Insertion of a Peritoneal Dialysis Catheter under Local Anaesthetic

Information for patients about percutaneous placement of a Tenckhoff Catheter in the abdomen

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Why do I need a Tenckhoff Catheter?

Your doctor has recommended, on the basis of your blood results and how you are feeling, that you need to start dialysis treatment for kidney failure. You have opted for peritoneal dialysis.

The peritoneum is a natural membrane that lines the organs in the abdomen (tummy area). In Peritoneal Dialysis (PD) it is used as a filter, to clean the blood, when your kidneys are no longer performing well enough to keep you healthy. In order to do this, a permanent tube known as a Tenckhoff Catheter needs to be placed in the lower part of your belly. This is used to run in and drain out dialysis fluid. This soft, flexible tube lies flat against your body. There is no opening and no odour.

In the ‘manual’ system, known as CAPD (Continuous Ambulatory Peritoneal Dialysis), the fluid is left in your abdomen to do the dialysis for several hours and then drained out, taking with it some of the waste products and excess water normally removed by the kidneys. Fresh fluid is then run into the abdomen. This exchange of fluid is repeated 4 times during the day and takes about 30 minutes each time. The fluid comes in a range of volumes and ‘strengths’; these remove different amounts of excess water, depending on your individual and changing needs.

At Southmead Hospital, we now offer the option of having the catheter inserted under local anaesthetic, for those patients assessed as suitable for this procedure.

Where will the catheter be positioned?

Matters to consider:

- Where do the waistbands on your clothes and underwear sit?
  You do not want these to be on top of your tube or exit site as this may interfere with healing.
Which side do you prefer to sleep on (if any)?
You do not want the tube to come out on that side as it may be uncomfortable and may interfere with healing.

Where are the natural skin folds when you are sitting?
The exit site should not be in a fold.

You will have the opportunity to discuss these issues with your doctor or nurse before the operation, and the agreed site will be marked on your skin.

How will I be prepared for the procedure?

Infection screening
Before the procedure is carried out, you will have swabs taken of your nose, armpits and groin, to check whether you are carrying any bacteria on your skin surface that could cause infection of the catheter.

If the swabs are positive, you may need to have some treatment to clear the bacteria before the procedure can be carried out.

The usual treatment is:

- Cleaning your skin with an antibacterial wash – Hibiscrub or Octenisan – for 5 days before the procedure takes place.
- Applying an antibacterial ointment – Mupirocin or Naseptin – to both nostrils three times a day for 5 days before the procedure takes place.

You will get a leaflet with full instructions when you are given the medications to take home. If for any reason you have not had these tests done in advance of the procedure, they will be done when you are admitted and if treatment is required it will be started then (the treatment still needs to last for 5 days).
Bowel cleansing

On the day before the procedure, you will be asked to take half a sachet of Picolax or Citrafleet powder. This is a strong laxative that should help to clear your bowels; this is necessary before the tube can be inserted.

Dilute the powder in a glass of water and take it immediately. Ensure you have immediate access to toilet facilities as the laxative can bring on frequent loose bowel motions very quickly. You will know when your bowel is empty when you pass watery, straw (yellow)-coloured motions.

If you do not achieve a clear bowel, you will need to take the second half of the laxative sachet on the evening before the procedure. Follow the instructions above as before.

Medications

If you take warfarin, clopidogrel or other blood-thinning tablets, you will need to stop taking these before the procedure is carried out. Your doctor or nurse will advise exactly when to stop taking these tablets.

Post-procedure support

You need to have a responsible adult to collect you from hospital, take you home and stay with you for at least one night after the procedure. If this cannot be arranged, please make sure that the medical and nursing staff are aware of this, as you may need to stay longer in hospital to ensure you are fully recovered from the procedure before going home.

What happens on the day of the catheter insertion?

For most patients, insertion under local anaesthetic can be done as a day-case procedure, but sometimes, depending on your other medical conditions, you may be asked to come into hospital – usually T Ward – the day before the procedure is due to take place.
If this is to be a day-case procedure, you will be asked to come to the Renal Day Case Unit at a designated time in the morning.

Please do NOT bring any valuables or large amounts of cash in with you – we cannot be responsible for them.

