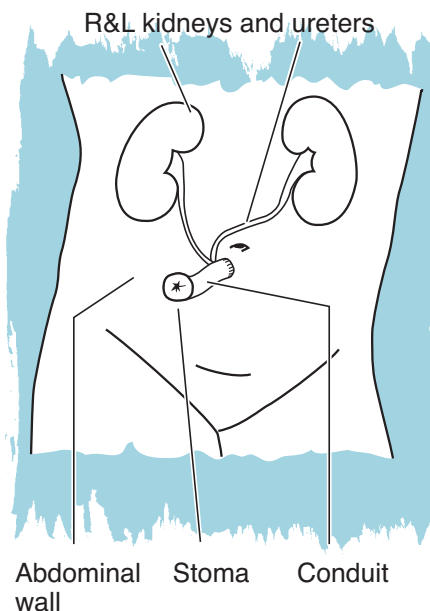
Following urinary diversion surgery you should be able to return to work, and resume other social and sporting activities that you enjoy. It is very important you do not gain too much weight after your operation as this can alter your body shape making it more difficult to fit the bag or catheterise yourself. It is therefore a good idea to do some gentle regular exercise and return to eating a healthy well-balanced diet as soon as possible.

Having a urinary diversion alters your body in a visible way, and it may take time for you to adjust to this change. Your urologist and stomal therapy nurse are there for you to discuss any concerns that you may have regarding this alteration in your bodily function and 'body image'.

Most men will not be able to have normal erections if they have had their bladder removed at the same time as their urinary diversion. There are treatments available that can help with this, so you should discuss this with your urologist. Women may find that they may have problems such as painful intercourse following this surgery. Extra lubrication can help with this. Your urologist and stomal therapy nurse are there for you to talk to regarding these matters.

# Ileal Conduit

This is the most commonly performed urinary diversion operation in Australia. Most people can look after an ileal conduit without too much trouble once they have been taught. A piece of bowel, most often the ileum, is used to make a conduit or 'pipe'. The urine passes down the ureters into one end of the conduit, which is inside your abdomen, and straight out of the other end of the conduit which is on the surface of your abdomen. This can also be called the stoma. *This should not affect the way your bowel works as only a very small piece of your bowel is used to make the conduit.*



You will need to see the stomal therapy nurse before your operation. She/he will explain the operation to you, and answer any questions you have. She/he will put a cross on your abdomen with a marker pen, in a place that is suitable for the ileal conduit and that you are able to see. This will make looking after it easier.

A bag<sup>7</sup> that sticks to your abdomen, will be used to collect the urine. The bag also protects the skin around your stoma from becoming sore. You must wear the bag at all times because urine flows into it all of the time from the conduit.

You will need to learn how to empty and change the bag that you wear over your ileal conduit. We will also teach you how to connect to a night drainage system, so that you need not get up during the night to empty your bag. After use it is important that the night drainage bag is emptied and cleaned with detergent, otherwise it can become very smelly.

<sup>7</sup> bag - these are disposable plastic bags sometimes called 'appliances' that 'stick' to your abdomen to collect the urine

## Ileal Conduit - changing and emptying 'the bag'

*The bags used for an ileal conduit are either 1 or 2 piece. Your stomal therapy nurse will help you to choose the best type for you and your lifestyle*

### TIPS

- Empty the bag when it is about half to two thirds full. Do not let the bag become too full and heavy as it can then leak.
- Collect all the equipment that you will need to change the bag (ie new bag, rubbish bag, wipes and warm water)
- Gently remove the old bag from your skin
- Wash and dry the stoma and the surrounding skin well. Warm water is usually sufficient.
- Apply a new bag - attach a belt if required
- Most people wear a bag when they bath or shower as urine trickles out of the stoma all of the time
- Change your bag early in the morning as this is the time when less urine comes out of your stoma

**T**ry to drink enough fluid so that the urine coming into your bag is a pale straw colour (1-2 litres per day or 4-8 glasses). You may find drinking acidic drinks (eg cranberry, orange and blackberry juices) helps keep your urine acidic, which helps the bag stick to your abdomen.

Your stomal therapy nurse will help you to choose a bag that is suitable for you. Most bags now come with an opening already cut out that is the right size for most stomas. This will make changing your bag easier. It is important to have your stomal therapy nurse check your stoma size with you after a few weeks, as stomas do shrink and so your bag size may change. It is normal to produce some mucus<sup>8</sup> from an ileal conduit and this passes into your bag with your urine. The amount of mucus does decrease with time.

