

An Introduction to

# Haemodialysis



**Prevent, Detect, Support, Research.**

# Contents

Foreword	3
What are kidneys?	4
Dialysis	7
What support is available?	36
How do I make the choice?	38
What if I am struggling to cope?	40
What does that word mean?	42
Where can I get more information?	46

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## Disclaimer:

Always consult your doctor before beginning any health treatment. This booklet is intended as a general introduction to the topic and should not be seen as a substitute for your doctor's or other health professional's advice. All care is taken to ensure that the information contained in this booklet is accurate at the time of publication.

# Foreword

An Introduction to Haemodialysis is designed specifically for people who are considering treatment options for kidney disease.

If you are reading this for the first time it may be that you have just received news that you need to consider kidney disease treatment options. You may also have had CKD for sometime, or you may be supporting a loved one in this situation.

An Introduction to Haemodialysis is designed to provide you with information about haemodialysis as a kidney disease treatment option. Other booklets in this series cover home dialysis, peritoneal dialysis, transplantation, live kidney donation, and comprehensive conservative care. We encourage you to read all the booklets so you can make an informed decision about your treatment.

**Kidney Health Australia** is here to support you throughout your journey. Our fully qualified team of nurses and allied health professionals are only a phone call away should you wish to speak to someone confidentially.

Welcome to Australia's kidney community and please keep in touch so that we may be able to provide you with whatever support and assistance you require.

To receive monthly updates on the latest in the kidney community and managing your kidney health visit **[kidney.org.au/subscribe](https://www.kidney.org.au/subscribe)**

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# What are kidneys?

Most people are born with **two kidneys**, each growing to the size of your fist. Your kidneys are bean shaped and are positioned near the middle of your back, on either side of your backbone (spine). Your kidneys are part of the body's urinary system.

## What do healthy kidneys do?

Kidneys are the unsung heroes of the body. The kidneys play a number of important roles in the body, such as:

- Extracting excess fluid to make urine (wee)
- Controlling blood pressure
- Filtering waste products from the blood
- Controlling body fluids
- Stimulating the production of red blood cells
- Controlling potassium, calcium and phosphorus levels
- Regulating vitamin D.

## What happens when the kidneys don't work properly?

Sometimes kidney function can change quickly. For example, your kidneys may stop working properly because of a sudden loss of large amounts of blood (e.g. during surgery) or as a result of an accident, illness or infection.

A sudden change in kidney function is called **acute kidney injury**. This is often temporary but can occasionally lead to lasting kidney damage. More often, kidney function worsens over a number of years – it is a chronic, or ongoing, condition. **Chronic kidney disease** (also referred to as CKD) is called a silent disease as there are often no warning signs. Sometimes people lose up to 90 per cent of their kidney function before getting any symptoms.

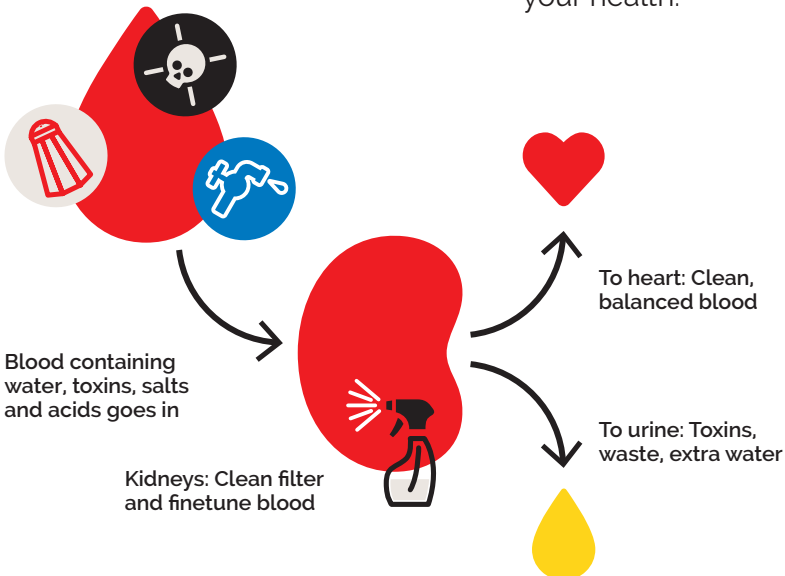
## Symptoms you may experience

- Retention of fluid causing breathlessness and swelling
- Tiredness
- Headaches
- Poor memory and concentration
- Irritability
- Sleep disturbances
- Feeling washed out
- Itchiness
- Nausea and loss of appetite
- Weight loss
- Altered sexual function.

# 90%

**of kidney function can be lost without experiencing any symptoms**

Dialysis is usually started when you no longer feel well enough to live your usual life, have excess fluid or swelling, or your blood results show levels of waste that are becoming dangerous to your health.

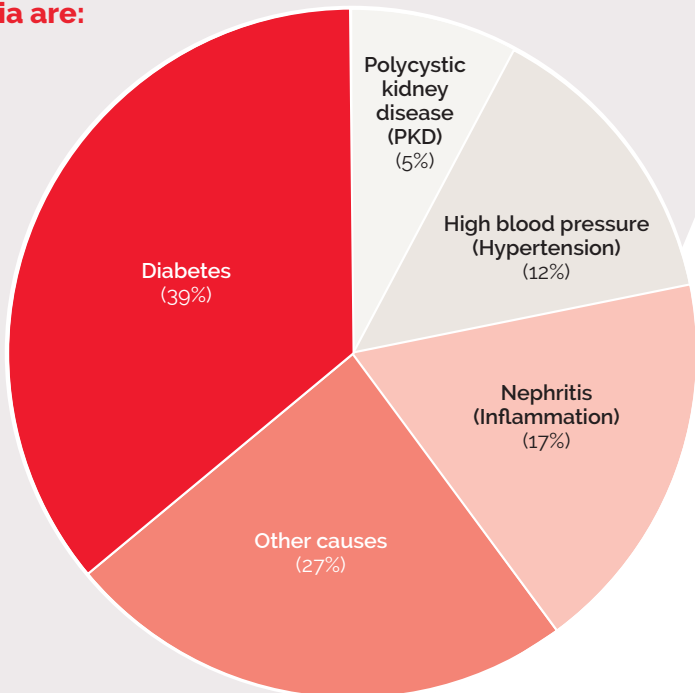


## You are not alone

In Australia:

- Over 3,000 people start dialysis or receive a transplant every year
- There are currently over 27,000 people in Australia on dialysis or living with a transplant.

