

Dialysis Unit

What I need to know about choosing Peritoneal Dialysis (PD)

This leaflet provides practical information for people who are thinking about choosing Peritoneal Dialysis (PD) as a treatment for their kidney failure.

Peritoneal Dialysis is a treatment that you can be taught to do for yourself at home. Most people can learn to do it in a few days and the nurses and doctors are never more than a phone call away. You will be followed up at the PD clinic every one to three months.

Who can be treated by PD?

Most people with kidney failure can have PD, but there are certain medical contraindications that can make doing PD difficult, for example, previous major abdominal surgery; so it is necessary discuss this with your doctor.

How will it fit into my life?

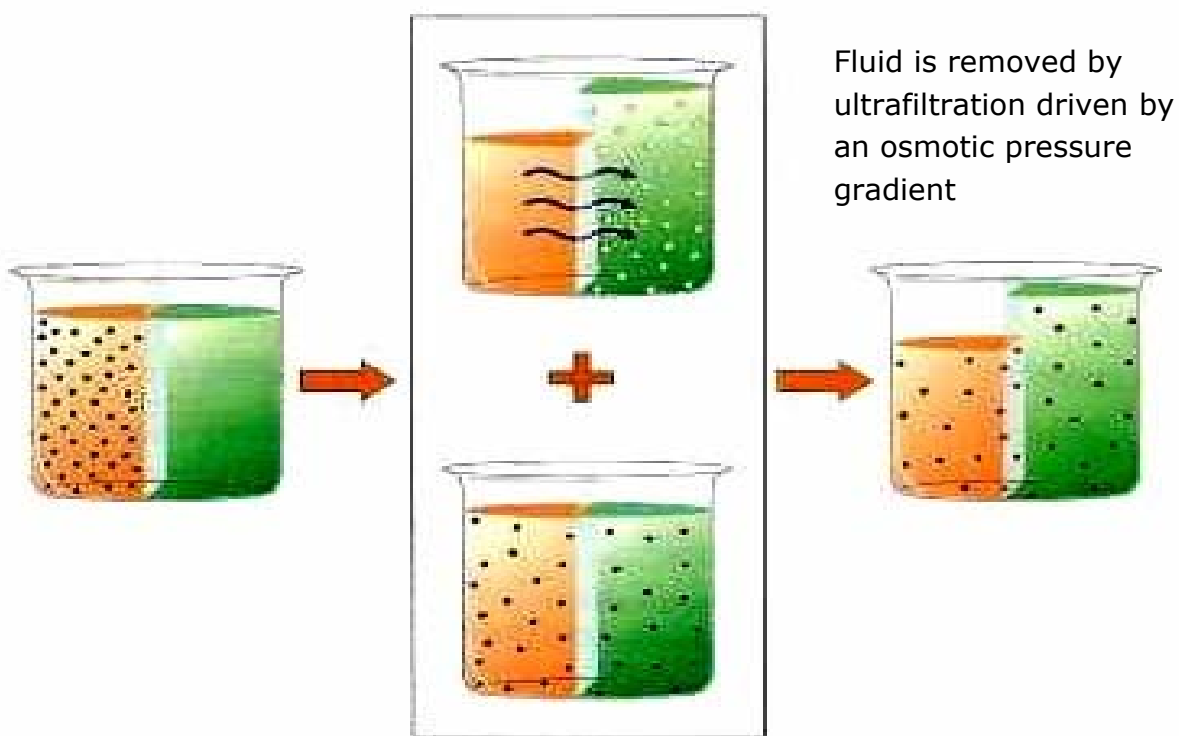
On PD, people enjoy a relatively normal life. The treatment is flexible and can be adjusted to fit in with work, school or travel plans, because you are in charge of your own treatment.

How does Peritoneal Dialysis work?

