

Fact sheet

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Haemodialysis — A Treatment Option

What is dialysis?

Dialysis or a kidney transplant is needed when your kidneys have stopped working. A sudden drop in kidney function is called acute kidney failure. It is often short lived and seldom means you will stay on dialysis. More often kidney function worsens over a number of years (called chronic kidney disease) until there is less than 10% function left. This is when permanent dialysis or a kidney transplant is needed. Your

doctor will tell you when it is time to start treatment.

Dialysis removes waste from your blood when the kidneys fail. There are two forms of dialysis — haemodialysis and peritoneal dialysis. This fact sheet deals with haemodialysis only. Dialysis must be performed for the rest of your life or until you receive a kidney transplant. If the transplant is unsuccessful, dialysis can be restarted.

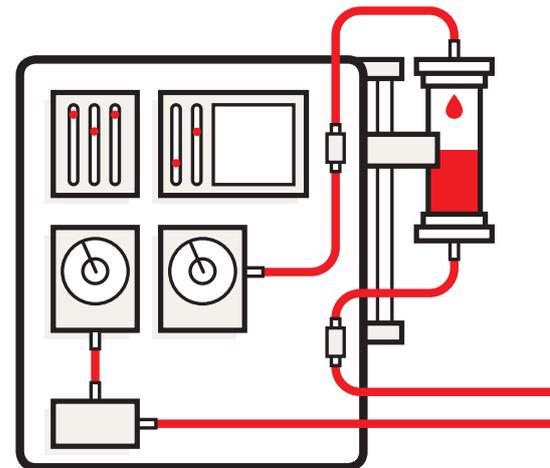
For information about peritoneal dialysis see the *Peritoneal Dialysis* fact sheet. See *Kidney Transplant* or *Non-dialysis Supportive Care* fact sheets for information about other treatment options.

What happens during a haemodialysis treatment?

Before each treatment your blood pressure and weight are checked. Your health will be assessed. During each treatment you sit in a chair next to the machine.

Two needles attached to soft tubing are put into your fistula or graft — one is to take the blood and the other to return the blood. The needles are then connected to the tubing on the machine. You are now ready to start dialysis.

The pump is turned on and the tubing takes the blood in a circle from you to the filter (dialyser) and back to you. Only a small amount of your blood is out of your body at any time. At the end of the treatment all your blood is returned to you and the needles are removed. Haemodialysis is not painful.



Where do I haemodialyse?

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.

When and for how long do I haemodialyse?

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 — nocturnal dialysis. This allows the time-consuming dialysis sessions to occur during sleep.

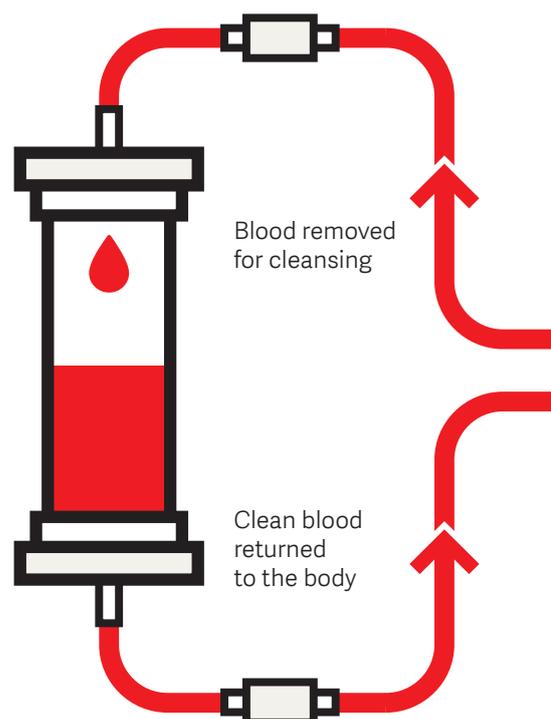
If you dialyse at a unit you will have permanent regular appointments, typically at least three times a week, e.g. Monday, Wednesday and Friday or Tuesday, Thursday and Saturday. Appointment times vary depending on the unit. Each unit dialysis session is for 4–5 hours.

How does haemodialysis work?

During haemodialysis your blood travels through a special filter called a 'dialyser' before being returned to your body.

The dialyser has many tiny fibres (tubes). As the blood is pumped into the dialyser it flows through the fibres. Each fibre has tiny pores in its walls. A special fluid called dialysate washes around the fibres. The dialysate does not come into direct contact with your blood. The extra water and waste products you don't need travel from your blood through the fibre pores and into the dialysate. Clean blood flows back to your body. The dialysate goes down the drain.

Some dialysis machines are suitable for haemodiafiltration, which is a specialised type of dialysis. During haemodiafiltration, the machine removes more water from the blood than during 'normal' haemodialysis. The additional liquid is continually replaced with an ultra-pure dialysate. Improved clinical outcomes with this form of dialysis are long term (typically seen after more than two years). Longer hours on haemodialysis (as with home haemodialysis) can have the same positive effect.



How will I feel during and after haemodialysis?

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.

Preparing for haemodialysis access

Access to your blood stream is needed so your blood can be cleaned of the excess water and waste products. A 'vascular access' is made during surgery to allow this. The surgery is usually done as a day case. It can take up to two months for the access to 'mature' ready for dialysis.

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:** Use of a piece of tubing attached between one of your arteries and a vein.
- **Catheter:** A catheter is usually a temporary tube put into a large vein until a fistula or graft is ready to use. Catheters can be used immediately.

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.

How will my lifestyle be affected?

On your dialysis days you will need to set aside a total of 6–8 hours for the treatment and travel. Activities are limited during dialysis. You can read, chat, play games, watch TV, write, use a laptop or sleep, but you cannot get up and move around.

On your non-dialysis days you can carry on with your usual life activities. You can work, attend social functions and carry on your usual role with your family. Intimate relationships can continue. Exercise is encouraged to promote a healthy heart. It can vary how healthy you feel between dialysis sessions, but most people feel better than before they started dialysis.

Do I have to change what I eat?

Just as your medication and other treatment can alter over time, your diet may also need to be reviewed. Suggested changes to your diet are based on your blood test results. You could be asked to limit your salt, protein, phosphate, potassium or fluid intake but only if these are causing problems. More hours on dialysis 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 Issues and Kidney Failure* fact sheets for more information.

Can I work when I start dialysis?

When starting dialysis it should be possible to continue working. The benefits of keeping a job include earning an income, maintaining self-esteem and friendships. The challenge when working on dialysis is balancing work and dialysis with the rest of life. Dialysing at home makes it easier to schedule treatments around personal commitments.

Can I travel on dialysis?

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 to book into another dialysis clinic. There are also some groups that offer special holiday programs.

See the Kidney Health Australia website www.kidney.org.au for more information.

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
- Finances e.g. travel costs

The benefits and drawbacks of each type need to be discussed with your health team and family. It may be possible to change between dialysis options if one does not suit. However, sometimes your choice is restricted. For instance to have haemodialysis it must be possible to gain good access to your bloodstream, which can be an issue if you have diabetes. If you have heart problems, the major changes in blood pressure and waste levels caused by haemodialysis may be a problem. Peritoneal dialysis may not be possible if you've had major abdominal surgery causing scarring.

Where can I get more information?

Comprehensive information on dialysing at home is available at www.homedialysis.org.au.

If you would like to talk to someone who has been on dialysis, Kidney Health Australia has peer support volunteers who are specially trained to talk to people with similar experiences about kidney disease. Please call Kidney Health Information Service (freecall) on 1800 543 639.

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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