

Treatment Options for Kidney Disease:

Making a choice that is best for you.

3



This booklet covers:

- Types of Dialysis
- Kidney Transplant
- You can take control



Baxter

Which Treatment Will Help YOU Feel Better?

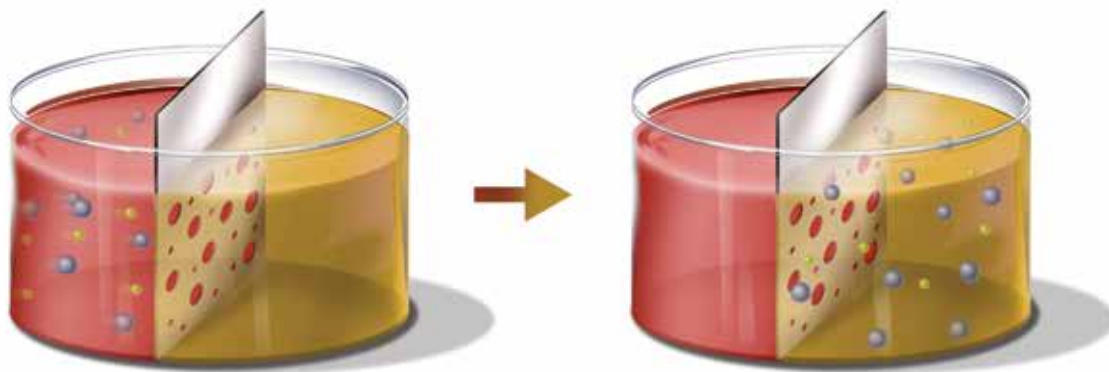
As your kidneys slow down and stop working normally, it becomes time for you to make a decision about your treatment. While there is no cure for kidney failure, there are treatments that can take over the functions that your kidneys can no longer perform — and make you feel better so that you can live a healthy life.

These treatments are **dialysis** and **kidney transplantation**. Dialysis is a replacement for the normal functioning kidney and with the help of your nurse, doctor, healthcare team, and family, YOU can choose the treatment that's best for you and your lifestyle.

Dialysis: Doing the Work of the Kidneys

Dialysis is a process that removes the wastes and extra fluid from your blood by filtering them through a membrane/filter, similar to the way healthy kidneys would.

During dialysis, blood is on one side of the membrane/filter and a special fluid called **dialysate** is on the other. Small waste products in your blood flow through the membrane/filter and into the dialysate. Larger particles, like red blood cells, remain in your blood. In this way, your blood is cleaned.



There are two kinds of dialysis, and they are different in *how* and *where* they are performed:

(1) One type of dialysis procedure uses the natural membrane of the body, called the peritoneum, as the filter to remove waste and fluid, and is called **Peritoneal Dialysis**. The peritoneum is a thin layer of your body's tissue that lines your abdomen and covers your abdominal organs.

(2) The second type of dialysis uses a machine and an external man-made or manufactured filter to remove the waste from blood, and is called **Hemodialysis**.

Peritoneal dialysis (PD) filters your blood inside your body, using the natural membrane of your own peritoneum as the filter. Your nurse will fully train you to perform PD on yourself at home, or even while traveling should you be on vacation.

There are also two types of PD:

- **Continuous ambulatory peritoneal dialysis (CAPD)** cleans and filters your blood continuously, needs no machine, and requires that you exchange (infuse and drain) fluid 4 times a day through a permanent catheter inserted in your abdomen.

- **Automated peritoneal dialysis (APD)** uses a machine called a peritoneal dialysis **cycler** to perform the prescribed exchanges to clean/ filter your blood each day through a permanent catheter, and is done at home during the night while you are sleeping.

In both instances the dialysis prescription (number of exchanges and dialysis solution) is prescribed by your doctor.

Hemodialysis filters your blood outside your body. During hemodialysis, your blood is removed from your body and pumped through a manufactured filter called a **dialyzer**.

