

Book One

LIVING WITH REDUCED KIDNEY FUNCTION



The foundation of kidney care.

5th Edition





The foundation of kidney care.

Here to help you

Your healthcare team including your primary care provider, nephrologist (kidney doctor), dietitian, nurses, pharmacist, social worker and others can help you with planning, answer your questions, and identify resources that can provide you and your family with the support you need.

The Kidney Foundation of Canada is also here to help by providing information and educational material, short-term financial assistance, peer support and a number of other programs and services. There are Kidney Foundation Branches and Chapters all across Canada. Look up the address of your provincial Branch office on our web site at **www.kidney.ca** or call toll-free 1-800-361-7494 and find out what's available.

There is also an active online kidney community that is supported by KFOC. The Kidney Community Kitchen provides kidney-friendly recipes, meal plans, diet information and discussion forums: **www.kidneycommunitykitchen.ca**. The Kidney Connect social network for people living with kidney disease is available at **www.kidneyconnect.ca**.

LIVING WITH REDUCED KIDNEY FUNCTION



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My personal information

Name _____

Address _____

Phone Numbers _____

Personal Health Number _____

Primary Care Provider _____

Kidney Doctor _____

Kidney Nurse _____

Kidney Dietitian _____

Kidney Pharmacist _____

Kidney Social Worker _____

Transplant Surgeon _____

Transplant Coordinator _____

Dialysis Unit _____

Next of Kin & Phone Number _____

Thank you



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The publishing of this handbook is made possible through charitable gifts from individuals, corporations and foundations. We especially thank the following sponsors for their support:

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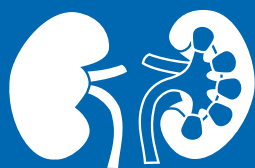
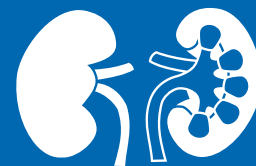


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Introduction

NOTES:

What is this handbook about?

There are many people in Canada who have chronic kidney disease (CKD). However, most of them don't know it so they aren't able to take steps to protect their remaining kidney function. If your doctor has told you that you have reduced kidney function and are in the early stages of CKD, then this information should be helpful for you and your family. By using this handbook and working with your healthcare team, you will learn how to manage your kidney disease. This means you may be able to delay or prevent symptoms of kidney failure as well as prevent or reduce the risk of other complications such as heart disease.

The purpose of this handbook is to provide you with the information you need to take control of your healthcare. In it you will find information about your kidneys and how they work, the stages of CKD, and steps that can help you to protect your remaining kidney function and maintain a healthy lifestyle. The information and suggestions in this book are general – you should always seek the advice of healthcare professionals for an assessment and treatment plan that meet your individual needs.

This book is produced by The Kidney Foundation of Canada (KFOC) and is provided free-of-charge to any person living in Canada who has been diagnosed with kidney disease. Others may obtain a copy of the handbook, for a small fee, by contacting their local Kidney Foundation office. Contact information and an electronic version of this handbook are available on The Kidney Foundation's web site at **www.kidney.ca**.

Hints on how to use this handbook

A diagnosis of kidney disease can be overwhelming and often completely unexpected: *"What is kidney disease? How can I have kidney disease? I didn't have any symptoms! How long will my kidneys work on their own? What should I do to give my kidneys their best chance? Will I need dialysis?..."*

Research has shown that people have better health outcomes when they are involved in seeking answers to some of these questions for themselves, by understanding their disease(s) and by participating in decision-making about their care.

This handbook and other information about kidney disease are available online at www.kidney.ca

- This material is available in accessible formats upon request by contacting info@kidney.ca or calling 1-800-361-7494.

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Produced by
The Kidney Foundation of Canada



Acknowledgements

The Kidney Foundation of Canada would like to thank all those people across Canada who generously gave their time and effort to make this handbook possible. Without their encouragement, ideas and support, it would not have been possible.

The Foundation would like to specifically acknowledge the healthcare professionals and others from across the country that assisted with this project.