Make sure you do not eat any food after midnight of the night before the procedure; you may continue to drink clear fluids until 6am that morning.

If you have diabetes that is treated with medication, it is essential that you inform the nurses on the unit when you arrive.

You will be asked to sign a consent form. The healthcare professional who is to carry out the procedure will come and explain what you should expect, including the reasons for the catheter being inserted and possible complications that can occur, to be sure you are aware of these.

Some blood samples will be taken, along with measurements of your blood pressure, pulse, temperature and oxygen level.

You will be asked to empty your bladder and bowels before going for the procedure. You will be given some tablets as pre-medications; these may make you feel sleepy.

**What happens during the procedure?**

You will be asked to undress down to your underwear and to lie on a couch in the procedure room. You will have a sheet to cover you during the procedure.

A small cannula (plastic tube) will be inserted into a vein in the back of your hand, and you will be given intravenous antibiotics (to prevent infection), painkillers and sedation, if required, through that tube.

Once the sedation has started to work, the catheter insertion will begin. You should be feeling sleepy but you will probably be aware of the people working around you. Some people manage to sleep through the whole procedure!
Your tummy will be cleaned with antibacterial solution and you will then have local anaesthetic injected into the skin below your belly button. A small cut, approximately 2cm in length, will be made into the skin in this area, and the catheter will be inserted into the peritoneal cavity through this.

This should not be painful, although you may feel some pushing and other peculiar sensations in your tummy as the catheter is being introduced. This is perfectly normal and does not usually cause significant discomfort. If you do feel any pain, please let the doctor or nurse know at once.

Once the catheter is in place, and fluid has been flushed through it to check that it is in the correct position, the incision will be stitched up, and the catheter exit site will be covered with a dressing.

What happens after the procedure?

After the procedure, you will be monitored by staff in the ward and given something to eat and drink as soon as you feel like it. There may be some discomfort in your tummy once the anaesthetic has worn off, and you will be given painkilling tablets to take on a regular basis for the next few days, if you need them.

The dialysis catheter will not be used for two weeks so that the wound can heal completely. Very occasionally, the blood tests may indicate that you need to start dialysis before the two weeks is up. This will be done using either haemodialysis via a temporary neck line or using the Automated Peritoneal Dialysis (APD) machine, as dialysis can be performed using smaller amounts of fluid, which is safer in the immediate post-op period. If this is required, you may have to stay in hospital a little longer.

There will be two dressings on your abdomen and you will have a stitch (suture) in place, closing the exit site. This may be the sort of suture that dissolves, but if not it will be removed about 10 days after the procedure.

You are likely to have some bruising on your abdomen after the procedure.
What immediate follow-up care will I receive?

Before you go home, you will be seen by a member of the Renal Community Team, who will give you appointments for your dressings to be changed and for blood tests to be taken 1 and 2 weeks after your operation. The dates for your dialysis training will also be organised.

The delivery of your stores will be discussed at this time. They will usually be delivered to you the week before your training starts.

You will be given a list of instructions for how to keep the tube safe when you get home:

- Keep your dressings dry – no showering or bathing for 2 weeks. You will be shown how to renew your dressings yourself during your training.
- No driving or lifting for at least 7 days.
- Take laxatives regularly if necessary – it is important to have a good bowel movement daily, as constipation can interfere with the working of the Tenckhoff Catheter. You will be given laxatives to take home so that you can ensure this happens.

You are usually able to go home 6 hours after the procedure, unless there is a complication (which is very unlikely). As mentioned above, you need to have a responsible adult to collect you from hospital, take you home and stay with you for at least one night after the procedure. Before you go, you will be given phone numbers to ring should you have any problems.

Will I need to take time off work?

Most patients are advised to take 7 days off work to recover from the procedure. Some people need more than this and some people need less. If you have a manual job, you are more likely to need more time off.
What are the benefits of having the PD catheter inserted under local anaesthetic?

The procedure is mostly carried out as a day case, usually first thing in the morning, which allows most patients to go home the same afternoon. This means a general anaesthetic is not required, and there is no hospital inpatient stay, which means less disruption to your life. A Tenckhoff Catheter inserted under general anaesthetic usually requires a two-day hospital stay. However, please be aware that, in certain circumstances, you may need to be admitted the day before the procedure, depending on your underlying medical condition. Your doctor will let you know if this applies to you.