Peritoneal dialysis uses your peritoneum (a natural membrane lining the abdominal cavity) to clean your blood and remove excess fluid. This is effective as the peritoneum has a very good blood supply, and has lots of tiny holes or 'pores'. These act as a natural filter through which toxins and fluid can pass, and be removed from the body.

A special dialysis fluid is filled into your peritoneal cavity, through a small soft tube called a Tenckhoff catheter. The dialysis fluid is then left in the peritoneal cavity where dialysis (removal of toxins and excess fluid) takes place. This form of dialysis works as a result of two processes, diffusion and ultrafiltration. The dialysis fluid has been especially designed to allow this to work effectively.

You will have built up a lot of waste products (toxins) in your blood and these are removed by diffusion. This is where the toxins pass from a high concentration (the blood) into a low concentration (the dialysis fluid) across the little holes in the peritoneum. This continues until the amount of toxins in the blood and the dialysis fluid are about equal.



Start
The blood contains waste products and excess fluid

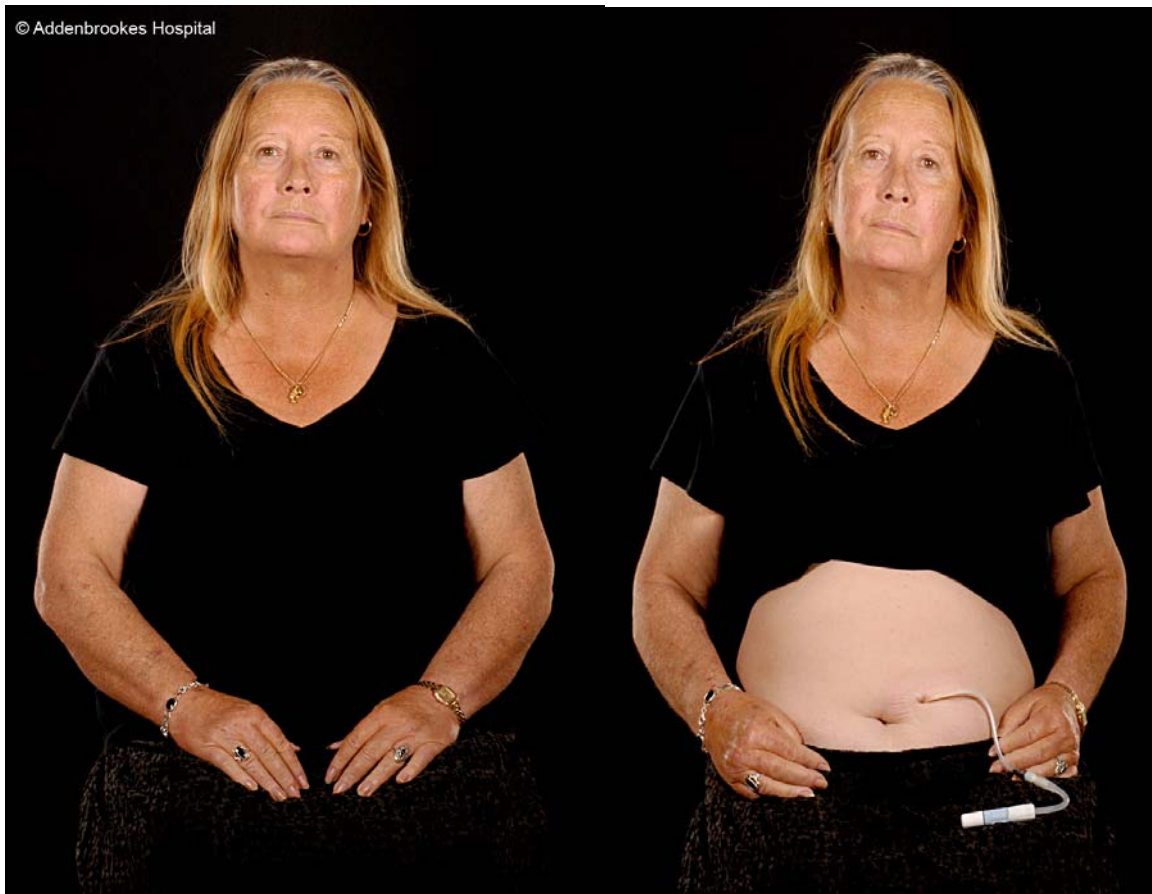
Waste products are moved across the membrane by diffusion driven by the concentration gradient