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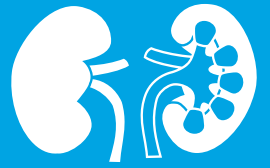
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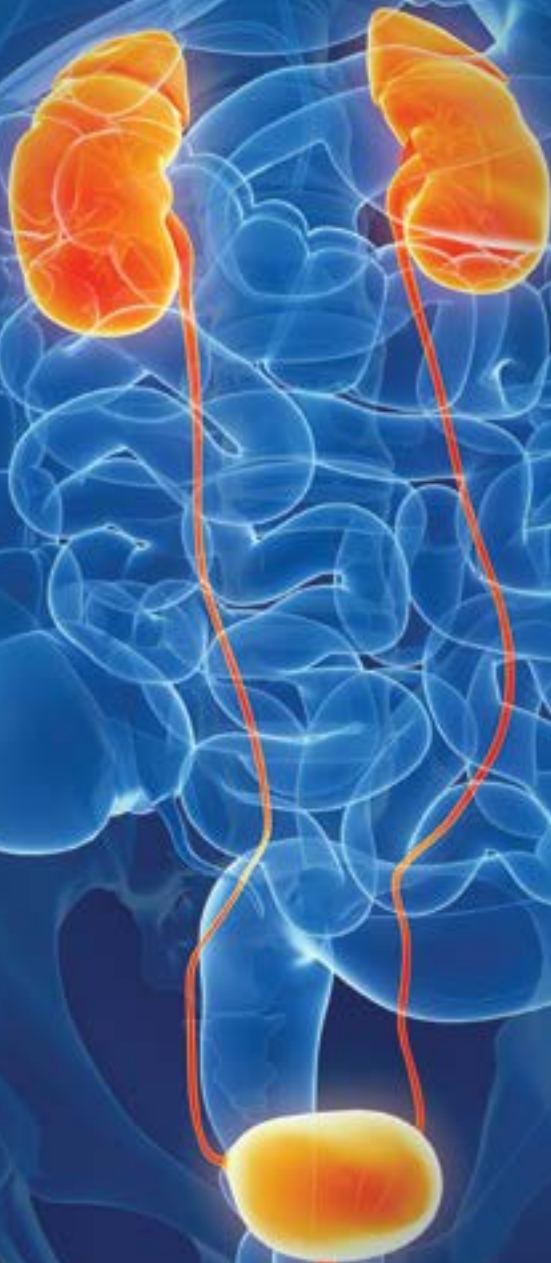
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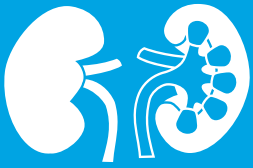
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HOW YOUR KIDNEYS WORK





How your kidneys work

HELPFUL TIP

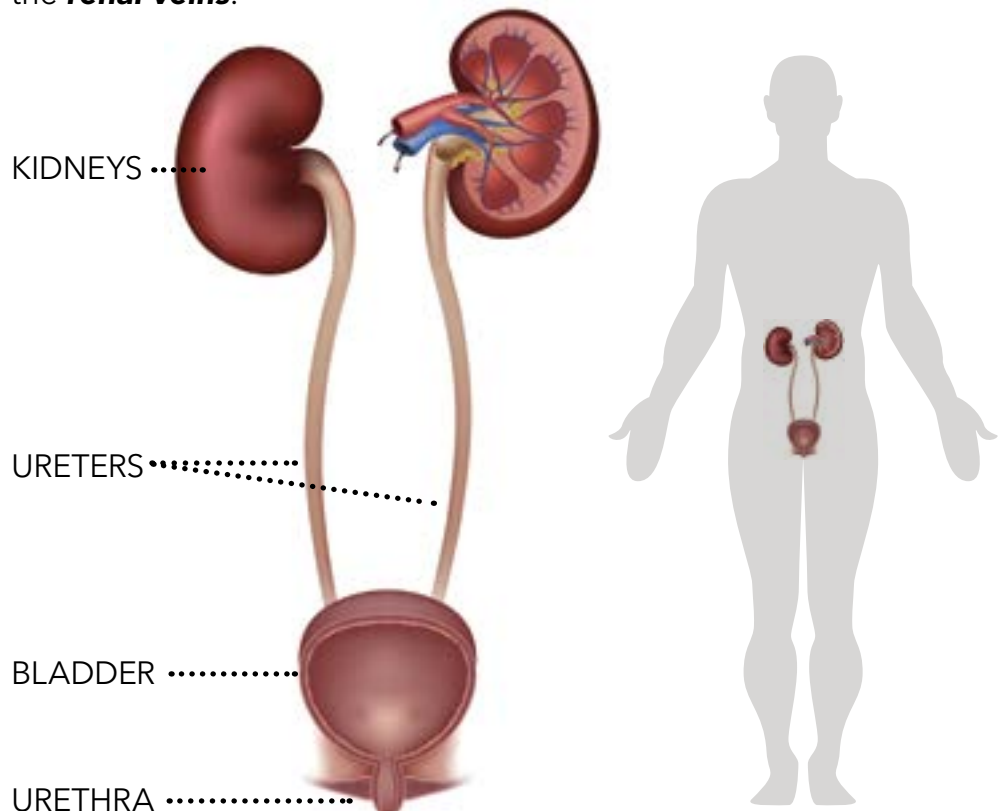
The first two chapters describe your kidneys and kidney disease and introduce some medical terms that you may not have heard before. If you don't understand something, make a note in the margin and bring this handbook to your next appointment. Or start a separate notebook for your questions.

