# Understanding Peritoneal dialysis and Hemodialysis

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# Overview

## About this Document

This guide has been created to accompany our webinar, Understanding Peritoneal Dialysis and Haemodialysis. It provides an overview of the two main types of dialysis, helping you to understand how each treatment works and some of the things you may want to consider when exploring your options.

Inside, you'll find key questions to ask your renal team, along with links to helpful information and support. We hope this resource helps you feel more informed and confident when discussing your treatment options and making decisions that are right for you.

### Previous Webinars

To watch our previously held webinars on topics such as; home dialysis, holiday dialysis, diet and nutrition, and current research.

**Click here for our YouTube Channel.**


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# Types of Dialysis

Dialysis is a medical treatment in which waste products are removed from the blood artificially, effectively taking over the job of the kidneys.

## Dialysis

- **Removes waste** - clears the toxins that build up in your body
- **Removes extra fluid** - prevents swelling and breathlessness
- **Balances salts** - keeps pottasium, sodium and other minerals steady

**There are two main forms of dialysis**

## Peritoneal dialysis (PD)

- Uses the lining of your own abdomen (Peritoneal membrane) as a natural filter
- Tenchkoff catheter for access.
- Done at home, by patient or carer
- Gentle, continuous cleaning every day

## Haemodialysis (HD)

- Uses a machine with a filter attatched to clean your blood
- Requires direct access to the blood via AV Fistula or Neckline
- Can be done at home or in a unit
- Usually done 3-5 times a week

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# Types of Dialysis

## Peritoneal Dialysis

**Peritoneal dialysis (PD)** is a form of renal replacement therapy. Similarly to HD, a special fluid is used to remove waste from the blood and clean it. While blood is taken from and returned to a vein in HD, in PD fluid is drained in and out of the abdominal cavity, performing a similar function. PD works because the peritoneum (lining of the inside of the abdomen) has a rich blood supply, allowing substances to cross from the bloodstream into the fluid.

In order for fluid to be passed in and out, a special soft tube called a Tenckhoff catheter, is inserted into the abdomen during a procedure at hospital. This is the tube through which fresh PD fluid flows into the abdomen and used fluid is drained. There are two main types of PD – continuous ambulatory peritoneal dialysis (CAPD) and automated peritoneal dialysis (APD), which are done at home.

### CAPD

In CAPD, a series of 'fluid exchanges' take place each day. A fluid bag is connected to your catheter, used PD fluid is drained and your abdomen is filled with fresh fluid. This takes around half an hour. After disconnecting the bag and closing the catheter cap, you are able to resume your daily activities while the fluid removes waste products from your blood. There are normally four to six of these exchanges to be done each day.

### APD

In APD, dialysis happens overnight as you sleep. The machine drains out used fluid from the day, and fills your abdomen with new fluid. Several cycles of filling and drainage will take place during your sleep, with fluid left in the abdomen during the day until it is time to repeat the process at night. This allows flexibility for you to get on with your day.

PD may not be the best form of dialysis for everyone. For example, patients who have inflammatory bowel disease or have had previous major surgery in the abdomen, may be more suitable for haemodialysis. Your doctor can answer your questions and reach a shared decision on which form of dialysis is most appropriate for you.

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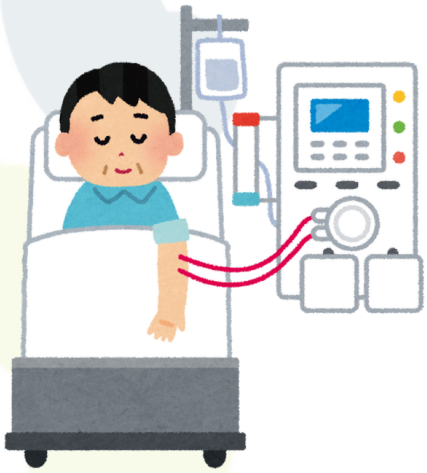
# Types of Dialysis

In **haemodialysis (HD)**, a machine which filters and cleans the blood is used. Blood is taken from your body and runs into the dialysis machine. Here, the unwanted wasted products move from the blood into a special fluid (dialysate) kept in the machine. The blood is now clean and is returned to the body.