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<sup>8</sup> **mucus** - is produced by the bowel and because living healthy bowel is used to make the ileal conduit it will continue to come out into the bag with the urine.

## Ileal Conduit - problems and how to deal with them

- **Fishy smelling urine** - you need to go and see your local doctor as you may have a urinary infection. There may also be visible blood in your urine. When you see your doctor take a sample of urine with you in a small sterile container. To collect your specimen, change your bag over your ileal conduit as you usually do, and collect the first lot of urine that comes into the bag as your urine specimen.

- **Blood in your urine** - It is not unusual to have blood on the wipes when cleaning the stoma and occasionally if the bag is not positioned correctly it may also cause the stoma to bleed. Treat your stoma with care!

This of course is very different from having visible blood in your urine. If this happens see your doctor as soon as possible. If you are taking aspirin or warfarin it is very important that you watch for this.

- **Skin irritation around your stoma**

If the skin around your stoma becomes irritated see your stomal therapy nurse.

Irritated skin can have several causes:

- poorly fitting appliances
- skin reaction to products used
- folliculitis which is irritation of the hair follicles around the stoma
- removing the appliance too frequently
- the formation of urinary crystals underneath the skin.

- **Leaking appliances**

This can be caused by:

- your bag not fitting properly
- shrinkage of the stoma or
- changes in your body contours if you have recently lost or gained weight.

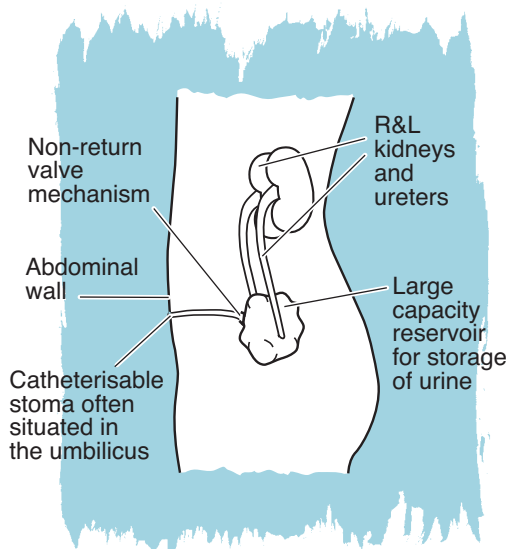
You need to see your stomal therapy nurse if this happens.



# (CUD) Continent Urinary Diversions

Some urologists are now creating internal reservoirs for the storage of urine. These reservoirs are inside your abdomen and are made from parts of your bowel. They are emptied by passing a catheter through a stoma, which is located in the umbilicus, or on the right side of the lower abdomen. You do not need to wear an external bag as the stoma can be either covered with a piece of gauze in between catheterisations or just left as it is.

A continent urinary diversion does require more dexterity, patience, problem solving skills, and motivation from you if you decide to opt for this type of urinary diversion. The 'trade off' is that an external appliance does not need to be worn.



*The opening of the CUD is called stoma.*

*Sometimes the CUD is referred to as 'the reservoir' or 'pouch'*

## Looking after your continent urinary diversion

*Prior to leaving hospital you will need to learn how to catheterise your CUD, how to irrigate the CUD with saline, and how to look after the equipment needed to do all of this.*

The amount of urine that your CUD holds gradually increases with time. The CUD is different to your own bladder in that it will not let you know when you need to do your catheterisations. Therefore you need to catheterise at regular intervals. This is usually every two hours for the first few days. Slowly the time between catheterisations can be increased. Eventually most people catheterise between 4 and 5 times in each 24-hour period. It is very important that you empty your CUD as completely as possible every time you catheterise.

If you find that you have to get up during the night in order to catheterise your CUD it may be worth 'cutting down' on the amount of fluid that you drink in the evenings.

