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Haemodialysis

Patient Information



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Haemodialysis (HD) helps to remove the dangerous substances and excess fluid that build up in your body when your kidneys stop working.

How does HD work?

When your kidneys don't work properly, toxins build up in your blood stream. This includes creatinine and urea, which are used to help monitor your kidney function. Your body can't get rid of acid and some minerals, which leads to the blood stream becoming more acidic, and minerals like potassium and phosphate building up. Over time, the volume of urine that you make reduces and excess water or other liquids can build up. This fluid can also be removed by HD.

HD works by taking blood from your body and 'cleaning it' in a machine to remove the toxins. Blood is taken out of your body and run through a filter. Toxins move from your blood into dialysis fluid and the dialysis fluid is then thrown away.

What are the benefits of HD?

HD 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). HD can help reduce other effects of kidney failure. This includes protecting your bone strength and reducing your potassium levels.

How often do you need to have HD?

You will generally need to have HD for at least 4 hours, three times per week. However some people will need more or less than this, depending on their individual needs.

Once your kidneys have stopped working, they do not usually get better so HD is likely to be an ongoing routine for you. It is important to have regular dialysis to manage your symptoms and make sure that the toxins that your own kidneys can no longer get rid of are being removed.

You can have your treatment in a unit attached to a hospital, in a satellite unit (not usually attached to a hospital) or you may be able to do your own dialysis at home. If you are having HD in a hospital or satellite unit you will generally be given a specific time slot to attend your dialysis. This will either be on a Monday, Wednesday, Friday or a Tuesday, Thursday, Saturday. You can learn to do some or all of your HD yourself. This is called shared or self-care and it can help you have more control over your treatment. It is also possible to train to do your own HD at home.





What needs to happen before I can start HD?

During HD your blood needs to be taken from your body and into the dialysis machine.

In most people, this is through a special connection called a fistula. This is made by joining an artery and a vein in your arm. Blood can then be removed from the body via a needle inserted into the fistula, so that it flows through the dialysis machine, before being returned to the body via another needle.

Fistulas take time to 'mature'. They are usually only ready to be used for dialysis about 6 – 8 weeks after they are formed. Sometimes a piece of tubing called a graft is used as an alternative to a fistula if your blood vessels are very fragile.

If you need dialysis before your fistula or graft is ready or you are unable to have one made, then you can have HD through a special dialysis line in your neck. This can be used immediately.

You will also be advised to have a vaccine to protect you from Hepatitis B. This is a virus which can be caught from blood. The vaccine may be given by the dialysis team or by your GP.

Will I get any other treatment during my HD treatment?

Yes, you will usually receive a blood thinner during HD to temporarily stop your blood from clotting while it is in the machine.

If you develop anaemia on HD you may be given injections of iron and supplements of the hormone called Erythropoetin, often called Epo, to help with possible symptoms such as shortness of breath and lack of energy.

Who will help me with my HD treatment?

A dialysis nurse or healthcare assistant will help you with your dialysis treatment. You will also be seen regularly by a doctor who will advise on your medications and monitor your blood tests.

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.

The dialysis team will check your blood tests every month to check that your treatment is effective. Your dialysis treatment may be adjusted depending on the results of your blood tests, your weight, blood pressure and how well you cope with HD.

Starting HD 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 could go wrong?

HD can leave you feeling tired, sick and washed out. It can cause cramps and low blood pressure. These symptoms are common. They can be improved by reducing the amount of fluid that needs to be removed at each dialysis session. This depends on the amount of fluid you drink between sessions so be very careful how much fluid you drink between treatments. The dialysis team can give you tips on how to measure and control the fluid you consume.

During dialysis blood is exposed to the outside world, so there is a risk of getting blood infections. These can be serious. The risk is higher if you have dialysis with a dialysis line rather than a fistula. The nursing staff will take special care when they give you treatment to reduce this risk. If you develop an infection, you may need to have antibiotics to treat it.

You can develop problems with your fistula or dialysis line.

- Fistulas may bruise, especially when they are first used. This gets better with time. Numbing cream can help any pain when the needle is inserted.
- Sometimes the fistula or dialysis line may stop working. In this case, the dialysis team will need you to see the doctors in the hospital to see if it can be repaired. When you have a fistula, you will notice that it has a 'buzz' which you can feel. If this disappears between dialysis sessions then call your unit immediately and they will advise you on what to do next.
- Sometimes your fistula and line may not work well enough to give good quality of dialysis. It is possible that you will need to have extra tests to help improve the function of the fistula or dialysis line.

How can I help to stay well on dialysis?

- **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.

- **Give up smoking if you do smoke**

- **Come to every dialysis session**

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**

The dialysis machines work very hard to provide you with treatment but they are 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 dialysis team will be able to advise you on your fluid allowance. This is very important to manage this and you may need advice from your dialysis team.

Is it possible to go on holiday?

You can still go on holiday if you are well on dialysis.

It is important to plan your travel well in advance with your HD team (at least three months), as you will need to continue to have your HD three times per week at a unit near to where you are staying. You should talk to your dialysis nurses if you require more information about this.



Are there any alternatives to HD?

Other options are kidney transplantation or peritoneal (tummy) dialysis. Some patients choose to control their symptoms instead of having dialysis and this is called conservative care. Conservative care may shorten your life expectancy as it treats the symptoms rather than the causes of your kidney disease.

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

Where can I find out more information?

- NHS Choices website: www.nhs.uk/Conditions/Dialysis/Pages/How-haemodialysis-is-performed.aspx
- Patient View: www.patientview.org
 - online access to your health records. Ask your renal unit for details about how to join
- Kidney Research UK:
www.kidneyresearchuk.org/health-information/haemodialysis



 www.kidneycareuk.org

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