A nurse or technician inserts two needles into a special permanent “access” usually in your arm. This access is created surgically and is called a **Fistula**. The needles that are inserted into the fistula are then connected to tubes that are used to remove your blood and then put it back into your body after the waste is removed through the filter.

Another type of access is called **Central Venous Catheter (CVC)**. It is a small soft tube (catheter) placed in to a large vein in the neck, shoulder or groin area that feeds towards the heart. CVCs do not require needles for the delivery of hemodialysis. However, CVCs have higher risk of blood infection than fistula.



Hemodialysis is usually performed during a scheduled time at the hospital in a dialysis clinic, although it can be done at home with proper training and the help of a partner. Most people require hemodialysis 3 times a week, with each treatment session lasting about 4 hours, depending on the dialysis prescription recommended by the doctor.

Hemodialysis that is done at home by the individual with support from a partner may also be done daily or 3 times a week, depending on the dialysis prescription.

As with Any Medical Procedure There Can be Side Effects – Know What They Are and How to Prevent Them

Most people enjoy the flexibility of being on PD, and complications do not occur often with the new technology available today. However, one complication of PD is **peritonitis**, an abdominal infection that may occur if procedures and hygiene are not followed carefully. By following the procedures taught by your nurse and learning to recognize the early signs of infection, as well as getting immediate antibiotic treatment, you can live healthy while doing PD.

Common complications of hemodialysis (HD) are **infection of your access (fistula) site**, blockage from blood clots, poor blood flow, and vascular access problems. These problems can prevent your hemodialysis treatment from working as well as it should and can be serious if not treated quickly.

Learning to recognize these complications and getting treatment quickly will also let you remain healthy while doing HD at home or in the clinic. Also common during hemodialysis treatments are side effects such as muscle cramps, headaches, and low blood pressure (which can make you feel dizzy, weak, or nauseated). These symptoms are related to your body's response to the rapid changes in fluid and electrolyte balance during the treatment. These symptoms can be managed, so be sure to report them to your dialysis nurse or technician.



Choosing the Type of Dialysis that's Right for You

There may be medical or lifestyle reasons why one type of dialysis is better for you than another. Here are some things to consider when making your decision.

Type of Dialysis	BENEFITS
Peritoneal Dialysis	<ul style="list-style-type: none"> • Fit your treatment around your lifestyle • Portable and flexible - easy to take your therapy with you when you travel or go to the cottage • Continuous therapy is gentler and more like your natural kidney function • Fewer visits to the dialysis unit for treatment • No needles • Independence - mostly you perform your therapy yourself • Can do therapy while you sleep
In-Center / Hospital Hemodialysis	<ul style="list-style-type: none"> • Regular contact with other Hemodialysis patients and staff • 3 treatments per week (4 days off) • No need for keeping equipment/supplies at home • Immediate access to medical help during therapy
Home Hemodialysis	<ul style="list-style-type: none"> • Help from family members • More control over when you dialyse • No travel to a clinic or hospital for treatment • Works during sleep, for some people

Type of Dialysis	POINTS TO CONSIDER	
Peritoneal Dialysis	<ul style="list-style-type: none"> • Exchanges need to be made daily • Need for a permanent access • Some chance of infection • May show a slightly larger waistline (due to carrying fluid) • Storage space required in your home • Some fluid and diet restrictions 	
In-Center / Hospital Hemodialysis	<ul style="list-style-type: none"> • Travel to centre/unit 3 times a week, on a fixed schedule for an average of 4 hours each treatment • Need for a permanent access • Some risk of infection, especially with CVC access • Insertion of 2 needles for each treatment (fistula access) • Some fluid and diet restrictions • Possible discomfort such as headache, nausea, leg cramps, tiredness 	
Home Hemodialysis	<ul style="list-style-type: none"> • Need for permanent access • Some risk of infection, especially with CVC access • Insertion of 2 needles for each treatment (fistula access) • Some fluid and diet restrictions • Training may take a minimum of 4 to 6 weeks • Storage space required for equipment and supplies 	

A Kidney Transplant: The Closest Thing to Your Own Healthy Kidney

A kidney transplant is a major surgical procedure in which a healthy kidney from a human donor is placed inside your lower abdomen. The healthy kidney then takes over the work that your kidneys can no longer do.

