Surgical Insertion of a Peritoneal Dialysis Catheter under General Anaesthetic

Information for patients about surgical placement of a Tenckhoff Catheter in the abdomen
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, the catheter is inserted by a surgeon in an operation that is usually carried out under general anaesthetic.
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 surgeon 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).

**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.

**What happens on the day of admission?**

You will be asked to ring the ward on the morning of the day of your admission to make sure that a bed is available for you.

You will then come to hospital at 4pm on the day before your operation is planned. Your stay will usually be for two nights.

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

You will be asked to sign a consent form. The surgeon who is to carry out the procedure will 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.

It is important to have your bowels well open before the operation. If required, you may be given a strong laxative dissolved in water on the night of your admission, to make sure that your bowels are empty before you go to theatre the next day.

**What happens on the day of the operation?**

If your operation is planned for the morning, you will not have anything to eat or drink after 12 midnight. If your operation is in the afternoon, you will be given an early breakfast at about 6am, and then nothing to eat or drink after that. If you have diabetes that is treated with medication, it is essential that you inform the nurses of this.

You will be given an antiseptic solution to shower with, and then have a clean theatre gown and anti-embolism compression stockings to put on.

Please be aware that we cannot give you an exact time for your operation, as theatre lists need to be flexible to deal with any emergencies that may occur. Everything possible will be done to ensure that you are not kept ‘Nil By Mouth’ any longer than is necessary.

**What happens after the operation?**

When you have recovered from the anaesthetic, you will be given painkillers if you need them. You will be encouraged to eat and drink as soon as you feel like it.

You will have blood tests to check your kidney function and haemoglobin level.
Your tube will be flushed with dialysis fluid to make sure that it is working properly.

It will then be capped and not 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 your operation.

You are likely to have some bruising on your abdomen after the operation.

**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 the day after the operation and, 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 complications might occur?

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

**Functional problems:** Occasionally, the catheter may not work despite apparently successful insertion. This may be due to the tip of the catheter sitting in the wrong place, or getting covered by internal tissue, which stops it working. At this unit, this occurs in less than 7 per cent of insertions (fewer than 7 in every 100 insertions).

**Bleeding:** Bleeding may occur, mostly as a result of bruising around the wound, and it usually stops of its own accord. In fewer
than 1 in 100 insertions (less than 1 per cent), you may need to have more surgery to stop the bleeding.

**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, which requires treatment with a further course of antibiotics. This occurs in less than 1 per cent of insertions (less than 1 in every 100 done). Very occasionally this may require the catheter to be removed. There is also a risk of infection developing deeper in the abdomen, causing peritonitis in the immediate post-op period (the first two weeks after insertion). At our unit, this occurs in around 3 per cent of insertions, and will be treated with different antibiotics.

**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.

**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.

On your second post-op visit for dressing care, your tube will be flushed with dialysis fluid again, to check that it is still working well.

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)