## Equipment, sterilisation of equipment, & how to catheterise your CUD

### Equipment & how to sterilise it

- Plastic container with lid - large enough to contain 2x kidney dishes, syringe, and about 12-15 cm deep. All of the equipment is kept submerged in Milton solution
- Milton tablets - 1 Milton tablet makes 2 litres of Milton solution in which you can store your equipment. This should be changed daily
- Single use intermittent catheter of the correct size - usually 14 or 16 Fg
- "Wet ones" or similar wipes
- Lubricating jelly
- 50ml catheter tip syringe
- 2 x kidney dishes
- Normal saline
- 2 x clothes pegs

*You need to use a new catheter each time you catheterise*

### Catheterisation technique

- Peg up your clothes out of the way
- Wash your hands with 'wet ones'
- Wash the top of 'wet ones' container.
- Lift the kidney dish out of the Milton.
- Open a new catheter & squeeze on some KY jelly.
- Wash the stoma and surrounding area on the abdomen with 'wet ones'
- Wash hands
- Catheterise - slide the catheter into stoma until urine starts to flow. In order to totally empty the pouch you need to move the catheter around inside the pouch. When you think that the pouch has been totally emptied slowly withdraw the catheter.
- Wash all the equipment that you have used in warm, soapy water - rinse and replace it in the Milton.

## CUD - catheterisation and irrigation

If you touch anything that you shouldn't, don't worry, just wash your hands again with the 'wet ones'. This method is an easy way to catheterise

when you are learning how to do it. You will eventually feel confident to catheterise straight into the toilet.

No force should be used when catheterising, and the part of the catheter which goes inside you should be touched as little as possible. If the catheter stops draining urine, or seems to be blocked, you can move it around gently inside the CUD. Do this often enough to dislodge any mucus. If this does not work, irrigating the CUD with normal saline via the catheter should help the urine to flow.

Occasionally this may not work either. If this happens you will need to remove the catheter and insert another sterile catheter. Be careful not to put any fibres or hairs into your CUD as they can form into stones in the pouch

### When do I need to irrigate my CUD?

It is a good idea to give your CUD a good 'clean out' with normal saline regularly even if the catheters do not block. The amount of mucus produced lessens with time. When this happens irrigating it once per week with approximately 200 mls of saline should do the trick.

It is very important that you make sure that the amount of normal saline that you put into your CUD comes out, plus the amount of urine that is in there. With time and practice you will be able to judge this.

Remember that mucus production increases if you have 'flu' or a gastric upset. At these times it is important that you fully empty your pouch and irrigate with saline as necessary until things settle down.

## CUD - problem solving

### If the catheter won't go in

- Don't panic - relax and take some deep breaths
- Never use force
- Use a lubricant eg KY Jelly
- Jiggle or carefully rotate the catheter holding the skin around the stoma firmly
- Try a smaller catheter
- Alter your position eg lean slightly backwards / forwards. Try lying down
- If you are still unable to insert the catheter you need to contact your stomal therapy nurse, local doctor or hospital immediately
- Your pouch can be damaged if it becomes too full so it is very important to get help if you are unable to insert a catheter

## Leakage between catheterisations

If you have leakage of urine between catheterisation you need to let your urologist know about it. This may be caused by contractions of the pouch. You may need to take some tablets that will help stop these contractions.

## CUD - infection and mucus production.

**Urinary infection** - if you think that you have an infection, you need to:

- Start to catheterise more often (every 2-3 hours)
- Drink more fluids
- Make sure that you empty your CUD each time
- Take a specimen of urine to your GP and ask him to do a 'urine culture' by sending it to the lab. A 'dipstick' test is not sufficient.
- If you have a proven infection you will need to take a double course of antibiotics. You need to take all of the tablets you have been given or otherwise your infection may return.

*If you do get an infection your urologist may suggest that the best thing to do is to keep the CUD as empty as possible whilst you take your course of antibiotics. This would be done by leaving a Foley catheter inside your pouch to drain it continuously into a catheter bag. The catheter should be left in place until a urine specimen shows that the urine is now free from infection. This catheter can also block with mucus. If this happens you will need to irrigate the catheter with saline to unblock it.*

**Mucus production** - your stomal therapy nurse will show you how to irrigate your pouch with normal saline in order to empty it as completely as possible. Cranberry juice and tablets have also been found to be useful with breaking up any mucus in the pouch, so that it can pass down the catheter more easily. Ask your stomal therapy nurse about this.

## CUD - catheterisation when 'out and about'

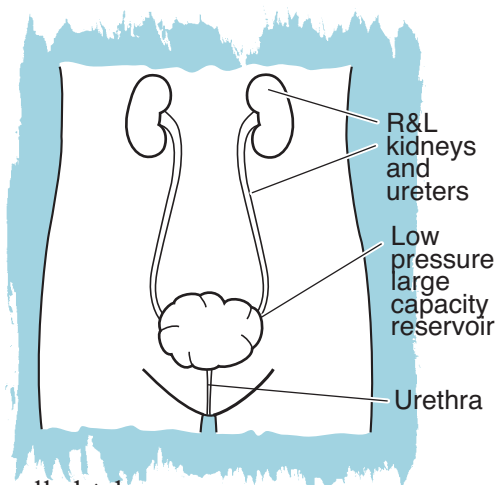
When you are not at home you still need to catheterise your CUD.