RESULT
The blood is purified i.e. it contains less diffusible waste products and the blood volume is normalised

Dialysis patients also frequently retain excess fluid. This is removed using a process called ultrafiltration. The dialysis fluid contains glucose (a form of sugar) which 'sucks' the water from the blood. The amount of water removed depends on the amount of glucose in the dialysis fluid; the more glucose there is, the more water will be removed. The special dialysis fluid along with the toxins and excess water is then drained out. This is called an exchange.

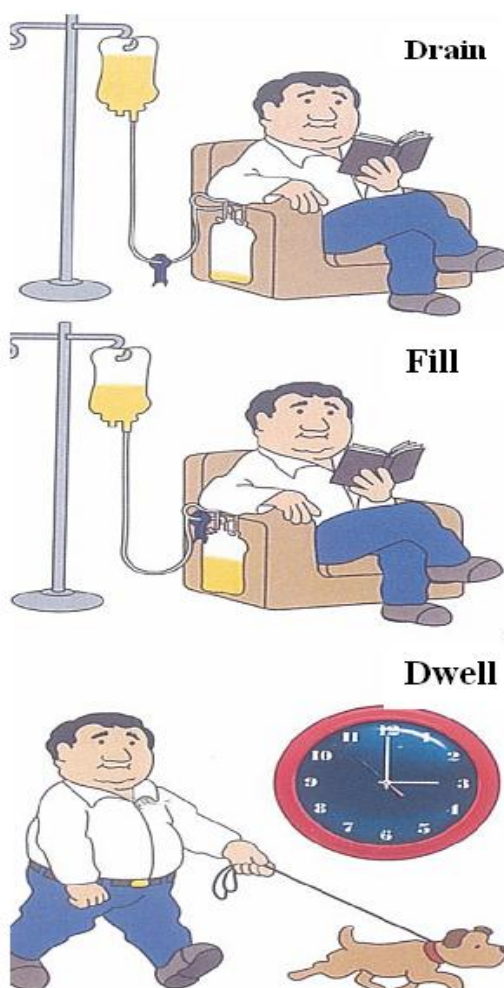
The Tenckhoff catheter is put into your abdomen during a minor operation, either with a general anaesthetic (where you are put to sleep) or a local anaesthetic (where you are awake but the area will be numbed).

Part of the Tenckhoff catheter remains outside your abdomen, under your clothes, so that the special dialysis fluid bag can be attached.



The PD exchange is made up of three stages:

1. **The Drain** - fluid is drained out of the peritoneal cavity through the Tenckhoff catheter.
2. **The Fill** – the peritoneal cavity is filled with between 1.5-3.0L of the special dialysis fluid.
3. **The Dwell** – the fluid is left to dwell inside the peritoneal cavity to allow the toxins and fluid to be removed (this is the dialysis).



There are 2 types of peritoneal dialysis

CAPD (Continuous Ambulatory Peritoneal Dialysis) APD (Automated Peritoneal Dialysis)

CAPD

- CAPD is where you do your own PD exchanges at home, manually, four times a day, every day.
- Each exchange of PD fluid takes about 20-30 minutes.
- The exchanges can be done almost anywhere (for example in the car, at work) as long as you have a cleanable surface to use such as a plastic tray.
- Continuous – means you are dialysing all the time
- Ambulatory – means you can walk around, you are not attached to a machine
- Peritoneal – means we use your peritoneal cavity
- Dialysis – means the removal of the waste products and fluids from the body
- The exchange times can be varied to fit in with your activities, an example for four exchanges a day would be:

1. 1st exchange breakfast time
2. 2nd exchange lunch time
3. 3rd exchange tea time
4. 4th exchange bed time

- If you want to travel on holiday we can arrange for the dialysis fluid to be delivered within the UK and most other countries.