Kidneys are as important to your health as your heart or your lungs. Kidneys remove waste products from your body, regulate water and produce hormones. In this chapter we will briefly look at how the kidneys work. If you know what the kidneys do when they work properly, it will be easier to understand what can happen if your kidneys begin to fail.

How do kidneys work?

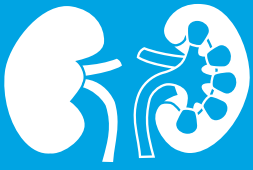
Normally, people have two kidneys, one on each side of the spine under the lower ribs. They are reddish brown in colour and shaped like kidney beans. Each kidney is about the size of your clenched fist.

One of the main jobs of the kidneys is to remove wastes from the blood and return the cleaned blood back to the rest of the body. Every minute, about one litre of blood (one fifth of all the blood pumped by the heart) enters the kidneys through the **renal arteries**. After the blood is cleaned, it flows back toward the heart through the **renal veins**.



NOTES:





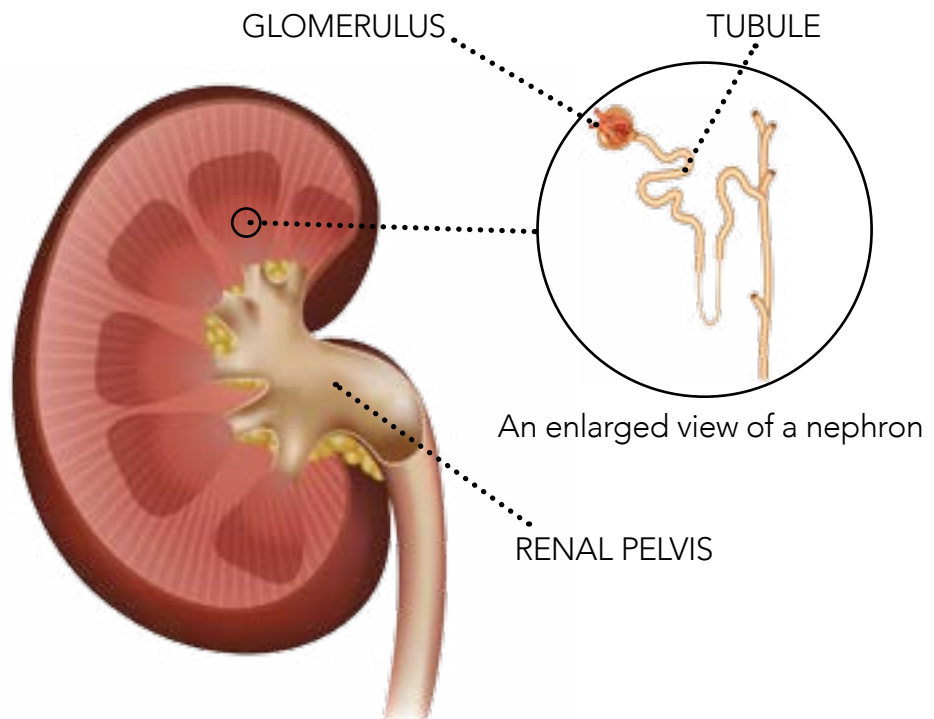
How your kidneys work

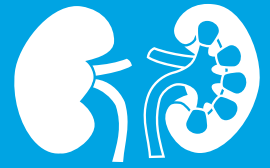
NOTES:

Inside each kidney there are more than one million tiny units called **nephrons**. Each nephron is made up of a very small filter called a **glomerulus**, which is attached to a **tubule**. Water and waste products are separated from the blood by the filters and then flow into the tubules. Much of this water is reabsorbed by the tubules and the wastes are concentrated into urine.

The urine is collected from the tubules in the funnel-like **renal pelvis** and then flows through tubes called the **ureters** into the **bladder**. Urine passes out of the body through a tube called the **urethra**. Together, the kidneys normally make one to two litres of urine every day depending on how much you drink.

Usually, the kidneys are able to provide more than twice as much kidney function as your body needs to work well. A normal kidney can greatly increase its workload: if you were born with one kidney or if one kidney is injured or donated, the remaining kidney can work harder to keep your body healthy.

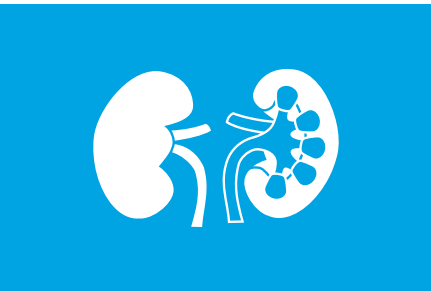




NOTES:

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Normal kidneys also make important chemicals in your body called **hormones**. These hormones circulate in the bloodstream like “messengers” and regulate blood pressure, red blood cell production and the calcium balance in your body.



