

Fact sheet



Haemodialysis: A Treatment Option

What is haemodialysis?

When you have end stage kidney disease your body cannot get rid of extra water and waste products.

Dialysis is a treatment for end stage kidney disease that removes the extra water and waste products from your blood. There are two forms of dialysis - haemodialysis and peritoneal dialysis. This fact sheet deals with haemodialysis only.

For information about peritoneal dialysis see the *Peritoneal Dialysis* fact sheet. See *Kidney Transplant* or *Non-dialysis Supportive Care* fact sheets for information about other treatment options.

How does haemodialysis work?

Haemodialysis requires access to your blood (vascular access), a dialysis machine, and a dialyser. Your blood flows from your vascular access and is pumped through the dialyser on the dialysis machine, and the clean blood is then returned to your body.

There are three types of vascular access.

- **Fistula** - Joining one of your arteries to a vein. The vein enlarges and is known as the fistula. It is usually in your lower or upper arm and occasionally in your leg.
- **Graft** - Using a piece of tubing attached between one of your arteries and a vein.
- **Catheter** - A catheter is a tube put into a large vein. A catheter is usually only temporary until a fistula or graft is ready to use.

You will need to take care of your access. Careful hygiene will help to prevent infection. You will be shown how to check your fistula or graft every day.

See the *Access for Dialysis* fact sheet for more information.

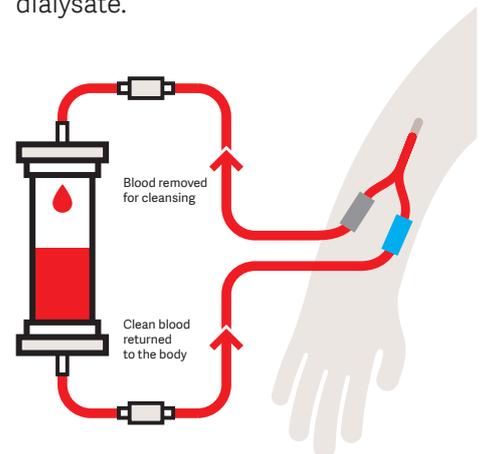
The dialysis machine

The dialysis machine is the engine that runs and controls your dialysis. The dialysis machine is prepared with lines, the special dialysis fluid (called dialysate) and a dialyser.

The dialyser

The dialyser cleans your blood and performs some of the work that your kidneys would usually do. Your blood is pumped by the dialysis machine through the blood lines to the dialyser and back to you.

The dialyser is 20 to 30 centimetres long and contains thousands of tiny hollow fibres (like hairs) that have very small holes. The blood travels through these fibres and is cleaned by the dialysate.



The haemodialysis routine

Haemodialysis is needed on a regular basis. The timing will depend on where you dialyse. If you dialyse at home your regime will be individualised and may include shorter or longer sessions, and between 3 to 6 treatments a week. The extra treatments or hours do actually improve your health outcomes.

Dialysing at home means that you can choose to dialyse when it suits you at any time during the day. At home it is possible to dialyse more often which has health benefits. If you dialyse at home you may also be able to dialyse at night. This is called nocturnal dialysis.

If you dialyse at a unit you will have permanent regular appointments, typically at least three times a week e.g. Monday, Wednesday and Friday or Tuesday, Thursday and Saturday. Appointment times vary depending on the unit. Each unit dialysis session is for 4–5 hours.

A TYPICAL DIALYSIS SESSION



Assessment (allow 15 minutes)

Before you can start each haemodialysis session your blood pressure, weight and general well-being needs to be assessed. The dialysis machine is prepared and programmed. Your vascular access should be checked for signs of infection.



Starting dialysis (allow 15 minutes)

Two needles are put into your vascular access. One needle is to take your blood and the other is to return your blood. The needles are then connected to the tubing on the dialysis machine. Blood then starts to be cleaned by the machine. Around 200 mL (less than 1 Cup) of your blood is out of your body at any time.



Activities during haemodialysis (allow 4-5 hours)

Unfortunately it is not possible to walk around during a haemodialysis session. If you choose to have haemodialysis during the day, then you will probably have your treatment sitting in a recliner chair. You can read, chat, play games, watch TV, write, use a laptop, or rest. Some people do gentle seated exercises during the haemodialysis session.



Completing dialysis (allow 15-30 minutes)

All of your blood is returned to your body and your vascular access is disconnected. The needles are removed and the needle holes held firmly until the blood flow stops (up to 10 minutes). You can carry on with your normal daily activities as soon as you feel able.

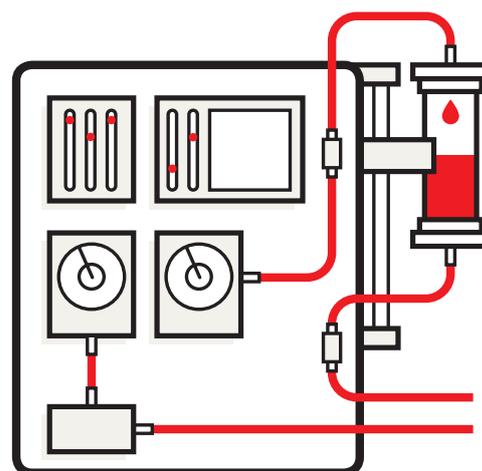
Where do I have haemodialysis?

There are several location options for haemodialysis:

- **Your own home** - you are trained by nurses to manage your own dialysis at home.
- **Self-care unit** - you are trained to manage your own dialysis in a community setting.
- **A satellite dialysis unit** - these units are often located in the community. A team of nursing staff support your dialysis. You will often see the same people every week.
- **Hospital or in-centre dialysis** - this is usually for those who require extra medical support.