**One of every 10 people has signs of kidney disease.**  
**The leading causes of kidney failure in Australia are:**



# Dialysis

When you have kidney failure your body cannot get rid of extra water and waste products. Dialysis is simply the cleansing of your blood, which is part of the work that your kidneys usually do for you.

Dialysis is usually performed for the rest of your life or until you receive a kidney transplant. If your kidney transplant is successful, dialysis is no longer needed, but can be restarted if the transplanted kidney begins to fail.

There are two different types of dialysis; **haemodialysis** and **peritoneal dialysis**. Both do the work of your kidneys, but in a different way.

During haemodialysis the blood is removed via tubing and cleaned by a special filter. It is then returned clean to your body.

Peritoneal dialysis (PD) works using your body's peritoneal membrane as a filter. PD is performed throughout the day using manual bags or at night using a machine.



## How haemodialysis works

Haemodialysis requires vascular access, which is a way to reach your blood for dialysis, a dialysis machine, and a dialyser. During Haemodialysis, your vascular access allows blood to flow from your body through soft tubes (called 'lines') to the dialysis machine. Here it passes through a special filter called a dialyser. This cleans the blood and the clean blood is then returned to your body.

### Vascular access

#### Types of vascular access

There are three types of vascular access:

- A Fistula
- A Graft
- A Central Venous Catheter (called a permcath).

Your health care team will describe each of these options and explain which type is most suitable for you.

### Vascular access with a fistula

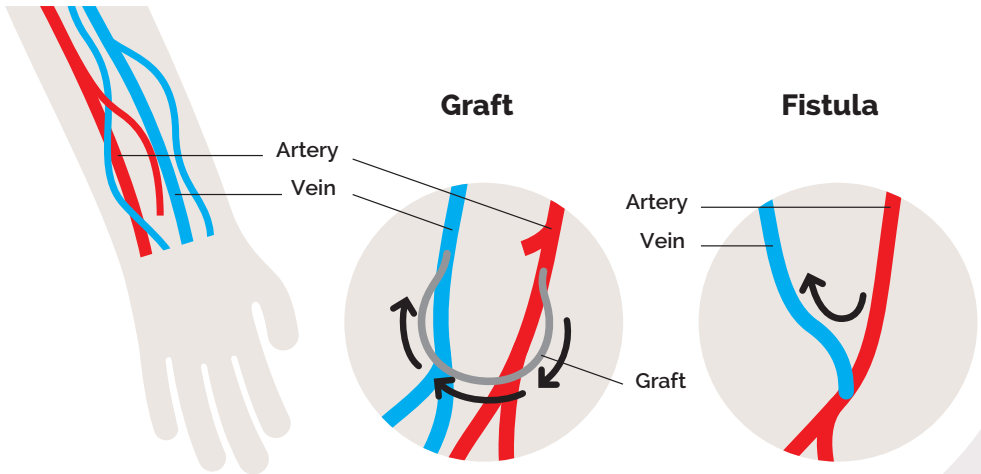
A fistula is the name for joining an artery to a vein. This is usually surgically created, preferably in your non-dominant arm (the arm you don't write with); this is the preferred option for access. With a fistula, blood flows quickly from the artery and makes the vein wider. This provides the good blood flow in your arm, which is needed for dialysis to work. The fistula is where the needles for the dialysis are inserted. Two needles are required, one connected to a line that removes blood and another line that receives blood and returns it to the body. Most people using dialysis have a fistula as it provides the best long-term vascular access, and usually has the lowest risk of complications.



## Vascular access with a graft

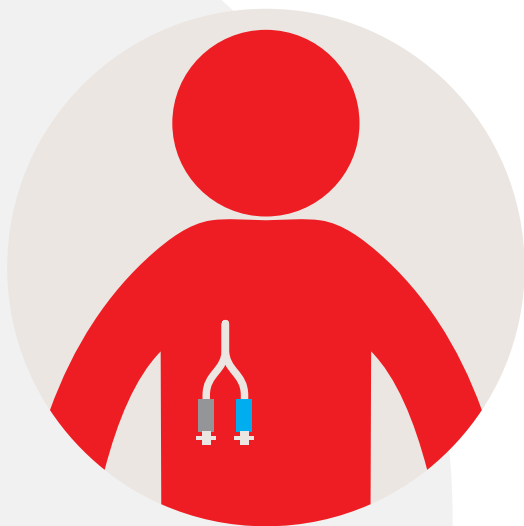
A graft is an artificial tube which is placed in an arm or leg, one end is attached to an artery and the other end is attached to a vein.

The needles for dialysis are put into the graft. Vascular access with a graft is needed when veins in the forearms are too small or delicate for a fistula to work.



## **Vascular access with a central venous catheter**

Sometimes it is not possible to create a fistula or a graft. In these cases vascular access is with a central venous catheter. This is also known as a dialysis catheter. A central venous catheter is a soft plastic tube that is placed into a large vein in the chest. This then splits in half and is connected to the lines to remove and return the blood.



Unlike a fistula, a central venous catheter can be used straight away. Some people may have a temporary central venous catheter (a vascath) while they are waiting for their fistula to be ready.

Central venous catheters are useful in the short term however have an increased risk of infection if not managed carefully. They also have a higher incidence of getting blocked, and do not provide as effective dialysis.



## Surgery for vascular access

Surgery on your arm may be needed to create a fistula or graft. The surgery is often a day-surgery hospital procedure. This means you are admitted to hospital and discharged on the same day, or you may stay overnight. The surgery may be performed with a **local** or **general anaesthetic**.

After surgery you will notice a buzzing feeling in the vascular access, which means that it's working. This can be felt by placing your hand gently over the fistula. A bruit, or the sound of the blood flowing through the fistula, can be heard with a **stethoscope**.

As a fistula takes a while to work properly, the surgery should ideally be done at least six to twelve weeks before you need to start dialysis; sometimes the fistula will need to be created in a two step procedure.

