Peritoneal Dialysis

Patient Information

Kidney Care UK

Health & care information you can trust

The Renal Association
founded 1950

Working together for better patient information
Peritoneal dialysis (PD) helps to remove waste products and excess fluid that build up in your body when your kidneys stop working.

What is peritoneal dialysis?

Peritoneal dialysis is a treatment for kidney failure. It uses the lining of your abdomen, or tummy, to filter your blood inside your body. This filtering will remove waste products that have built up in your blood stream. Health care professionals call this lining the peritoneum.

How does PD work?

When you have peritoneal dialysis, a specially manufactured fluid containing water with salts and other additives flows from a bag into your abdomen. Whilst the dialysis fluid is inside your tummy, it absorbs wastes and extra fluid from the body. The dialysis fluid is then drained out of your body, taking with it the toxins and excess water. This process is called an exchange.

A few weeks before starting the treatment, you will have a soft tube, called a catheter, placed into your abdomen. This stays in your abdomen all the time, with part of the catheter on the outside of your body. It is soft to touch and should feel comfortable.
What are the different types of PD?

You can do your exchanges during the day, or at night. The most important thing is to perform all your exchanges as recommended.

**Continuous ambulatory peritoneal dialysis (CAPD)**

If you choose this type of dialysis, you can perform the exchanges several times during the day. The dialysis solution will flow in and once the bag is empty, you disconnect it and place a cap on the catheter. As you are doing your normal activities, the solution inside your tummy will absorb waste and extra fluid from your body. After a few hours, the solution which now has waste products, is drained out of your tummy into an empty bag. Then, you repeat the process with a fresh bag of dialysis solution. Each treatment takes about 30 to 40 minutes and you will usually need to repeat this four to six times a day.

**Automated peritoneal dialysis (APD)**

This can be done by a machine overnight while you sleep. You need to set-up the machine before you go to bed. The dialysis fluid is flushed into your tummy and taken out automatically by the machine overnight. Usually the machine will fill and empty your tummy three to five times during the night. Sometimes you may need to change the fluid in your tummy once in the middle of day.

The way that you perform PD will depend on what suits your lifestyle and what you require in terms of waste product and fluid removal. Your PD team will help you decide on the best treatment. They will teach you how to do your own PD. You will be given all the equipment you need.

Some kidney units offer **assisted PD** where a carer visits you at home to carry out some parts of PD for you.
How often will I need to have PD?

This depends on how your kidneys are functioning. Although at first you may not need PD every day, in the longer term you probably will. Your kidney team will assess how well the dialysis is working and will advise you on how much PD you need to have.

What needs to happen before I can have PD?

It is important that there is an area at home which will be cool, clean and dry to store your dialysis supplies. You will need to have a clean, dry and well-lit space to perform your exchanges and you will to have easy access to a sink to wash your hands.

You will need to have a small operation to insert the catheter into your abdomen. Some units can do this under local anaesthetic or you may need a general anaesthetic, especially if you have had operations on your tummy before.

After the operation, you will usually need to wait 2 weeks to recover. Your kidney team will then train you to perform PD.

You may need to make changes to your schedule to fit your dialysis treatment into your daily routine. If you do exchanges during the day, you will need to stop your normal day to day activities for about 30 minutes to perform an exchange. If you do automated peritoneal dialysis, you will need to set up the dialysis machine every night.
You will need to take laxatives as it is important that you open your bowels twice a day and that your bowel motions are soft. This will help your PD to work well.

You may need to take a vitamin tablet as PD can remove certain vitamins from the body. Your PD team will check whether any other treatments that you are taking for your kidney disease will need to continue.

You may have been taking phosphate lowering tablets or vitamin D tablets to protect your bones and these will probably need to be continued.

If you were on an injection to increase your blood count (‘EPO’ or ‘ESA’), then this will probably continue too.

You might also be given a water tablet to help your kidneys continue to produce some urine.
Who will help me with my PD treatment?

Although PD helps you to remain independent, the thought of performing this yourself might be overwhelming at first. However you will have expert support to guide you through the process.

A dialysis nurse or healthcare assistant will teach you how to perform PD at home and how to prevent infections.

You will be seen regularly by a doctor who will check your medications and the amount of treatment you need. Your dialysis treatment may be adjusted depending on the results of regular blood tests, your weight and blood pressure.

A kidney dietitian will check whether you need to make any changes to your diet, such as reducing the amount of salt, potassium or phosphate that you eat. They will help with practical suggestions on how to adapt your diet in any way needed. They will also check to make sure that you are well nourished and may suggest some supplements to help if you need them.