What complications might occur?

There are four main possible complications that could occur with this procedure:

**Technical failure:** Occasionally, insertion of the catheter under local anaesthetic fails for technical reasons. If this happens, the procedure will be stopped and you will be advised of the alternative ways in which the catheter can be put in. Failure to insert the catheter under local anaesthetic occurs infrequently (about 1 in 30 attempted insertions).

**Bleeding:** Bleeding can occur in 3-4 per cent of cases (3 to 4 of 100 insertions). Any bleeding that does occur usually stops of its own accord, but occasionally requires further treatment.

**Bowel perforation:** Very occasionally during the course of the procedure, the bowel is cut by mistake. This occurs in fewer than 1 in 100 insertions (i.e less than 1 per cent). This is a serious complication that may require a surgical operation and an inpatient stay in hospital.

**Infection:** You will be given intravenous antibiotics at the time of the catheter insertion to prevent infection. Despite this, some patients develop infection at the catheter exit site or inside the abdomen, and this requires treatment with a further course of
antibiotics. This only occurs in 2.6 per cent of insertions. Very occasionally this may require the catheter to be removed.

**How will I be looked after in the long term?**

A Community Team Nurse will be allocated to look after your ongoing care and he or she will keep in contact with you. This will involve some visits to your home. The first visit usually takes place in the week after your training is completed.

A follow-up clinic appointment will be arranged with one of the renal doctors for approximately 2 weeks after training.

Hospital transport can be provided for all your hospital appointments and training, if necessary, but we do encourage you to make your own arrangements if at all possible.

**How do I learn to do the PD?**

Approximately 2-4 weeks after the tube insertion, you will need to come to Renal Outpatients for 2 days, 9.30am-3.30pm, for dialysis training. This is then completed with a third day of training at home. We do encourage your family or carers to be involved with your dialysis, and they are welcome to come with you for training (though only one person at a time, due to space restrictions).

The training is completed when we are confident that you are safe and able to continue with the 4 exchanges a day by yourself, so it may take less or more time, depending on your individual needs.

**Where will I do my PD fluid exchanges?**

These need to be done in a room or corner of a room that you can keep clean — i.e. away from animals and children and **not in a bathroom, toilet or kitchen**.

You will need a surface that is stable and at a suitable height to allow you to stand or sit without stretching the tube.

You will also need somewhere to hang the dialysis bag. You can use a coat hanger over a door to start with.
We suggest that you do not buy anything at this stage. Wait until you have been trained and started doing your exchanges at home.

**Training for APD**

If you have opted to have APD (overnight Automated Peritoneal Dialysis), you will start by learning the basic PD as described above. You will then need to discuss a date for APD training with your Community Team Nurse. APD training normally takes a couple of days and usually takes place at your home about 2-3 months after starting PD. The APD machine and supplies will be delivered prior to your training, and after training your Community Team Nurse will give you an individually programmed card to simplify the machine operation for you.

**Where will I store the boxes of fluid and other equipment?**

You will have an initial delivery of 40 boxes of fluid plus other items (one month’s supplies). If your space at home is very limited, we may be able to offer fortnightly delivery instead. The delivery driver will put the boxes where you want them – upstairs, in a garage or shed – anywhere safe that is clean and dry. Remember, though, that they need to be brought to your exchange area at some point and the boxes can be heavy, so don’t store them too far away.

You will also have some other stores delivered, such as dressings, cleansing solutions, paper towels etc. It is useful to store the dressings in a cupboard or drawer close to your exchange area, if you have the space.

Please be aware that the APD dialysis bags are larger than the CAPD bags, so you may need slightly more storage space if you move to APD.

You will have a ‘top up’ delivery of fluids and stores every month and someone will need to be at home to accept the delivery. If this is likely to be difficult, it is possible to arrange for the driver to have a house, garage or shed key. Please keep in good contact with the Community Team Administrator (see back page) and let
her know if you have any problems.

References


NHS Constitution. Information on your rights and responsibilities. Available at [www.nhs.uk/aboutnhs/constitution](http://www.nhs.uk/aboutnhs/constitution)