## Looking after your vascular access

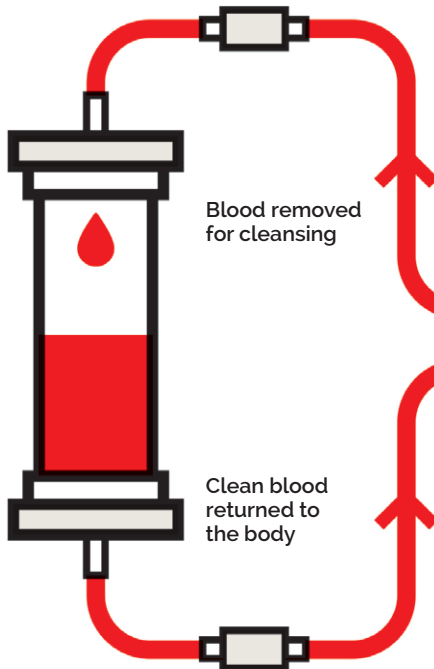
The first six weeks are critical to developing a strong fistula or graft. For the first few days, the fistula or graft will be covered with a protective dressing. You may have stitches, which will be removed after seven to ten days. Your health care team will show you how to check and look after your fistula or graft. It will be important to contact your health care team if your fistula or graft stops working. Once a fistula or graft is created, no compression to the arm; do not allow blood pressure readings to be taken on that limb, consider wearing a watch on your other wrist, and don't rest a bag or heavy item on the arm.

If you have a central venous catheter the protective dressings will be applied by your health care team. Catheters can become infected. You will be given advice about how to care for your catheter.

## The dialysis machine

The dialysis machine is the engine that runs and controls your dialysis. The dialysis machine is prepared with lines, dialysate (the fluid used in dialysis) and a dialyser (the filter). It also has safety features to detect air and blood clots.

Many modern dialysis machines can do both standard haemodialysis and haemodiafiltration. The advantage of haemodiafiltration is that larger waste molecules are removed from your blood. The removal of these molecules may keep you healthier, especially if you are going to be on haemodialysis for a number of years.





## The dialyser

The dialyser cleanses your blood and performs some of the work that your kidneys would usually do. The 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 cleansed by a special solution known as dialysate.

Very clean water is required to make the dialysate. Most dialysis machines use a special water treatment system to clean the water. The water may go through a series of filters until it is clean enough for dialysis.

The water is then delivered to the dialysis machine. The dialysis machine mixes the water with a special concentrate, provided in a bottle or as a powder, to form the dialysate.

## Dialysis needles

Cannulation is where two special needles (called cannulas) are inserted into the vascular access to allow dialysis to take place. This gives access to your blood, which makes haemodialysis possible. Many people are anxious about the insertion of the dialysis needles. Putting in the needles should get easier over time as the fistula gets stronger.

Before the start of each haemodialysis treatment a local anaesthetic (injection or cream) can be used to numb the area where the two needles go into your vascular access. One needle is for taking your blood to the dialyser. The other needle is for the returning your clean blood to your body. The needles are removed at the end of the haemodialysis session.

There are two different ways of positioning the needles for each treatment:

- **Button hole** means putting the needles in the same spot each time. It can be easier and less painful to get the needles in, but you need to be careful to prevent infections
- **Rope ladder** means needling in a line up and down the fistula or graft.

If you do your haemodialysis at home, it is expected that you may be worried about learning how to put in your dialysis needles. With time and practice, you or your dialysis partner will overcome that anxiety and learn to reliably insert the needles. The staff at your renal unit are there to help you through this process.

## The dialysis routine

The time spent on haemodialysis varies. On average the treatment will be three times a week for four to five hours, every week of the year. The staff at the dialysis unit will help patients find a routine that is responsive to their needs, but there can be limitations to appointment times.

An advantage of doing haemodialysis at home is that you have greater flexibility with your dialysis.

For example:

- Increase to alternate days (every second day), or even four, five, six or seven times per week
- Increase or decrease the hours of each dialysis session as long as the target number of dialysis hours is reached each week
- Do the dialysis overnight (can be up to eight hours)
- Do the dialysis on a public holiday when dialysis units are closed.

The advantages of additional hours of dialysis are discussed later in this booklet. They include more energy, better blood test results, a longer life-span and less diet and fluid restrictions. See **page 20**.

How many hours of haemodialysis you have each week should be a shared decision between yourself and your health care team based on your blood results and general well-being.

For more information on Home Dialysis, read **An introduction to Home Dialysis** booklet.

## 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 programed. Your vascular access should be checked for signs of infection.



### Starting dialysis (allow 15 minutes)

The two dialysis needles are placed in position, using a very clean technique (or the central venous catheter is accessed). The vascular access is then connected to the tubing on the dialysis machine and the machine is set to dialyse. The access will be secured carefully and 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. Usually your first haemodialysis sessions are short (about 2 hours) to allow you to get used to it.

During the haemodialysis session your blood pressure should be checked regularly. Some people can experience dizziness and low blood pressure during haemodialysis. Keeping your feet up helps to prevent this. It is important to let your health care team know if you feel unwell during haemodialysis as the dialysis machine program may need to be adjusted.

You can drink and eat something light during a haemodialysis session, although you may be advised to wait until your session is finished as eating can cause your blood pressure to drop.







## 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.

There is no discomfort during haemodialysis and the hardest part may be finding interesting things to pass the time. You can read, chat, play games, watch TV, write, use a laptop or sleep, but you cannot get up and move around. Some people do gentle seated exercises during the haemodialysis session. Ask your renal unit team for exercise routines and ideas or online videos for exercise on dialysis.

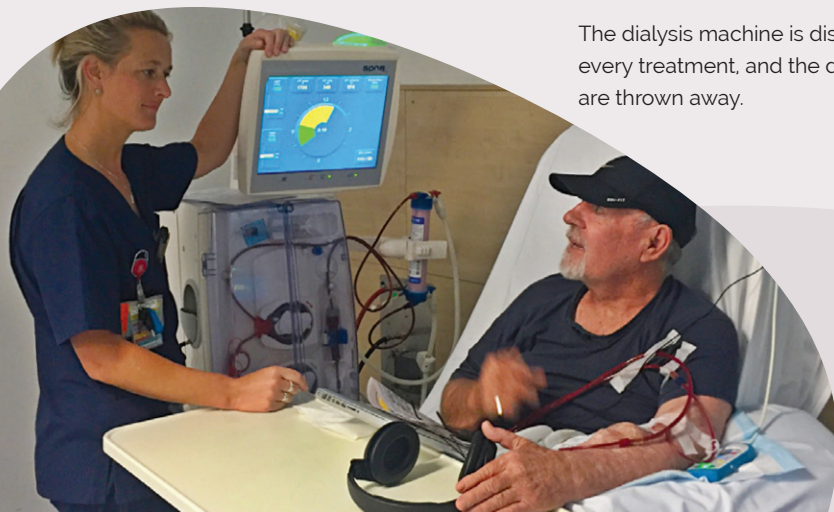


## Completing dialysis (allow 15–30 minutes)

All of your blood is returned to your body and the vascular access is disconnected. The needles are removed and the needle holes held firmly until the blood flow stops (up to 10 minutes). Your blood pressure and weight are checked.