APD

- This is where a machine is used to perform the PD exchanges whilst you are asleep.
- You connect to the machine in the evening and disconnect yourself in the morning. You would need to be attached to the machine for 8-10 hours each night.
- The machine needs to be within reach of an electricity supply, and is about the size of a small suitcase. It is usually placed in the bedroom.
- Many people on APD will need to do a CAPD exchange during the day either at lunch time or teatime.
- The machines have built-in safety devices and are easy to operate.
- If you want to travel on holiday, you can take the machine with you. We can deliver the dialysis fluid within the UK and to most other countries.

There are advantages and disadvantages to both types of peritoneal dialysis. A dialysis specialist nurse will talk to you and answer any questions you have about your peritoneal dialysis treatment. If you have any further questions, you can call the peritoneal dialysis unit and talk to a nurse on 01223 217822.

Catheter insertion – how will the tube be put in?

Your kidney doctor will discuss with you when you need to start dialysis. If you have chosen peritoneal dialysis you will need to have an operation to put a small plastic tube into your abdomen (tummy). This tube is called a Tenckhoff catheter.

You will be given a date for the operation and asked to ring the ward to check that a bed is available. You will either need to go to theatre and have the catheter inserted by a surgeon under a general anaesthetic (where you will be put to sleep), or you will have the catheter inserted under a local anaesthetic (while you are awake). The doctor will discuss which is the best option for you. You will need to stay in hospital overnight.

An anaesthetist will come and talk to you about this and discuss your health.

The place where your catheter/tube comes out is called the exit-site. It is usually placed slightly above and to the side of the umbilicus (belly button). The doctor will determine with you the best location for the exit site.

The catheter is secured with special tape to your tummy to prevent it from moving too much. This will help with the healing. The exit site is covered with a special dressing.

What do I need to do before the operation?

It is important that you are not even slightly constipated before having the Tenckhoff catheter inserted. To help empty your bowels you will need to take some medicine called a laxative for one week before the operation. You may also need further treatment on admission if you are still constipated.

You will also need an **antibiotic** to minimize the risk of infection at time of catheter insertion. This is given to you on the ward in a drip **before** your operation.

What will happen after the tube (Tenckhoff catheter) is in?

You will need to come to the peritoneal dialysis unit once a week to see the nurse. The nurse will connect a dialysis bag to your Tenckhoff catheter and let some dialysis fluid run into your peritoneal cavity and then back out. This prevents the tube getting blocked and is called a flush. The nurse will also clean your exit site and take some blood from you. The procedure takes about one hour.

Training to do my own bag exchanges:

A date will be arranged with you to come to the peritoneal dialysis unit so that we can teach you to perform your own dialysis treatment. This usually takes three to five days. A training date is usually booked for four weeks after the tube is put in. Normal training hours are 0930 until 1630 hours and it is good to bring someone with you who can also learn and support you. Before you come for training, all the things you will need to carry out your dialysis for a month will be delivered to your home. You will need to think of a place to store the fluid. If storage is a problem, mention this to the dialysis nurse as soon as possible.

What if I need dialysis before I learn how to do it myself?

Blood samples will be taken during the flushes to make sure you don't need dialysis treatment sooner than planned. If you do need dialysis before your training date you will be asked to come to ward C5 for 24 hours and have peritoneal dialysis through a machine using small amounts of fluid each time. This usually happens twice a week. A nurse will explain this to you in more detail if you need it.

Looking after your tube (Tenckhoff catheter)

The catheter will stay in your tummy for you to use to do your dialysis. The dialysis nurse will give you an information leaflet called "How to care for your catheter".