If you choose to do haemodialysis at home, special plumbing is installed and the machine and all supplies are provided. You learn to manage your own dialysis. A spouse, friend, carer or partner can be trained to assist you, but some people dialyse by themselves.

See *Home Haemodialysis* fact sheet for more information. Your health-care professionals will advise you of the available treatment options for you.



How will my lifestyle be affected?

On your haemodialysis days you will need to set aside a total of 6–8 hours for the treatment and travel.

On your non-haemodialysis days you go about on with your usual life activities. You can work, attend social functions and carry on with your usual role with your family and friends. Intimate relationships can continue. Exercise is encouraged to promote a healthy heart.

Sometimes during or after dialysis you can feel sick, dizzy, tired, washed out, or have muscle cramps. This is usually caused by quick removal of a large amount of fluid, which results in a drop in your blood pressure. These symptoms are usually reduced if using home haemodialysis, where you can dialyse for longer hours and more frequently.

Do I have to change what I eat?

Usually your kidneys get rid of many wastes and extra minerals from food that your body does not need. When you are on haemodialysis the treatment does this, but cannot always remove enough wastes. You could be asked to limit your salt, protein, phosphate, potassium or fluid intake but only if these are causing problems. More hours on haemodialysis usually means less diet restrictions. Your diet will be designed with your special needs in mind.

Kidney failure can reduce your appetite. You may have difficulty eating enough food to keep you healthy, and malnutrition can become a problem. It is very important to maintain the diet recommended by your Accredited Practising Dietitian.

See *Calcium and Phosphate or Nutrition and Kidney Disease* fact sheets for more information.

Can I work when I start dialysis?

It should be possible to continue working while on haemodialysis. The benefits of keeping a job include earning an income, maintaining self-esteem and friendships. The challenge when working on haemodialysis is balancing your work and haemodialysis time commitments. Dialysing at home makes it easier to schedule treatments around personal commitments.

Can I travel on haemodialysis?

It is still possible to travel for work or personal pleasure if you are receiving haemodialysis. Dialysis may make it difficult, but not impossible. Holidays and trips will need careful planning as you will need to book into a dialysis clinic for your haemodialysis treatments. There are also some groups that offer special holiday programs.

What type of dialysis is best?

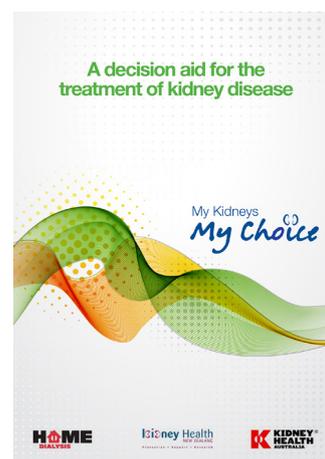
The choice between home haemodialysis, unit based haemodialysis and home peritoneal dialysis depends on many factors including:

- Personal preference
- Your health and medical suitability
- Your lifestyle



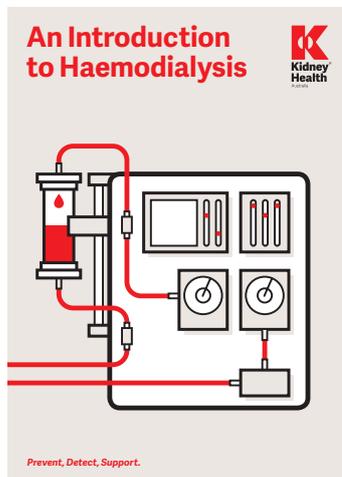
The benefits and drawbacks of each type of treatment should be discussed with your health team and family. It may be possible to change between dialysis options if one does not suit.

My Kidneys, My Choice is a useful decision aid that will help you to make your choice. It contains a check-list of issues that you should consider when making your choice. The decision aid is available from the Treatment for kidney disease > Choosing your treatment page at kidney.org.au.



More information

For more information on HD can be found in the *An Introduction to Haemodialysis* booklet.



THINGS TO REMEMBER

- During haemodialysis your blood travels through a special filter called a dialyser to be cleaned, before being returned to your body.
- Haemodialysis can be done at home, or at a dialysis centre. If you have haemodialysis at home you have more control over when and how often you have haemodialysis.
- Your diet may need to be reviewed when you are on haemodialysis. An Accredited Practising Dietitian will help make recommendations with your special needs in mind.

What does that word mean?

Dialysate - Special fluid that is used during dialysis to help clean the waste and excess fluid from your blood.

Dialyser - Part of a dialysis machine that acts like a kidney to filter blood and remove waste products and excess fluid.

Haemodiafiltration - A specialised type of dialysis that removes more water from the blood than 'normal' haemodialysis.

Malnutrition - When a person's diet is lacking in adequate nutrition. This can occur through poor diet, when not enough energy is consumed or from the inability to absorb certain nutrients.

Phosphate - A mineral that, together with calcium, keeps your bones strong and healthy. Too much phosphate causes itching and pain in your joints, such as knees, elbows and ankles. When your kidneys are not functioning properly, high levels of phosphate accumulate in your blood.

Potassium - A mineral in your body that is controlled by your kidneys. It helps nerves, muscles and other cells work well. At very high levels, it may cause your heart to stop.

For more information about kidney or urinary health, please contact our free call Kidney Health Information Service (KHIS) on 1800 454 363.

Or visit our website kidney.org.au to access free health literature.

This is intended as a general introduction to this topic and is not meant to substitute for your doctor's or Health Professional's advice. All care is taken to ensure that the information is relevant to the reader and applicable to each state in Australia. It should be noted that Kidney Health Australia recognises that each person's experience is individual and that variations do occur in treatment and management due to personal circumstances, the health professional and the state one lives in. Should you require further information always consult your doctor or health professional.



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