You can carry on with your normal daily activities as soon as you feel able. Some people find they need a little time to recover after a haemodialysis session. You will need to discuss with the dialysis staff and treating doctor whether it is safe for you to drive home after a treatment. The more often you dialyse the quicker you recover from your session.

The dialysis machine is disinfected after every treatment, and the dialyser and lines are thrown away.



## What are the differences between home haemodialysis or unit based haemodialysis?

Haemodialysis can be performed at:

- **Home** – you are trained by nurses to manage your dialysis in your own home
- **Satellite dialysis unit** – these units are located in the community, and you can manage your dialysis yourself or with the help of nurses
- **Hospital dialysis unit** – these units are located at a hospital. They are staffed by nurses and are usually for people who require extra medical support.

Your health care team will advise you of the available treatment options for you and will help you choose the best dialysis that fits with your lifestyle and wishes.



## Haemodialysis at home

The greatest flexibility in haemodialysis is available by doing it at home. This also means you and your family are more involved in your treatment. Your haemodialysis can be organised to fit into your lifestyle rather than you trying to fit your life around fixed dialysis schedules at a satellite or hospital dialysis unit.

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

There are many benefits to having your haemodialysis at home:

- Less time spent in hospital
- Less time spent travelling to and from hospital
- More frequent haemodialysis means you will feel better
- Flexibility to fit haemodialysis around your work and family commitments
- Flexibility to fit haemodialysis around your lifestyle.

For more information read our **Introduction to Home Dialysis** booklet.



## Home haemodialysis schedules

When you have haemodialysis at home, your dialysis routine will be decided by you and your health care team.

The most popular home haemodialysis schedules involve haemodialysis on every second day (seven times a fortnight in total). You choose the days off. It doesn't matter if you prefer the morning, afternoon or evening. You can vary the time you dialyse from day to day. Some people choose ten or twelve sessions a fortnight but shorter sessions.

You can be flexible and fit your haemodialysis schedule into your lifestyle. Finding what works best for you may take some time.

Home haemodialysis allows you to choose to have your sessions overnight. This is called nocturnal haemodialysis. By having your haemodialysis at night, each treatment can last for around eight hours. As with daytime haemodialysis, you will need at least three treatments per week. The most popular option for nocturnal haemodialysis is every second night (four nights a week in total).

More dialysis sessions means more waste products and water are removed from your body, which may result in:

- Improved feelings of well-being
- Fewer medications
- Fewer diet and fluid restrictions
- Less impact on your daily life.

## Home haemodialysis training

The thought of learning a new skill is scary for most people. The nurses in home dialysis units can train almost anyone to manage their dialysis at home. You will only go home for haemodialysis once you are confident with your new skills and ability to manage any possible problems.

Home haemodialysis training will be offered at the training unit connected with your renal unit. If this training unit is not in a convenient location for you other arrangements may be possible. If you live in a rural or remote area you may need to travel or stay closer to a training unit. If this is needed you can apply for financial support for the travel and accommodation costs.

Home haemodialysis training is a mixture of watching, reading, listening and doing. The training nurses are very experienced and can provide information in different languages and to suit many different cultures. Your family can come to the training with you. The sense of achievement at the end of the training is something you and your family won't forget.

Home haemodialysis training takes around 6 to 8 weeks, with 3 or 4 training sessions a week. It is important that you try to allow time away from other work and family responsibilities to just focus on your training. It is also a good idea to plan a quiet week when you first start your haemodialysis at home so that you can get used to your new routine.



Undertaking home haemodialysis also involves additional activity regarding the set-up of the dialysis machine before each dialysis session and cleaning the machine at the end of the session. Weekly and monthly tasks may include changing the filters on the reverse osmosis unit and dialysis machine, lodging stock order requirements and arranging monthly blood tests. Storage space of around one cubic metre is required for medications and supplies.

Once you are ready to have your haemodialysis at home, you will be provided with nursing and technical support both over the phone and in person. To manage your health you should have contact with your **renal nurses** every month (either in person or by phone), your **nephrologist** every three months, and you should also see your **GP** on a regular basis for your other non-kidney related health check-ups.



## Haemodialysis at a satellite or hospital dialysis unit

Haemodialysis can also take place at a satellite or hospital dialysis unit. The dialysis treatment is exactly the same as for home haemodialysis.

You need to make regular appointments to go to the dialysis unit to have your haemodialysis. These appointments are usually three times each week, and last four to five hours. To allow for travel to the dialysis unit, preparation and completion of the haemodialysis, you will need to set aside a total of six to eight hours for each haemodialysis session.

For people who are working, every effort is made by the dialysis unit to schedule your treatments to fit in with your hours of work. However, this is often difficult to achieve for full-time employees, as most dialysis centres do not operate an overnight shift. It is easier to accommodate the demands of full-time work when dialysis is carried out at home, either after arriving home or overnight.

Many dialysis units offer morning or afternoon sessions, and most operate on Saturdays. Once you have arranged your schedule you will usually have your haemodialysis at the same times every week.

**Some things that people like about having haemodialysis at a satellite or hospital dialysis centre are:**

- The haemodialysis is supported by a nurse encouraging you to help
- You have days off between treatments when you can carry on with your usual activities
- You will often meet the same people
- Home-life and haemodialysis can be kept separate.

**However, there are disadvantages with having haemodialysis at a satellite or hospital dialysis unit:**

- More frequent haemodialysis is better for your body. You can usually only have haemodialysis three times each week
- Food and fluid intake is restricted between haemodialysis sessions
- Travel to and from the dialysis unit can be tiring and expensive
- Haemodialysis sessions are fixed appointments with many dialysis units unable to be flexible.