How your kidneys work



NOTES:

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Summary

- One of the main jobs of your kidneys is to remove wastes from the blood and return the cleaned blood to the rest of the body.
- Together, the kidneys normally make one to two litres of urine every day, depending on how much you drink.
- Your kidneys help control how much water you have in your body. They “clean” your blood by removing wastes from the body through your urine.
- Your kidneys produce hormones that help your body make red blood cells and regulate blood pressure.



KIDNEY DISEASE



Kidney disease



HELPFUL TIP

It can be overwhelming to find out that you have kidney disease. It may be hard to remember information and test results when you get home after your medical appointments. Try to bring someone with you to take notes and record information so that you can focus on listening and asking questions.

NOTES:

This chapter will help you recognize the risk factors for kidney disease, some common causes of kidney disease, and the medical terms used to describe them. By knowing more about your kidney disease, you will better understand how to protect and preserve your kidney function.

What is chronic kidney disease (CKD)?

Chronic kidney disease (CKD) is the presence of kidney damage, or a decreased level of kidney function, for a period of three months or more. There are two key tests which are used to detect kidney damage and to assess how well your kidneys are functioning at removing toxins and waste products from your blood.

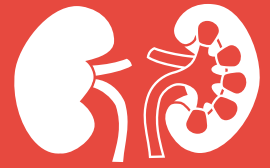
Blood test

A blood test is used to measure your **serum creatinine level** which helps to indicate how well the kidneys are filtering the blood. Creatinine is a waste product made from muscle use and the breakdown of the protein you eat. As the blood creatinine rises, kidney function decreases. Decreased kidney function means that your kidneys are not able to remove the toxins and waste products from your blood as well as someone with normal kidney function.

The estimate (or percentage) of kidney function is called the **glomerular filtration rate (GFR)**. Sometimes the GFR is also referred to as the **estimated glomerular filtration rate (eGFR)**. Glomeruli are tiny blood vessels in the kidney that help to filter waste. The GFR is a way of measuring how well the kidneys are working by determining the *rate* at which the *glomeruli* are *filtering* waste products from your blood. The eGFR is the most common way to measure kidney function at kidney clinics.

Urinalysis

Simple laboratory tests such as **urinalysis** (a urine dipstick), which looks for blood and a protein called **albumin** in the urine, are also useful in detecting kidney damage at an early stage and determining your risk of losing more kidney function. The filters of the kidney do

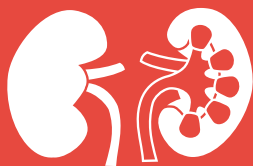


Other blood tests, X-rays, kidney ultrasound or a kidney biopsy may also be needed to diagnose the specific type of kidney disease and to determine the appropriate treatment.

Kidney disease can range from mild to severe and in some cases, lead to **kidney failure**. Kidney failure is sometimes referred to as **end-stage kidney disease (ESKD)**. Kidney disease often starts slowly and develops without symptoms over a number of years, so CKD may not be detected until it has progressed to the point where your kidney function is quite low. Fortunately, most people do not progress to end-stage kidney disease, especially if they are diagnosed early and are able to take steps to preserve their remaining kidney function.

NOTES:

Kidney disease



The following table provides an overview to help you understand CKD at different phases, including potential symptoms and treatment. The amount of kidney function (GFR) you have remaining, your symptoms, your overall health and other factors (such as the amount of albumin in your urine) will be used to help you and your healthcare team to: manage your health, monitor your kidney function and determine the type of treatment that's best for you.

Kidney function, symptoms and treatment

	NORMAL	MILD	MODERATE	SEVERE	KIDNEY FAILURE
Amount of Kidney Function	> 60%*	45% - 59%	30% - 44%	15% - 29%	< 15%
Symptoms	No symptoms observed	No symptoms observed	Early symptoms may occur and could include tiredness, poor appetite, and itching	Tiredness, poor appetite and itching may get worse	Symptoms may include severe fatigue, nausea, difficulty breathing and itchiness
Treatment Options	Identify cause and try to reverse it	Monitor albumin and GFR, blood pressure, general health and well-being	Monitor albumin and GFR, and continue to try to stop or slow the worsening of kidney function	Monitor albumin and GFR, and continue to try to stop or slow the worsening of kidney function	Monitor albumin and GFR, and continue to try to stop or slow the worsening of kidney function
	Monitor albumin and GFR	Try to stop or slow down the worsening of kidney function	Learn more about CKD and treatment options	Discuss and plan for treatment choice: dialysis access, assessment for transplant, or information about non-dialysis supportive care	Continue with non-dialysis supportive care, plan for transplant or start dialysis (depending on symptoms)**

* Normal unless there is an underlying issue, kidney damage or albumin in the urine.

** The timing of starting dialysis treatment depends on a large number of factors. This should be discussed with your doctors and healthcare team.