Starting PD is a big change. It can interfere with your home and work life. The nurses and doctors are there to help you. You may also find it helpful to talk to a social worker, counsellor or patient organisation such as Kidney Care UK. Please do ask to see them if you need support.
What are the benefits of PD?

PD may help relieve symptoms related to kidney failure including feeling sick, tired or weak. It can also help with symptoms due to too much fluid in your body, including puffy ankles and shortness of breath (fluid on the lungs). PD can help reduce other effects of kidney failure. This includes protecting your bone strength and reducing your potassium levels.

Unlike haemodialysis (HD) which usually has to be done in hospital, PD is performed at home, allowing you greater flexibility and independence.
A very common side effect of PD is constipation, and sometimes this makes the dialysis less effective. You may need laxatives to help your bowels keep moving.

One of the most serious problems with peritoneal dialysis is infection. This can occur around the catheter - exit site infection; or within the abdomen - peritonitis. This is caused by bacteria entering the body through the catheter when it is connected or disconnected with the bag.

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<thead>
<tr>
<th>Type of infection</th>
<th>Symptoms</th>
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<tr>
<td>Exit site infection</td>
<td>Redness, pus, swelling, pain</td>
</tr>
<tr>
<td>Peritonitis</td>
<td>Tummy pain, fever, cloudiness in the dialysis solution, vomiting</td>
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</table>
If infection is confirmed you will be treated with antibiotics which can be given through your PD tube. You might need to be admitted to hospital if the infection is severe and sometimes the tube needs to be removed.

Peritoneal dialysis increases the chances of having a hernia, which is a weakness in your abdominal wall. They can occur by your belly button, near the exit site or in your groin. If you notice a new lump or swelling make sure you check with your healthcare professional.

Rarely, scarring of your abdomen wall can occur which can cause pain and discomfort. Your PD team will be monitoring you and if they feel this is likely to develop they will discuss changing your type of dialysis treatment.

Your kidney team will discuss the possible risks with you before you start PD and will check on you regularly to make sure you are staying healthy.
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Who will help me with my PD treatment?

By keeping fit and healthy
Your muscles become weak when you have kidney disease so it is important to take regular exercise. You may have the option to see a physiotherapist and join in with exercise classes to help you keep fit.

Even small amounts of activity help, especially if performed regularly. Speak to your PD team who can advise what level of activity is right for you.

Give up smoking if you do smoke
Perform PD every day
Missing dialysis sessions will reduce the amount of kidney treatment you receive and lead to increased levels of toxins in your blood. This can be dangerous.

Keep to the diet and fluid allowances
PD works very hard to provide you with treatment but it is not as effective as normal kidneys. Your dietitian at the dialysis unit will be able to provide you with dietary advice and offer you support throughout your time on dialysis.

It is also important to be aware of your individual daily fluid allowance. This may change if you start passing less urine. Your kidney team will be able to advise you on your fluid allowance. It is very important to manage this and you may need advice from your dialysis team.

How can I stay well on dialysis?
Can I go on holiday?

Yes, and one of the advantages of PD is that it helps to maintain your independence. Speak to your kidney team to ensure you’re travelling safely and to allow them to arrange enough supplies for the time that you are away.

Are there any alternatives to PD?

Other options are kidney transplantation, haemodialysis or haemodiafiltration. Your kidney team can discuss these with you.

Sometimes PD works less well with time. If this happens, your PD team may advise you to change to another form of treatment.

In some cases, people’s overall health declines and dialysis becomes too difficult. You may then choose to stop dialysis and only receive treatment for the symptoms of kidney failure. This may shorten your life expectancy but improve your quality of life for the time you have left.

These choices should be discussed between you and your healthcare team so you can decide which option is best for you.

There are separate information leaflets about haemodialysis, kidney transplantation and stopping dialysis available on the Renal Association and Kidney Care UK websites.
Where can I find out more information?

- Kidney Care UK: About Kidney Health - www.kidneycareuk.org/about-kidney-health
- NHS Choices - Dialysis: www.nhs.uk/conditions/dialysis
- Renal Association Patient Information Leaflets – includes leaflets on Haemodialysis, Transplant frequently asked questions and Dialysis away from home – www.renal.org/information-resources/patient-leaflets
- Patient View: www.patientview.org - Online access to your health records. Ask your renal unit for details about how to join

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