## **Transport to the satellite or hospital dialysis unit**

Travel to the dialysis unit is usually something that you need to arrange. It is important to note that a lot of time can be taken up by travelling to and from the dialysis unit three times each week.

For people who do not live close to the satellite or hospital dialysis unit, many hours can be spent travelling each week. This can become tiring, frustrating, and expensive.

For people who are unable to provide their own transport or use public transport, ambulance or community transport may be available. If you live in a regional or rural area and need to live away from home or travel a long distance for haemodialysis, you may be able to access the transport assistance scheme for your state. If you think you might have problems with getting to and from dialysis talk to your health care team as soon as possible.



## How will haemodialysis affect my lifestyle?

Levels of activity and lifestyle choices vary across stages of life and from person to person. What is important to you may be less important to other people. You may work, be retired, travel, play sport or have a family to care for.

The impact of haemodialysis on your lifestyle is one of the issues covered in the **My Kidneys, My Choice** decision aid available from the **Choosing your treatment** page at [kidney.org.au](http://kidney.org.au)

### Diet and fluid

When you are on dialysis, the treatment does the job of the kidneys (getting rid of waste and fluid from the body). Your dialysis routine controls how much waste can be removed. Dialysis sessions that are longer or more often, allow fewer restrictions on your diet and fluid intake, and will be different for every person on dialysis. Most people need help from an **Accredited Practising Dietitian** experienced in kidney disease (often called a **Renal Dietitian**) to set up a personalised meal plan. Nurses at the dialysis units can refer you to a dietitian.

The renal dietitian will assess what you are currently eating and let you know if any changes are needed.

The diet assessment includes checking your intake of energy and important nutrients such as:

- Protein
- Sodium/salt
- Potassium
- Phosphate
- Fluid
- Fat
- Carbohydrate.

Advice is given on a personal basis, taking into account what you like to eat, how you are feeling, your age, lifestyle, weight, muscle size, health status, dialysis regime and blood test results.

You will have regular blood tests when on haemodialysis and the nurses or your doctor will be able to let you know if your diet intake is correct. Sometimes they also adjust your dialysis regime to help get rid of more wastes from your food.

Most people on haemodialysis need to restrict their potassium and fluid. Avoiding foods extremely high in phosphate may be necessary, many people use special tablets called phosphate binders.

When you are on haemodialysis, fluid is removed during the dialysis process. For some people they still pass urine and get rid of fluid that way, but many do not. Therefore most people on haemodialysis need to limit the amount of fluid they have each day. Fluids are liquids that you drink, and any foods that are liquid at room temperature. This includes ice cream, yoghurt and ice cubes. Fluid is also contained in foods like cooked pasta and rice, salad ingredients, soup and some fruits (such as watermelon).

If you do frequent haemodialysis at home you have greater freedom with what you can eat and drink. An accredited practising dietitian or your nursing team can help you to sort out the fluids that you can have each day.

The easy way to monitor how much fluid you are drinking is to weigh yourself every day. If your weight goes up quickly it is usually due to fluid. You should always weigh yourself before and after your haemodialysis session. This allows the machine to be programmed to remove the right amount of fluid.

## Medications

When your kidneys stop working medications play a vital role in helping your body stay in balance. It is usual for most medications to have two names; one name is the approved pharmaceutical name that can sometimes be difficult to say and spell. The other is the brand name, which is the name that the pharmaceutical company uses to promote its brand.

When you have kidney disease it is common to have to take tablets to control your **blood pressure**. Different types of blood pressure tablets work in different ways so it is not unusual for more than one type to be prescribed. The dose may also alter from time to time according to your blood pressure.

The haemodialysis session can have an impact on your blood pressure. Your health care team will let you know if you need to take your blood pressure medications at different times on days that you have haemodialysis.

You may also need to take a medication called a **phosphate binder**. These medications help control the levels of phosphate and calcium in your body. It is essential that phosphate binders are taken with food as they act like a sponge soaking up phosphate that is released from your food.

The hormone **erythropoietin** is often used to treat the **anaemia**, which is common when you have kidney disease. Most people on haemodialysis usually need iron supplements as well, either as a tablet or a regular infusion during the dialysis treatment. Other medications may be needed to protect the health of your bones, to control your blood sugar and to lower your **cholesterol**.

Reduced kidney function, poor appetite, and changes to your diet can mean that some of your vitamins levels are low. Your health care team will let you know if you need to take extra vitamins. Some vitamins can be dangerous when you are on haemodialysis, so it is recommended that you do not take any vitamins without checking with your doctor or **pharmacist** first.

The process of haemodialysis may remove some of your medications from your blood stream. Your health care team will review your medications and let you know if you need to take certain medications before or after a haemodialysis session.

Taking medications as prescribed is one of the best things you can do to maintain your good health.

## Employment

Haemodialysis takes up many hours each week. You can work with all types of haemodialysis but you may need to adjust your working hours, particularly when you first start dialysis and your body is adjusting. Your work routine (days that you work and hours that you work) may also play a large part in your decision about which form of dialysis will suit you best.

## Finances

If your ability to work changes, this may impact on your income and your household finances.

## Sport and exercise

Continuing sport and exercise is encouraged for everyone on haemodialysis. With home haemodialysis you are more likely to have the flexibility to fit your dialysis routine around your exercise. If you play a contact sport, it is important to make sure your fistula is protected. If you swim, you need to pay careful attention to the advice of your health care team about water quality and safety.

You can also exercise during your haemodialysis sessions. The options include:

- Cycling on a portable pedal machine
- Resistance exercises with a stretch band.

Talk to your health care team to see which options for exercise on dialysis are available for you.

See **Resources** on **Page 35** for further information.

## Sexuality and fertility

Dealing with the health problems caused by kidney disease, and the treatments for it, can be difficult. It is easy to get caught up in the medical side and overlook the impact that kidney disease can have on your personal life and relationships.

Sexuality is more than just sex. It can be an important part of who you are, how you see yourself, how you express yourself, your sense of self-worth, and your sexual feelings for others. Haemodialysis brings many physical changes that can affect how you feel about your body and your sexuality.