Kidney disease



Risk factors for CKD

There are a number of risk factors for CKD, some that you can control such as smoking, and others that you cannot, such as aging. People with diabetes, high blood pressure or who have a family history of kidney disease are at increased risk of developing CKD. Children who are born with kidneys that did not develop properly are also at risk. In addition, people of Aboriginal, Asian, South Asian, Pacific Island, African/Caribbean and Hispanic descent are at higher risk for CKD.

What causes chronic kidney disease?

There are many different kidney diseases and disorders. Some kidney diseases are present at birth and others develop as we grow older. Often, kidney disease is associated with other medical conditions such as diabetes, high blood pressure and heart disease.

Most diseases of the kidney attack the filtering units in the kidney, damaging their ability to remove wastes and excess fluids. There is no cure, but it may be possible to prevent CKD or slow it down. This is especially true in people with diabetes and/or high blood pressure, the leading causes of kidney failure.

Diabetes

Diabetes is a disease that is caused by a lack of **insulin** in the body or the body's inability to properly use normal amounts of insulin. Insulin is a hormone that is a very important chemical messenger that regulates the level of glucose (sugar) in the blood. The body must have insulin to function. Therefore, people with diabetes may take medications that can either make the pancreas produce more insulin, or help the body properly use the insulin that is being produced, or they may take insulin by injection or pump.

Even with the use of insulin or other medications, people who have had diabetes for some time often suffer from damage to the small blood vessels such as the ones in the filters of the kidney.

HELPFUL TIP

More information about the classification of CKD, GFR and albumin is available at **www.kidney.ca**. Strategies for protecting your kidney function are included in the following chapters.

NOTE:

Sometimes kidney failure occurs rapidly and this is called **acute kidney injury**. This may be a result of infection, diseases that specifically attack the kidney filters, or other causes. For acute kidney injury, dialysis treatment may be urgently needed for a period of time, but kidney function often recovers.

Kidney disease



One in 10 Canadians has kidney disease and millions more are at risk.

For more information and an online risk assessment, go to: www.kidney.ca/risk
Available in English, French, Chinese and Punjabi.

NOTES:

High blood pressure

High blood pressure (also called ***hypertension***) may cause chronic kidney disease. The reverse is also true: chronic kidney disease frequently causes high blood pressure.

High blood pressure damages the small blood vessels that deliver blood to the kidneys' filters. Long-standing, untreated high blood pressure, or very severe high blood pressure, will reduce the flow of blood into the filters and may lead to CKD.

The kidneys also produce a hormone that helps in the control of blood pressure. When the kidneys are damaged or fail, this hormone may increase and cause high blood pressure. In turn, this may lead to further kidney damage. It is important to control high blood pressure to try to prevent long-term kidney damage.

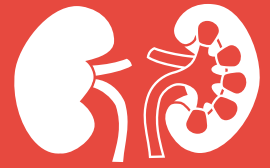
Chronic kidney inflammation (Glomerulonephritis)

Chronic kidney inflammation (***glomerulonephritis*** or ***nephritis***) is a condition in which the glomeruli are damaged. Glomeruli are the tiny filters that help clean the blood. There are many types of glomerulonephritis: some types recover without medical treatment, while others can be treated with medications. Sometimes, some types of glomerulonephritis cannot be successfully treated despite using many different medications. If this happens, dialysis may be needed if the kidney filters become more scarred and are not able to do their job properly.

There are many types of glomerulonephritis associated with different conditions such as ***systemic lupus erythematosus (lupus)***, ***vasculitis*** (inflammation of blood vessels), ***Hepatitis B*** or ***Hepatitis C*** just to name a few.

Polycystic kidney disease

Polycystic kidney disease (PKD) is the most common inherited disease of the kidneys. It will be passed to 50% of the children of an affected parent. Polycystic means "many cysts". Polycystic kidneys become very large and have a bumpy surface because of fluid-filled cysts. Pressure from the cysts as they expand can slowly damage the



NOTES:

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At times, even prescription medications may cause kidney dysfunction. Sometimes the damage can be repaired but sometimes



Kidney disease

IMPORTANT:

Be very careful about taking non-prescription medications. It is wise to discuss all over-the-counter drugs and herbal remedies before they are taken.

it cannot. However, many prescription medications can be safe for people with kidney disease as long as your doctor makes changes to the dosage (amount). You should always ask your doctor or pharmacist about the possible side effects of prescription medications for people with kidney disease.

Other kidney problems

Other problems can affect the kidneys. Some of these are Alport syndrome, Fabry disease, kidney cancer, Medullary Sponge Kidney (MSK), Wilms' tumor (children only) and bacterial infections. Information on most of these conditions is available at www.kidney.ca or from your local Kidney Foundation office.