Dressings

It is important to keep your exit site covered with a dressing to protect it. Your exit site will be checked and a new dressing will be put on by the nurse during your weekly flushes. You will be taught how to clean your exit site during your training. The ward or the dialysis nurse will give you some spare dressings in case one falls off in between flushes.

Can I have a bath or a shower?

No – You will need to have a 'strip wash' until your exit site has healed. A nurse will advise you when it is safe to get the exit site wet during a shower, usually three to four weeks after insertion. You will then be taught how to care for your exit site yourself.

Can I drive after having a catheter put in?

It is better to have somebody to collect you to drive you home, as your tummy may be sore. Please position the seat belt to avoid hurting your exit site area. Your doctor will advise you when it is safe for you to start driving again.

Can I work after having the tube put in?

Many people do work once on Peritoneal Dialysis. You need to discuss with the doctors regarding a return to work date following your Tenckhoff catheter insertion, and you must not lift any heavy items for six weeks.

If you are returning to work you need to discuss your dialysis requirements with your employer as soon as possible, especially if you are intending to perform an exchange at work.

If you need to perform an exchange at work you will need a space to do it, access to a sink to wash your hands and a small area to store some supplies.

The PD exchange relies on gravity to drain in and out, so to drain the fluid in it just needs to be hung up above you, for example a hook on the wall to hang it on.

What are the main complications?

The doctor should tell you about things that could go wrong before you sign your consent form and will also talk about the potential risk of having an anaesthetic. Here are the four main complications:

1. Sometimes the tube moves in your tummy and the fluid will not drain in or out.
2. Occasionally the tube gets blocked.
3. There is a risk of infection.
4. The dialysis fluid may leak out of the exit-site.

If any of the above complications occur, the dialysis nurse and doctor will provide the appropriate treatment. Some problems with the catheter may require surgery or a new tube (reported incidence of 13%).

How to contact a PD nurse:

The Peritoneal Dialysis office is open Monday to Friday from 0900 to 1700 hours. The phone number is **01223 217822**. If you get an answering machine please leave a message and phone number and a nurse will ring you back.

A PD nurse will aim to meet you before your catheter is put in, and possibly visit you at home.



It is against the law to smoke inside any building at either Addenbrooke's or the Rosie hospitals. Smoking is only allowed at the small number of purpose built smoking shelters on site. Please do not smoke anywhere else on site.

For advice on quitting, contact your GP or the NHS smoking helpline free, 0800 169 0 169

Please ask if you require this information in other languages, large print or audio format: 01223 216032 or patient.information@addenbrookes.nhs.uk

Polish

Informacje te można otrzymać w innych językach, w wersji dużym drukiem lub audio. Zamówienia prosimy składać pod numerem: 01223 216032 lub wysyłając e-mail: patient.information@addenbrookes.nhs.uk

Portuguese

Se precisar desta informação num outro idioma, em impressão de letras grandes ou formato áudio por favor telefone para o 01223 216032 ou envie uma mensagem para: patient.information@addenbrookes.nhs.uk

Russian

Если вам требуется эта информация на другом языке, крупным шрифтом или в аудиоформате, пожалуйста, обращайтесь по телефону 01223 216032 или на вебсайт patient.information@addenbrookes.nhs.uk

Cantonese

若你需要此信息的其他語言版本、大字體版或音頻格式，請致電 01223 216032 或發郵件到: patient.information@addenbrookes.nhs.uk

Turkish

Bu bilgiyi diger dillerde veya büyük baskılı ya da sesli formatta isterseniz lütfen su numaradan kontak kurun: 01223 216032 veya asagidaki adrese e-posta gönderin: patient.information@addenbrookes.nhs.uk

Bengali

এই তথ্য বাংলায়, বড় অক্ষরে বা অডিও টেপে পোতে চাইলে দয়া করে 01223 216032 নম্বরে ফোন করুন বা patient.information@addenbrookes.nhs.uk ঠিকানায় ই-মেইল করুন।

Document history

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