Accessing support for issues relating to your sexuality and/or fertility will depend on the cause of the problem and your personal preferences. It is important that you talk to someone who knows your health history and understands the medications that you are taking.

Members of your health care team will understand, treat your conversations with respect and confidentiality, and offer treatment or referral to other specialists. Try to communicate your concerns with your partner so you can start to resolve the issues before they affect your relationship and life together.

Fertility can be affected by kidney disease. If you are considering becoming pregnant while on haemodialysis, it is essential that you and your partner discuss this with your doctor. It is also important to talk to your health care team about birth control options while undergoing haemodialysis. Some types of the contraceptive pill may raise blood pressure.

See **Resources** on **Page 35** for further information.

## Travel and holidays

With careful planning you can travel and go on holidays while on haemodialysis. It may involve making an appointment to have your haemodialysis at another facility. You will need to organise this before your trip, and you may have to pay some costs.

The **Big Red Kidney Bus** features fully equipped dialysis machines, travelling to different locations in Victoria and New South Wales each year. People can book holidays and still have their needed dialysis treatments.

The Bus is a free service, but holiday accommodation and travel is a personal cost. Thanks to the generous support of **Monash Health** (Victoria) and **Royal North Shore Hospital** (New South Wales), you'll be cared for by highly experienced and caring dialysis nurses when on board.

See **Resources** on **Page 35** for further information.

## Pets

You can still own pets if you are on haemodialysis. If you have haemodialysis at home it is recommended that your pets are kept away from your haemodialysis equipment so the risk of infection is reduced. It is also important to avoid being scratched or allowing your pet to make contact with your dialysis access.



## How much will haemodialysis cost me?

### **Costs for doing haemodialysis at home**

When you have haemodialysis at home there is no charge for your haemodialysis machine and supplies. These are delivered to your home once a month. Home haemodialysis supplies take up storage space, a designated cupboard or similar is useful; some people choose to buy special storage items to help organise their supplies. You may notice that you use extra hand soap and paper towels.

Some prescription medications are also needed for your haemodialysis. Some dialysis units assist with the cost of buying a recliner chair to sit in while you have your haemodialysis, digital scales (to weigh yourself) and blood pressure machines. This does vary, so please check with your dialysis unit.

Water and electricity are necessary for home haemodialysis. You will usually be required to pay for plumbing and electricity set-up costs for home haemodialysis. Solar panels will reduce the cost of electricity for home haemodialysis. Some units may help with the costs of having solar panels installed at your home. There are rebates and concessions available to help with the costs of the extra water and electricity used during haemodialysis treatment, your local renal unit can provide more information about what is available where you live.

## **Costs for doing haemodialysis at a satellite or hospital dialysis unit**

Haemodialysis is available in Australian public hospitals and some private hospitals and clinics. Renal units in metropolitan areas are often located within university teaching hospitals. Satellite units are sometimes located away from the main hospital campus in a cottage or freestanding clinic or, in the case of rural units, at the local hospital.

Medicare covers haemodialysis treatment in public hospital or satellite units. Top level private health insurance often covers private hospital or private satellite treatment, although there can be limitations and some insurance companies do not cover private dialysis at all. It is important to check the level of coverage provided by your private health insurer.

Travel costs are the main cost incurred for people using hospital based dialysis. Even someone who has to travel only 10km to have dialysis at a satellite or hospital dialysis unit travels 3,000km per year just for dialysis. Parking is free at most satellite centres but if you dialyse at a large hospital you may have to pay parking fees. Ask if there is a special parking concession for dialysis patients.

## Resources

This booklet focuses on haemodialysis. For more information about other kidney disease treatment options (including home dialysis, peritoneal dialysis, transplantation, live kidney donation and comprehensive conservative care), see the other booklets in this series available from the **Resources Library** at [\*\*kidney.org.au/resources\*\*](http://kidney.org.au/resources)

For more information about haemodialysis at home see the booklet **An Introduction to Home Dialysis** available from the **Resources Library** at [\*\*kidney.org.au/resources\*\*](http://kidney.org.au/resources)

**Kidney Health Australia** offers a range of fact sheets and publications with useful diet advice and tips. For more information see [\*\*kidney.org.au/resources\*\*](http://kidney.org.au/resources) and also [\*\*kidney.org.au/your-kidneys/living-with-kidney-disease/health-and-wellbeing\*\*](http://kidney.org.au/your-kidneys/living-with-kidney-disease/health-and-wellbeing)

For information about sport and exercise see [\*\*kidney.org.au/your-kidneys/living-with-kidney-disease/health-and-wellbeing/exercise\*\*](http://kidney.org.au/your-kidneys/living-with-kidney-disease/health-and-wellbeing/exercise)

**Kidney Health Australia** offers a range of fact sheets and publications on sexuality and fertility [\*\*kidney.org.au/your-kidneys/living-with-kidney-disease/health-and-wellbeing/sexuality\*\*](http://kidney.org.au/your-kidneys/living-with-kidney-disease/health-and-wellbeing/sexuality)

**Kidney Health Australia** has a range of fact sheets on travel and holidays at [\*\*kidney.org.au/your-kidneys/living-with-kidney-disease/managing-money-work-and-travel\*\*](http://kidney.org.au/your-kidneys/living-with-kidney-disease/managing-money-work-and-travel) as well as information on the **Big Red Kidney Bus** at [\*\*kidney.org.au/ways-we-help/big-red-kidney-bus\*\*](http://kidney.org.au/ways-we-help/big-red-kidney-bus)

**Kidney Health Australia** has a range of fact sheets on patient and carer support at [\*\*kidney.org.au/your-kidneys/living-with-kidney-disease/families-and-carers\*\*](http://kidney.org.au/your-kidneys/living-with-kidney-disease/families-and-carers)

# What support is available?

There is a lot of support available for people who are on haemodialysis. The health care team and renal social worker in each dialysis unit are valuable sources of information.

## Financial support

There are a number of options for financial support for all people on haemodialysis. Many of the payments are administered through **Services Australia**.

Many social workers or local councils have access to free financial planners too.

Please talk to someone if you are struggling financially.

## Transport support

Information is available on the different ways to travel to the satellite or hospital dialysis unit either for haemodialysis sessions or to attend training sessions for home haemodialysis.