Summary

- Most people do not progress to end-stage kidney disease, especially if they are diagnosed early and are able to take steps to preserve their remaining kidney function.
- Kidney function is measured through simple blood and urine tests. Urinalysis checks for protein (albumin) and blood in the urine. A blood test for creatinine level is often used to help estimate GFR (glomerular filtration rate).
- People with diabetes, high blood pressure or people who have a family history of kidney disease are at greater risk of developing CKD. So are people of Aboriginal, Asian, South Asian, Pacific Island, African/Caribbean and Hispanic descent.
- Diabetes and high blood pressure are the leading causes of CKD in Canadian adults. Other causes include chronic kidney inflammation, polycystic kidney disease and urinary tract obstruction.

See **Chapter Four:**

Managing your medications for kidney health for more information on medications.

HOW YOU CAN SUPPORT YOUR KIDNEY HEALTH





How you can support your kidney health

HELPFUL TIP

When you have a diagnosis of kidney disease, there are many things outside of your control. However, there are still a number of steps you can take to protect your remaining kidney function. As you go through this chapter, write notes in the margins about areas that you might need to focus on to support your kidney health. You can discuss them with your healthcare team.

NOTES:

Most people's kidney function changes slowly and not everyone with chronic kidney disease will develop end-stage kidney disease. However, damaged kidneys won't heal, so the rest of this handbook will focus on helping you to maintain the kidney function you do have left. In most cases, supporting your kidney health and protecting your remaining kidney function depend on maintaining a healthy lifestyle and managing other medical conditions you may have.

By the end of this chapter, you will better understand why it is important to control your weight, diabetes and blood pressure and to stop smoking to help prevent kidney failure or to slow down the decline of your kidney function.

Manage other medical conditions

One of the most important ways to preserve your kidney function is to gain control over other medical conditions you may have. The first step is to follow the advice of your healthcare team and to take your medications as prescribed.

Control your blood sugar if you have diabetes

Why? High blood sugar clogs all blood vessels including the filters of the kidney. This causes decreased kidney function. High blood sugars can also damage the nerves that tell you when your bladder is full. A full bladder can cause the urine to back up into the kidneys and cause further damage to those precious kidney filters. This can also lead to increased bladder infections. Keeping your blood sugars well controlled will help to protect the delicate filters in the kidneys and may slow down the decline in your kidney function.

Here are some tips for managing kidney disease if you have diabetes:

- Talk with your doctor or nurse about what your target blood sugar level should be, and when and how often you need to check it.
- Test your blood sugar as often as directed by your healthcare team. The A1C blood test tells you what your average blood sugar level was over the past two to three months. Have this test done



- Maintain a healthy lifestyle and weight. Aim for 150 minutes of activity every week (30 minutes, 5 times per week), assess what you are eating and improve food choices. See a dietitian if you need help with this.
- Don't smoke.
- Control your **cholesterol** through proper food choices and if you are on medication, make sure you take it as directed by your doctor.
- Manage your blood pressure. People with kidney disease who also have diabetes should aim for a blood pressure of 130/80 mm Hg.
- Infections in people with diabetes tend to progress rapidly. If left untreated, many infections, especially urinary tract infections, can further damage the kidneys. People with diabetes must take special care to have infections treated immediately.
- Make sure to have your kidney function tested annually (or as often as your doctor suggests) by having blood and urine tests.

Why? High blood pressure can cause the filters in your kidneys to become scarred and lead to a decrease in kidney function. Prolonged uncontrolled high blood pressure can also increase the risk of heart disease. Blood pressure control is one of the most effective ways of slowing the progression of kidney disease.

- Talk with your doctor or nurse about what your target blood pressure should be, and when and how often you need to check it. Generally, you should keep your blood pressure below 130/80 mm Hg.
- You should regularly monitor your blood pressure at home and write down your blood pressure readings.
- Take your record of your blood pressure readings with you to your doctor's office visits and clinic appointments.

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How you can support your kidney health

See **Chapter Five:**

Your diet and nutrition for kidney health for more information on reducing sodium in your diet.

NOTES:

- Take your blood pressure medications as directed by your doctor.
- Maintain a healthy lifestyle and weight. Aim for 150 minutes (30 minutes, 5 times per week) of activity every week, reduce sodium (salt) intake, and make time to relax.
- Don't smoke.
- Make sure to have your kidney function tested annually (or as often as your doctor suggests) by having blood and urine tests.

Other ways to manage your blood pressure

The DASH (Dietary Approaches to Stop Hypertension) eating plan is based on eating foods rich in vegetables, fruit, nuts, and 1% milk products. It is also low in sodium and saturated fat. This eating plan can help you lower your blood pressure.

Maintain a healthy weight

Why? If you are overweight, losing even a small amount of weight can help you control your blood pressure and blood sugar. Controlling your blood pressure and blood sugar helps to protect your kidneys.

Chapter Seven:

Developing a personal care plan of action contains blood pressure logs and other resources to help you manage your blood pressure.





- Your sense of smell and taste improve.
- Breathing becomes easier as your bronchial tubes relax and your lung capacity increases.
- Your blood circulation improves and oxygen levels in your blood return to normal.
- Your risk of heart attack, lung cancer and other smoking related diseases decreases over time.
- You will have more energy as well as more money to spend or save.