Wipes, catheters and clothes pegs can be kept in a plastic bag that can hang on a toilet door. In order to keep everything as clean as possible take out your equipment only when needed. Always have more than one catheter with you in case the catheters block and you need another one.

*Make sure you talk to your stomal therapy nurse regarding catheterising when away from home and work out a way that suits you.*

# Neobladder

**N**eobladder operations are similar to continent urinary diversion operations. The main difference is that the neobladder is joined to your own urethra. It is generally much more successful in men than women because men have a longer urethra. Even with men however, up to 50% report problems with incontinence at night. There are techniques available that can help with this problem. Patient satisfaction with this operation is generally high, despite the problems associated with incontinence. It does maintain your 'normal anatomy'.



If you are unable to totally empty your neobladder by straining, you will need to learn to catheterise and irrigate your neobladder before you leave the hospital.

## Neobladder - equipment needed and care of equipment

### Equipment you will need and sterilisation of the equipment

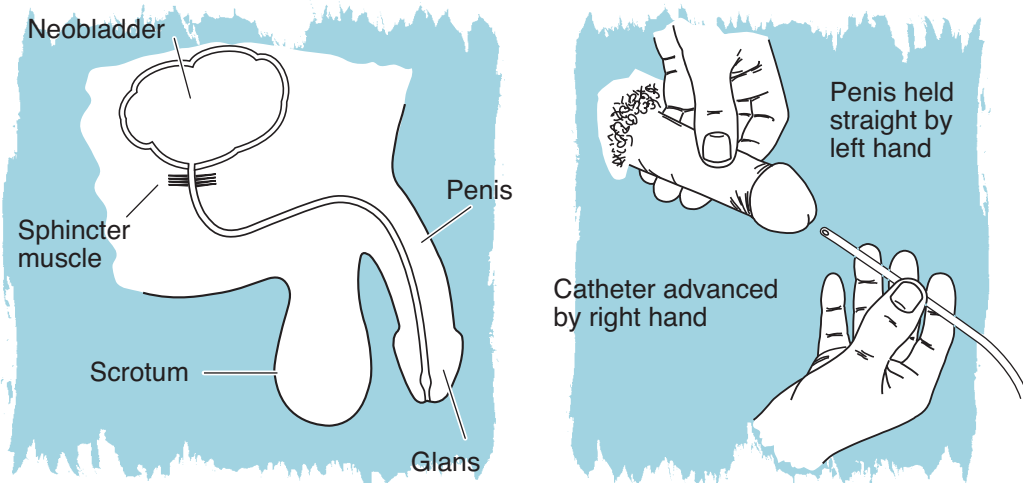
- Plastic container with lid - large enough to fit in kidney dish and syringe, and about 12-15cms deep. All of the equipment should be kept submerged in the Milton.
- Milton tablets - 1 Milton tablet makes 2 litres of Milton solution in which you can store your equipment. This should be changed daily.
- Single use intermittent catheter of the correct size - usually 14 or 16 Fg
- 'Wet ones'
- Lubricating jelly
- Catheter tip syringe
- Normal saline
- 2 x kidney dishes

*The syringe and kidney dishes need to be washed in soapy water and rinsed after use, before being put back into the Milton.*

It is very important that you also read the section on CUD Pages 8 - 9.

## Neobladder - catheterisation for men

*If you are left-handed you need to adjust the technique*



- Wash your hands before setting up the equipment & opening catheter.
- Hold your penis in your left hand and swab down the shaft of the penis from the tip down to the base. If you are not circumcised, draw back the foreskin and swab the glans (or knob) thoroughly with 'wet ones'.
- Pick up the catheter in your right hand being careful to touch the part that is going into your urethra as little as possible. Hold your penis straight out with your left hand.
- Gently insert the catheter into the urethra a few cms until slight resistance is felt from the sphincter muscles that act like a valve to keep the urine in the neobladder.
- Now relax, by taking a few , slow deep breaths through your mouth, keeping gentle but steady pressure on the catheter, and as the sphincter muscles relax, the catheter will pass into the neobladder and urine will start to flow out into the container or the toilet. Do not use jerky movements when catheterising as this can cause spasm of the sphincter muscles at the point the urethra enters the neobladder preventing the catheter from going in. Never use any force when catheterising.
- Leave the catheter in place until the urine stops flowing and then slowly remove the catheter a few centimetres at a time.
- If the urine does not flow or you feel that there is more urine in your

neobladder that is not coming out of the catheter, you will need to irrigate with normal saline in order to try to unblock the catheter.