## Assisted transport schemes (regional and rural)

People in regional and rural areas who need to travel a long distance to the dialysis unit or to attend training sessions may be eligible for financial support from the government.

## Carer support

Carers are very special people, and at times they may need to be cared for too. Support for carers may be financial, personal, social, help at home, or opportunities to have a break (called **respite**).

It's important to remember that if you are responsible for helping someone with their haemodialysis you can get tired and overwhelmed. Ask for help when you need it, and accept any assistance that is offered. You need to stay healthy and happy to support your loved ones.

## Resources

**kidney.org.au/your-kidneys/living-with-kidney-disease/families-and-carers** for support and resources.

Support groups specifically for carers can be found at

**Carers Australia**

**carersaustralia.com.au**

or call **1800 242 636**.

**My Aged Care**

**myagedcare.gov.au** is a website set up by the Federal Government to provide access to a full range of services including support for carers.

**Services Australia**

**servicesaustralia.gov.au/individuals/carers**

A website for information on payments and services available if you provide care for someone with a severe disability, illness or a frail and aged adult.

**safetyandquality.gov.au/our-work/**

**partnering-consumers/shared-decision-making**

for shared decision making between a consumer and their healthcare provider.

**Carer Gateway**

**carergateway.gov.au/**

**help-advice/**

**working-health-services**

**Ask Share Know**

**askshareknow.com.au**

# How do I make the choice?

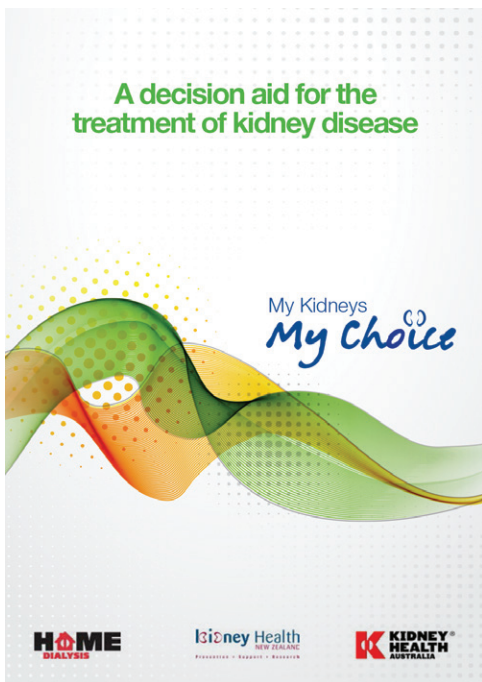
The choice between types of dialysis depends on factors such as your age, health and lifestyle. The benefits and drawbacks of each type need to be discussed with your health team and family.

If you have decided to use haemodialysis you have two choices to make:

- **Where would I prefer to dialysis – a dialysis centre or at home?**
- **If home, would I prefer haemodialysis or peritoneal dialysis?**

Education is the first step to choosing what type of dialysis treatment you will have. Take advantage of the nurses and social workers who offer group and individual education sessions. Use booklets (like this one), **Kidney Health Australia's** website **[kidney.org.au](http://kidney.org.au)** and other reputable sources of information, and consider talking to other people in the same position. Your health care team can offer advice on particular forms of dialysis suited to your individual needs, as well as provide reliable sources of information.

It is best to select a dialysis treatment based on your lifestyle, daily schedule, activities and personal preference. Many factors such as your age, where you live, your medical conditions and your support system will make a difference.



**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 in the **Resources** section of **Choosing your treatment** page at [kidney.org.au/treatment](http://kidney.org.au/treatment)

Sometimes, due to medical or other reasons, it may be necessary to change from one form of dialysis to another. Your treatment choice is up to you. If you find your initial choice no longer suits you, it may be possible to change. Your health care team will be available to help.

# What if I am struggling to cope?

It is normal to feel anger, despair, fear and other emotions during the journey of kidney disease diagnosis and treatment. These feelings usually improve with time. If the impact of kidney disease is overwhelming you, it is important that you talk to someone.

The nurses, social worker, doctor at your renal unit or your GP are the best place to start. Social workers are employed in renal units to provide professional counselling to patients and their family members. They are very familiar with the issues you are experiencing. There is no need to feel embarrassed or ashamed or to suffer in silence.

You can also see your GP who can arrange a referral to a psychologist or social worker in your community. These services can be accessed through Medicare.

If you find yourself feeling low, please ask for help.







## Resources

**Kidney Health Australia** fact sheet **Depression and Chronic Kidney Disease** can be found at **[kidney.org.au/resources/factsheets-and-photosheets](http://kidney.org.au/resources/factsheets-and-photosheets)**

**Kidney Health Australia** book **SANE Guide to Good Mental Health for People affected by Kidney Disease** can be purchased at **[kidney.org.au/shop/books](http://kidney.org.au/shop/books)**

**beyondblue**  
**[beyondblue.org.au](http://beyondblue.org.au)** or call **1300 22 4636** provides a confidential telephone information and advice helpline.

**Lifeline**  
**[lifeline.org.au](http://lifeline.org.au)** or call **13 11 14** provides 24 hour crisis support and suicide prevention services.

# What does that word mean?

## A

### **Accredited practising dietitian**

Accredited Practising Dietitians (APDs) have the qualifications and skills to provide expert nutrition and dietary advice.

### **Anaemia**

When there are only a small number of red blood cells in the blood or the blood cells are not working properly. Red blood cells carry oxygen, so someone with anaemia can feel weak, tired and short of breath.

## B

### **Blood pressure**

The pressure of the blood in the arteries as it is pumped around the body by the heart.

### **Button hole cannulation technique**

With this technique the dialysis needles are placed into the exact same holes on your fistula every time you have haemodialysis. Inserting the needles in the same holes creates a track for the needle – similar to the hole made in an earlobe for a pierced earring.

## C

### **Central venous catheter**

A special tube which is surgically inserted into your neck, collarbone or top of your leg to allow temporary access for haemodialysis.

### **Cholesterol**

A naturally-occurring waxy substance made by the body. It is an essential building block of cell membranes, hormones and vitamin D. Too much cholesterol in your blood can cause clogging of the arteries and lead to cardiovascular disease.

### **Chronic Kidney Disease (CKD)**

A term used widely to describe kidney damage or reduced kidney function (irrespective of the cause) that persists for more than three months. Sometimes CKD leads to kidney failure, which requires dialysis or a kidney transplant to keep you alive.