NOTES:

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How you can support your kidney health

How can I quit?

Quitting can be hard but there are a lot of supports to help you stop smoking. Talk to your doctor or pharmacist about medication and/or nicotine replacement therapy (NRT) that might help. You can also get counselling or join a support group. If you are not immediately successful when you try to quit, try again! Some people have to try five or more times before they quit for good – each time you try, you will figure out what works for you and it will get easier.



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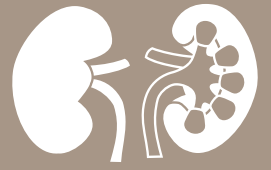
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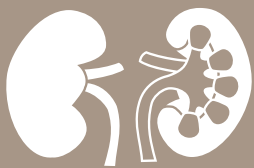
To support your kidney health and help protect your remaining kidney function, it is important to:

- Manage other medical conditions you may have like diabetes and high blood pressure. Keeping your blood pressure and blood sugar well controlled may help to delay or prevent the progression of kidney disease.
- Maintain a healthy weight.
- If you smoke, try to quit.



MANAGING YOUR MEDICATIONS FOR KIDNEY HEALTH





Chapter 4

Managing your medications for kidney health

HELPFUL HINT

Become an expert on all the medications you're taking. You should know:

Name of medication

Strength of medication

Dose (how much to take)

How often and what time of day to take it

What the medication is used for

What common side effects to watch out for

What to do if you miss a dose

Different types of medications are commonly prescribed for chronic kidney disease. Some medications slow down the progression of kidney disease or manage the complications of kidney disease. Others reduce the risk of heart disease or stroke. It is very important to take your medications as prescribed and the information in this chapter focuses on helping you to do that.

Medications often have more than one name: the medical or generic name of the drug, and the brand or trade name used by the pharmaceutical company to identify their version of the medication. Towards the end of this handbook, there is a chart showing examples of common brand names for various medications.

Commonly used medications

Blood pressure medications

Blood pressure medications help to reduce your blood pressure. This reduces your risk of stroke and heart attack and plays a very important role in slowing down the decline of your kidney function.

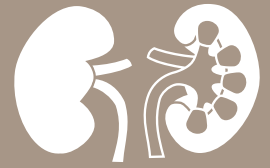
Different types of blood pressure medications work in different ways so you may be prescribed two or more different types in order to reach your blood pressure goal. Some of the more commonly used blood pressure medications include **angiotensin-converting enzyme (ACE) inhibitors** or **angiotensin receptor blockers (ARB)**, **beta-blockers**, **calcium-channel blockers**, and **alpha-blockers**.

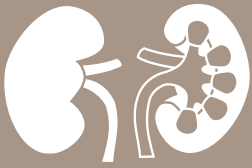
Diuretics

Diuretics (also called "water pills") are medications that help your kidneys get rid of extra sodium and water.

Cholesterol medications

Cholesterol medications reduce the cholesterol levels in your blood. Controlling your cholesterol reduces your risk of heart disease and stroke. This is important because people with chronic kidney disease are at higher risk of heart disease and stroke. There are different types of cholesterol lowering medications including **statins**, **fibrates**, and **ezetimibe**.





Managing your medications for kidney health

NOTES:

Need help remembering to take your medications?

You can use a *medication aid* to help you take your medications at the right time. There are several different medication aids available to help you manage your medications. Talk to your pharmacist about what might work best for you.

- Dosette – a re-usable weekly medication container that can help you (or your family member) sort your medications according to the time of day you should take them (morning, lunch, supper, bedtime).
- Blister pack/bubble pack – your pharmacy can prepare your medications in a weekly package, sorted according to the time of day you should take them.
- Reminder alarms, computer apps and calendars can also be useful.

Have trouble swallowing pills?

Many children, and some adults, have difficulty swallowing pills and capsules. Sometimes a liquid form of the medication is available, but it can make the prescription more expensive and it is not available for all medications.

It can be helpful to learn new ways to swallow a pill so you can improve the chances of success with the medication and reduce the stress you might feel when taking your medications. Try practicing with various sizes of hard candies (like Tic Tac® or Mini M&Ms®).

Bring all your medication bottles and/or packages to your doctor's appointments

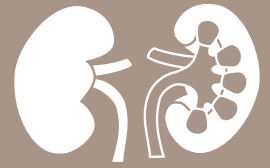
This is especially important on the first visit. Bring all your prescription medications, over-the-counter products, vitamins, herbal remedies or natural supplements that you are taking.

Keep a current list of all your medications

If you need help, ask a family member or your pharmacist to make a list based on the directions on your medication containers or doctor's instructions. Bring this list with you to all medical (and dental)



Managing your medications for kidney health



appointments. It is very important that you take your medication list with you to the emergency room if you need to go. Make sure to make any changes to the list as new medications are added, stopped or if the dosage changes. This will help your healthcare team know what you are taking and help prevent possible medication interactions or duplications and improve overall medication safety.

