Long term Catheter Valves

Exceptional healthcare, personally delivered
You have been fitted with a urinary catheter, either following surgery or because you have had problems with your bladder.

A catheter is a small tube inserted into your bladder either via the urethra or through the abdomen, and is held in place with a small balloon filled with fluid. This will either be attached to a bag or a special valve to allow you to empty your bladder. This will not prevent you from carrying out your everyday activities.

This information discusses potential problems that may arise with long term catheter use.

**Catheter Encrustation**

**The problem**

In theory, a long term urinary catheter can be used for twelve weeks before it needs to be changed. Unfortunately, half of all catheter users have a problem with catheter blockage, meaning that it needs to be changed much more often than this. Some people even need their catheters changing several times a week.

**Why does it happen?**

This problem is caused by bacteria living on the surface of the catheter. All catheter users have bacteria in their bladder, although they do not usually cause illness. These bacteria live in a layer all over the catheter and coat themselves in a protective material. This layer of bacteria and protective coating is called a biofilm and it prevents antibiotics and bladder washout solutions reaching the bacteria.

A few of these bacteria are able to turn urine, which is normally slightly acidic, alkaline. Normal acidic urine has salts dissolved in it. If the urine is not acidic these salts can no longer be dissolved and they form crystals. These crystals either form in the bladder, which can lead to bladder stones, or in the biofilm on the catheter which causes the catheter to block.
How do I know if I have this problem?
When the catheter is changed it should initially drain well. After a few weeks (or days, if you have very bad encrustation) the catheter will drain less well and then block. This will cause leakage of urine and may be uncomfortable. When the catheter is removed, the crystals causing the blockage will be visible if it is cut open.

What can be done?
The problem cannot be cured, but there are ways to lengthen the time it takes for the catheter to block.

The more fluid you drink, the longer the catheter will last. It is important to make sure that you produce dilute urine during the night as well as the day. You should drink plenty before going to bed and again if you wake up in the night.

Catheters with wide channels down the middle will take longer to block than those with narrow channels. You could either change to a larger size of catheter or, if you use a latex based catheter, change to one made from 100% silicone, as these have much wider channels. Unfortunately larger catheters and silicone catheters can be uncomfortable, although this is less of a problem with a suprapubic catheter than a urethral one.

Removing any bladder stones that may be present will also help.

Once these methods have been tried, you should work out how long, on average, your catheter is now lasting. The best way to reduce problems caused by an encrusting catheter is to change it before it blocks. For example, if it tends to block about every three weeks, change the catheter regularly every two weeks to prevent problems occurring as an emergency. Changing the catheter more often will not do you any harm.

You or your carer may also like to learn how to change your own catheter, so that you can cope better in an emergency.
Alternative treatments

There is very little evidence that any other form of treatment helps, although many have been tried.

Acidic catheter maintenance solutions (bladder washouts) are often used in an attempt to dissolve the crystals. They need to be used regularly throughout the time the catheter is in place. Once it starts to block it is too late. Even when used this way, however, the results are usually disappointing. Antiseptic or antibiotic solutions are also sometimes used, but either do not work, or only work for a very short time.

Drinking cranberry juice does not seem to work any better than drinking the same amount of any other fluid. Cranberry tablets or Vitamin C tablets also do not seem to help.

Antibiotics do not work, as the bacteria are protected in the biofilm and their use can sometimes make encrustation worse. However, you should remember that while these treatments do not improve catheter encrustation, they may be needed for other conditions you may have.

A final note

Just as catheter encrustation may suddenly appear or worsen for no obvious reason, it can also improve. Much more research is needed to find out why, and to develop new treatments, especially as the current ones do not seem to be effective. We have an excellent team of scientists working with us to find ways of solving these problems. If you would like to be involved in this research process, please contact us.

Using a Catheter Valve

What is a catheter valve?

A catheter valve is a tap like device that fits directly into the end of your catheter, an alternative to using a drainage bag. Your bladder can then continue to store urine and be emptied regularly as it would if you had no catheter.
What are the benefits of a catheter valve?

- More discreet than using a bag.
- More comfortable.
- May reduce the risk of bladder infection and catheter blockage.
- Maintains normal bladder function.

When should I open the valve?

Whenever you feel the need to pass urine, before going to bed and first thing in the morning. You should release the catheter at least every 4 hours.

Prior to opening your bowels, open the valve. This minimizes the risk of leakage.

When do I change the valve?

The valve should be changed every 7 days. Wash your hands and empty your bladder, remove the old valve and replace with the new one. Rinse the old one, wrap in plastic bag or newspaper and place in rubbish bin. Do not burn.

Can I use valves with drainage bags?

You can connect your valve to a night bag, leave the valve tap open overnight then remove and wash the night bag through each morning. The night bag should be changed every 7 days.

You can also use the valve with a leg bag to drain the bladder if you are in a situation where finding a toilet may be difficult. A leg bag strap or catheter-retaining strap can be used for support if your underwear does not provide sufficient support for the catheter and valve.

What about personal hygiene?

Wash the area where your catheter is inserted each day. Avoid using creams and talc around the area. You can bath or shower with the valve in place. If you develop a heavy or offensive smelling discharge around the catheter you should see your District Nurse or GP.
You should drink at least 1.5 (3 pints) of fluid per day. Any kind of fluid is acceptable although it is best to avoid too much tea, coffee or Cola. If your urine is a pale yellow colour you are drinking enough.

**Can I go on holiday?**

You can go away but make sure you take sufficient spares of all your equipment to cover the time you are away. It may not be available elsewhere.

**What about sexual activity?**

If this is an area of concern for you, discuss it with your Nurse or Doctor. There may be alternative ways of managing your urinary problem.

**What might cause the catheter to leak?**

- Constipation and straining.
- Blocked catheter.
- If you have an irritable bladder.
- If you do not empty your bladder frequently enough.

Discuss any of these issues with your Nurse or GP.

**When should I ask for help?**

If:

- You have pain associated with your bladder that is not relieved by your usual pain killers.
- You are unable to drain your bladder and you suspect the catheter is blocked.
- You see blood in your urine.
- Your urine becomes cloudy, offensive smelling and you begin to feel unwell (flulike symptoms).
- Urine continues to leak around your catheter.
- You are worried about any aspect of your catheter care.
References and sources of additional information

www.biomedhtc.org.uk/AdviceHome.htm

www.promocon.co.uk [accessed April 2006]
Helpline: 0161 834 2001
Email: promocon@disabledliving.co.uk

www.bladderandbowelfoundation.org [accessed February 2013]
Helpline: 0845 345 0165

NHS Constitution. Information on your rights and responsibilities. Available at www.nhs.uk/aboutnhs/constitution
If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.

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