## D

### **Dialysate**

A special fluid used in dialysis to remove waste and extra fluid from the blood.

### **Dialyser**

The part of a kidney machine which acts like a filter to remove waste from your body.

### **Dialysis**

A treatment for kidney failure, which removes wastes and extra fluid from your blood by filtering through a special membrane. There are two types of dialysis, haemodialysis and peritoneal dialysis.

### **Dialysis machine**

A machine used in dialysis that filters your blood to remove excess water and waste products when your kidneys are damaged, dysfunctional, or missing.



## E

### **Estimated glomerular filtration rate (eGFR)**

Regarded as the best measure of how well the kidneys filter wastes from the blood.

### **Erythropoietin (EPO)**

**Pronunciation** uh-ri-thruh-poy-ee-tn

A hormone that is made by your kidneys that causes the bone marrow to make red blood cells. A lack of this hormone can cause anaemia.

## F

### **Fistula**

Produced when a vein and an artery in your arm or leg are joined together to make it easier to move blood in and out of your body during haemodialysis. Also known as an arterio-venous fistula.

## G

### **General anaesthetic**

Medications that are used to send you to sleep, so you're unaware of surgery and don't move or feel pain while it's carried out.

### **General Practitioner (GP)**

A doctor who treats acute and chronic illnesses and provides preventive care and health education to patients.

### **Graft**

Commonly used method of providing access to your blood in which a vein and an artery in the arm are joined together with a piece of special plastic-like tubing.

## H

### **Haemodialysis**

A treatment for kidney failure. Your blood is pumped through special tubing to a haemodialysis machine. The machine acts like a kidney, filtering waste products from the blood before returning it to your body.

### **Health care team**

Living with kidney disease means that you will have contact with many health professionals. In addition to your nephrologist (kidney specialist), your health care team will also include renal nurses, renal dietitian, renal social workers, your GP, and other health professionals depending on your circumstances.

## K

### **Kidney transplant**

A surgical procedure to place a kidney from a live or deceased donor into a person whose kidneys no longer function properly.

### **Kidneys**

Most people have two kidneys, each about the size of an adult fist and weighing 150 grams. Inside each kidney there are about one million tiny units called nephrons. The nephrons are the part of the kidney that filters the blood. Each nephron is made up of a very small filter called a glomerulus. As blood passes through the nephron, water and waste products are removed. Most of the water returns to the blood and the waste products collect in the bladder then leave the body as urine (wee). Most kidney diseases attack the nephrons.

## L

### **Local anaesthetic**

Medications that numb a specific area of your body to prevent feeling pain (as compared to general anaesthetic, which applies to your whole body).

## N

### **Nephrologist**

A doctor who specialises in treating conditions of the kidney.

### **Nocturnal haemodialysis**

Where haemodialysis is performed at night while you are asleep. This is usually performed at your home.

## P

### **Peritoneal dialysis**

Treatment for kidney failure during which dialysis fluid is moved in and out of your peritoneal cavity to remove wastes and fluid from the blood.

### **Pharmacist**

A person who is professionally qualified to prepare and dispense medicinal drugs. Also known as a chemist.

### **Phosphate binder**

Medication that binds with the phosphate in your intestine causing some of the phosphate to be passed in the faeces (poo).

## R

### **Renal**

Another word for kidneys.

### **Renal Dietitian**

A Dietitian experienced in kidney disease who can help develop an eating plan needed as part of the management of kidney disease.

### **Renal Nurse**

Nurses who are trained in kidney disease treatments.

### **Renal social worker**

Social workers who are trained in providing people with kidney disease and their families with the support needed to cope with kidney disease.

### **Respite**

A short period of rest or relief.

### **Rope ladder cannulation technique**

With this technique the dialysis needle placement is placed in a different site along the length of your fistula each time you have haemodialysis.

## S

### **Satellite centre**

A dialysis unit that provides haemodialysis away from the hospital. This is an option when home dialysis is not appropriate and hospital dialysis is not required. Compared to a hospital dialysis unit, satellite centres have lower staff ratios and no on-site nephrologist.

### **Stethoscope**

A medical instrument for listening to the action of your heart or breathing.

## U

### **Urine**

The name for excess fluid and waste products that are removed from your body by the kidneys. Commonly called wee.

## V

### **Vascular access**

Access to your blood stream for haemodialysis.

### **Venous**

Relating to a vein or the veins.

# Where can I get more information?

This booklet contains information about haemodialysis. Other booklets in this series cover dialysis (home dialysis, peritoneal dialysis), kidney transplantation, live kidney donation and comprehensive conservative care. We encourage you to read all the booklets so you can make an informed decision about your treatment.

## Resources

Visit **[kidney.org.au](http://kidney.org.au)**

If you want to read more, **Kidney Health Australia's** publication **Living with Kidney Failure** (8th edition) provides comprehensive information about all aspects of living with kidney disease.

Connect with

**Kidney Health Australia:**

- Community Newsletter  
**[kidney.org.au/subscribe](http://kidney.org.au/subscribe)**
- Social groups - Kidney club
- Facebook, Instagram, Twitter.



## Kidney Helpline

**1800 454 363**

**[kidney.helpline@kidney.org.au](mailto:kidney.helpline@kidney.org.au)**

Free health information service for anyone requiring assistance with managing their kidney health, understanding their kidney disease diagnosis or information on **Kidney Health Australia** support programs.

As the peak body for kidney health in Australia, we strive to create a healthier community through increased awareness and early detection of kidney disease. We connect kidney patients to vital resources and services to help them manage their condition and improve their quality of life. We also support and foster advocacy and research to drive improvements in the diagnosis, management and eventual cure of kidney disease.

### **Our support services**

- Educational resources on kidney health and kidney disease, covering diagnosis, treatment options and management
- Fact sheets, books and educational videos and apps about kidney disease
- A large range of self-management resources including recipe books and nutrition resources
- Renal unit locations guide
- Holiday dialysis bus
- Transplant housing
- Support groups
- Kidney Health Week – national kidney awareness week
- Community events and challenges
- Regular newsletters
- Guidelines, resources and education for Health Professionals.



**Connect with us:**

Freecall 1800 454 363

[www.kidney.org.au](http://www.kidney.org.au)

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