A healthy donor kidney can come from a living person — such as a family member, or a friend or other unrelated donor — or from a recently deceased person, a cadaver. Selecting living donor kidney option requires procedures and tests in order for your doctor to determine if you can accept the living donor kidney.

About 70% of all transplanted kidneys are from cadavers. Waiting for a kidney from a cadaver also requires procedures and tests while you are on some form of dialysis as you wait for the transplant procedure. In addition, the wait for most individuals in Canada can vary due to the limited availability of donors.



The Transplant Operation

During the transplant operation, your arteries and veins are connected to the transplanted kidney. The operation itself usually takes 3 to 4 hours. After surgery, you will need to spend several days in the hospital and several weeks at home recovering.

Are You a Candidate for Transplantation?

Not everyone is eligible for a kidney transplant. Your doctor and healthcare team can help determine if transplantation is right for you or if your particular condition makes this option too risky or too unlikely to succeed.

Immunosuppressive Medications (or Immunosuppressants)

Patients who have received a transplantation need to take immunosuppressive drugs every single day to prevent the body from rejecting the transplanted kidney. Rejection occurs because the body naturally tries to get rid of foreign substances or objects — in this case the new kidney.

Because immunosuppressants work by weakening the body's immune system, they will lower your resistance to other illnesses, particularly infections. They can also cause side effects like weight gain, skin changes, mood swings, and upset stomach.

Complications of Transplantation

Rejection can be a major complication of kidney transplantation. Unfortunately, sometimes even drugs cannot stop the body from rejecting a transplanted kidney. When this happens, you will need to go back on dialysis and possibly wait for another donor kidney.

Life with a New Kidney

A successful kidney transplant is probably the closest thing to a cure for kidney failure, as it may allow you to lead a more “normal” life — one with fewer daily disruptions or reminders of your kidney disease.

Kidney transplantation

- Healthy new kidney takes over work of the 2 failed kidneys
- Surgical procedure
- Requires daily medication to prevent rejection
- Dialysis no longer needed following the transplant
- Not right for everyone

Complications

- Rejection of the kidney
- Immunosuppressive therapy may lead to a weak immune system/increased risk of infection, changes in appearance

Keeping Your Diabetes and Blood Pressure Under Control

Like so many other people with kidney failure, you may also have diabetes, high blood pressure (hypertension), or both.

Careful management of these conditions becomes even more critical when you are on dialysis or have a transplanted kidney. Your doctors and renal care team will routinely check your blood glucose levels and your blood pressure during medical visits. They may change your medications or the dose, depending on how your kidney failure is being treated.



You Can Take Control

It is up to you to regularly monitor your own blood glucose levels and blood pressure at home or while travelling. High levels of blood glucose can complicate dialysis and damage the small blood vessels in the kidneys. High blood pressure can also damage the kidneys and disrupt dialysis.

- If you have diabetes, be sure to take your medications as prescribed, stick to your recommended diet, and monitor your blood glucose level regularly.
- If you have high blood pressure, take your medications even if you feel fine, watch what you eat and drink, and check your blood pressure regularly.



Kidney Resources

There are many resources available to help you learn about your kidney disease and how to best live with it.

Here are just a few:

Kidney Foundation of Canada www.kidney.ca

Canadian Diabetes Association www.diabetes.ca

Heart & Stroke Foundation of Canada www.heartandstroke.ca

AGIR (French kidney patient connection – Québec) www.agir.qc.ca



Thank you to those centres who helped put this material together.

Provided by Baxter Corporation as a service to healthcare professionals and their patients.

Baxter

Baxter Corporation
Mississauga, Ontario L5N 0C2
www.baxter.ca

Baxter is a trademark of Baxter International Inc
TH-CKD-03 (CAMP/
MG1/15-0024b) 1/16