In order for dialysis to work, the blood must flow into the dialysis machine efficiently. This is usually achieved by one of several methods. Usually, the most common and preferred way is by joining an artery to a vein in the arm, referred to as a fistula. This allows a site from which to take blood for HD that is strong enough to withstand the needle and will reliably provide good blood flow each time. The procedure to create a fistula is performed by a surgeon in hospital, and patients are normally able to go home on the same day. In patients where the vessels are not suitable for a fistula, a synthetic graft with the same purpose can be placed in the arm in a similar operation. Both fistulae and grafts take several weeks to 'mature' before they are strong enough to be used for dialysis.



HD sessions may take place either at a dialysis centre or at home. In centre dialysis, you will normally have several sessions a week, each lasting around four to five hours. These sessions are usually held on alternating days. In home HD, the dialysis machine and equipment is kept in your house. Sessions are often more frequent for HD at home compared to at a centre but can offer better flexibility around your schedule. Some patients also report feeling better with more frequent dialysis sessions. You will receive training on how to perform home HD if you wish to choose this route. In some cases, it is possible to do nocturnal HD at home. This takes place as you are asleep, allowing each session to last a longer period of time. This is often gentler on the body and may filtrate the blood more effectively. Nocturnal home HD gives you more time to do the things you want to during the day.

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# Things to consider

| | Peritoneal dialysis | Haemodialysis (HD) |
|---|---|---|
| **Where** | At home, or away with supplies | Dialysis unit, or at home |
| **How Often** | Every day- 4 exhanges or overnight | Usually 3 times a week, about 4 hours |
| **Who does it** | You or your carer | Nurses, or you if home trained |
| **Needles** | None for treatment | Two needles each session |
| **Diet and Fluid** | More relaxed for most people | Tighter limited between sessions |
| **Main risk** | Infection of the abdomen | Access problems, low blood pressure |
| **Daily rhythm** | Gentle and continuos | Peaks and dips around sessions |

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# Things to consider

There is no one-size-fits-all experience of dialysis, and everyone's journey is different.

## Location

HD often means travelling to a clinical unit, whereas PD is done independently in your own home

## Your health

Your heart, blood vessels, past surgery and any remaining kidney function all matter

## Time commitment:

HD takes about 4 hours per session, 3 days a week, plus travel time. PD requires daily exchanges (either manual several times a day or automated overnight with a machine while you sleep)

## Travel and work

PD offers more flexible scheduling for work or holidays because boxes of fluid can be delivered across the UK. HD requires arranging temporary dialysis slots at another NHS unit when travelling

## Your home

PD requires clean storage space at home for fluid bags and supplies.

## Your week

Work, school runs, childcare, travel — which pattern fits best?

## Your support

Family, friends, carers, networks and how far you live from the unit

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# Questions to ask your kidney team

Take this list of questions with you to your appointment as a prompt - there is no such thing as a small question.

- Which treatments am I suitable for, and why?
- What would a typical day or week look like for me?
- How soon would I need to start, and what preparation is involved?
- How would this affect my work, travel and family life?
- What support is available at home, and who do I call if something goes wrong?
- Could I change to a different treatment later, or be considered for a transplant?

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# Helpful Resources

**Kidney Wales**
We can support you whether you are a kidney patient, parent, carer or family member of someone with kidney disease. We can help with any queries you may have no matter how big or small.

Our monthly newsletter helps you stay connected with all the latest updates, inspiring stories, and upcoming events from Kidney Wales.
You can sign up via the link at the bottom of our Patient Resources page or contacts us: 029 2034 3940 e: team@kidneywales.cymru

The **Kidney Wales Patients and Supporters Community Group** is a closed Facebook group offering a safe, supportive space for people affected by chronic kidney disease. It's a place to connect with others who understand, share experiences, and offer encouragement along the way. Whether you're looking for reassurance, shared understanding, or simply a friendly conversation, you'd be very welcome to join our community.

https://www.facebook.com/groups/KidneyWalescommunity/

https://kidneywales.cymru/kidney-health-information/#treatment-types

**National Kidney Federation**
You can discuss your kidney diagnosis with trained members of staff.
The NKF Helpline is 0800 169 09 36 or email helpline@kidney.org.uk
https://www.kidney.org.uk/what-is-peritoneal-dialysis

**Kidney Care UK Dialysis Freedom**
A FREE service for UK patients and UK units which helps patients access Dialysis away from Base, whether it's a holiday, family celebration, or for work.
For more information, call: 01509 808668
https://dialysisfreedom.co.uk/

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