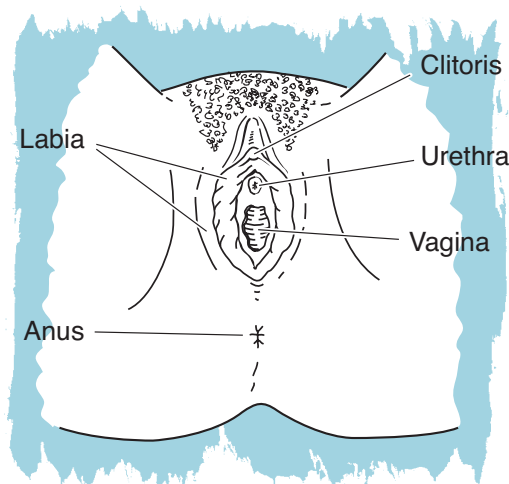
- Try not to let any pubic hair go into the neobladder

*Moving the catheter around inside the Neobladder can help break up the mucus so that it can pass down the catheter more easily.  
(see irrigation on page 8 & 9)*

## Neobladder - catheterisation for women

*The technique for men and women is slightly different due to the differences in male and female anatomy.*

- Wash hands before setting up equipment & opening catheter.
- Wash down the area shown in the 'female anatomy' diagram (always clean from top to bottom)
- Spread the labia with the index and middle finger so that the urethral opening is in good view (you will be able to do this by 'feel' with practice)
- Pick up the catheter without touching the end that is going into your urethra
- Insert the catheter into the urethra letting the urine drain into a container or the toilet. Leave the catheter in place until the urine stops draining and then gradually remove it a few cms at a time
- If the catheter stops draining you may have to irrigate with normal saline in order to unblock the catheter (see page 9)
- Try not to let any pubic hairs go into your neobladder



## How to obtain your equipment - 'The Stoma Appliance Scheme' & 'self help' groups

All the equipment that you need following urinary diversion is supplied to you free of charge after you pay a yearly 'membership fee' to one of the stoma associations. Your stomal therapy nurse will give you the forms to join the 'Stoma Appliance Scheme' and will organise your first month's supply of equipment. The stoma associations in each state as well as distributing appliances also act as 'self help' groups. Many people have been through what you are going through now, so speak to them about it. Make use of their experience. Ask your stomal therapy nurse about this.

Remember that there is life after these operations. You can lead a full and rewarding life, playing sport and returning to work. Nobody need know that you have a bag or an internal pouch unless you tell them. It is a good idea to share your 'secret' with close friends and your family however who can give you help and support. The front cover of this booklet shows people 'being active and having fun' which is what we want you to do.



## Care after you go home

It is very important that you have regular 'follow-up' with your urologist following your urinary diversion. You may need to have regular blood tests every 6-12 months, especially if you have a continent urinary diversion or neobladder operation. Some people need to have Vitamin B12 and folic acid supplements so these levels should be checked with a blood test every 12 months. You should also get your doctor to do a blood count, kidney function tests and bicarbonate levels each year.

Your stomal therapy nurse can also help with any problems you may have with your urinary diversion eg leaking bags with an ileal conduit or checking your catheterisation technique if you have a continent urinary diversion or neobladder operation and are experiencing a lot of infections.

Given understanding and support most people learn to care for their urinary diversions without too much trouble. Many do so very well. Social and psychological adjustment may be more gradual. This is often dependent on a person gaining confidence in attending to the care of the urinary diversion. Remember that the urologist and the stomal therapy nurse are there for you to talk about any problems you may have.

You are not alone!

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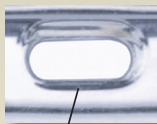
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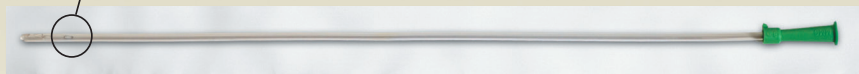
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