Let your pharmacist know that you have chronic kidney disease

As part of the healthcare team, your pharmacist can work with your doctors to make sure that you are taking the right dose for your level of kidney function.

When to contact your pharmacist or doctor

- If you have a serious reaction to a medication
- If you are ill (vomiting, diarrhea, dehydration)
- If you have new and/or irritating side effects
- If you think your medication is not working
- If you run out of medications – try to think ahead and refill your medications two weeks before they will run out
- If you are prescribed a new medication by someone who is not part of your regular healthcare team (i.e. emergency room physician) who may not be familiar with your level of kidney function

Do not stop taking your medication(s) without first talking to your doctor

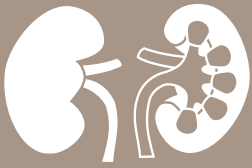
Talk to your doctor first before stopping your medication(s) so that they can make sure it won't affect your treatment plan or your health. If you are having financial difficulty buying the medications you need, or if you do stop or change your medication dose for any reason, be sure to let your doctor know so that together you can plan appropriately for your care.

NOTE:

For sample medication logs, information for your pharmacist and more tips on managing your medications, go to **Chapter Seven: Developing a personal care plan of action.**



NOTES:



Managing your medications for kidney health

NOTES:

Covering the cost of medication

- Not all medications approved by Health Canada are covered by publicly-funded drug plans or private insurance plans. Do your research to make sure you know what is covered by your specific plan and how much you will have to pay.
- Each province has different rules for their publicly-funded drug plans. For example, some provide coverage for people 65 and older, or individuals on social assistance. Talk to your doctor and other members of your healthcare team and call your Provincial Ministry or Department of Health to get more information about the drug plan in your province.
- Even if you are eligible for coverage under one of the public plans, you may still have to pay some of the costs of your medications through, for example, a co-payment, a deductible, or a premium.
- Your private insurance plan may require that you pay for your medications upfront at the pharmacy and then submit the receipts for reimbursement. If this is a problem for you, ask your insurance company to allow your pharmacy to submit the bill directly to them for reimbursement.
- Talk to your pharmacist. They may be able to assist you by contacting your insurance plan or by working with your doctor to prescribe another medication that is covered.

(Adapted with permission from the *"How to" Health Guide* produced by the Health Charities Coalition of Canada.)



Medications and remedies to avoid

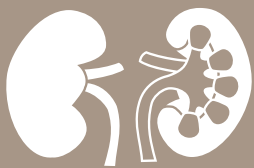
While many medications are good for your kidney health, some medications can put you at risk of further kidney damage or may build up in your body causing undesirable effects.

When you have CKD there are some prescription and over-the-counter medications and remedies that you should avoid, including herbal medicines, vitamins and supplements.



- Non-steroidal anti-inflammatory medications (NSAIDs) such as ibuprofen (Advil®, Motrin®) or naproxen (Aleve®) since these can cause damage to the kidneys, especially if used at a high dose for long periods of time.
- Daily low dose ASA (81 mg) (like baby Aspirin®) is safe for your kidneys but avoid high doses of ASA since this can put you at risk for kidney damage. Acetaminophen (Tylenol®) is safe to use for headache, pain and fever.
- Cold and flu medications that contain decongestants may increase blood pressure. In addition, avoid cough and cold medications that also contain ASA or NSAIDs.
- Vitamins or food supplements may contain potassium or magnesium or high doses of vitamin A that can build up in your body.
- High doses of vitamin C (500 mg or more) can cause damage to kidneys. There is a specially formulated multivitamin for people with kidney disease that has the right amount of vitamins that your kidneys can handle. Ask your healthcare team about this.
- Avoid specific enemas or certain laxatives that contain phosphates, magnesium, calcium or aluminum unless your kidney doctor prescribes them.
- Milk of Magnesia or antacids that contain magnesium or aluminum should also be avoided.

Herbal medications and products are not regulated in the same way that pharmaceutical products are. Therefore, the list of ingredients is not always accurate and some herbal medicines have been found to contain pesticides, poisonous plants, hormones, heavy metals and other compounds that are potentially dangerous.



Chapter 4

Managing your medications for kidney health

Some herbal medications also include diuretics, high levels of potassium, and/or other ingredients that can affect the kidneys or interact with your prescription medications to change their effectiveness. It is very important to tell your doctor about any herbal medications or products you may already be using or plan to use.



Vaccinations

It is recommended that all people with advanced CKD have an annual flu shot unless your doctor advises otherwise.

It is also recommended that all people with CKD have the pneumococcal vaccine - this is to prevent severe forms of pneumonia. Usually this is given once and then repeated in five years.

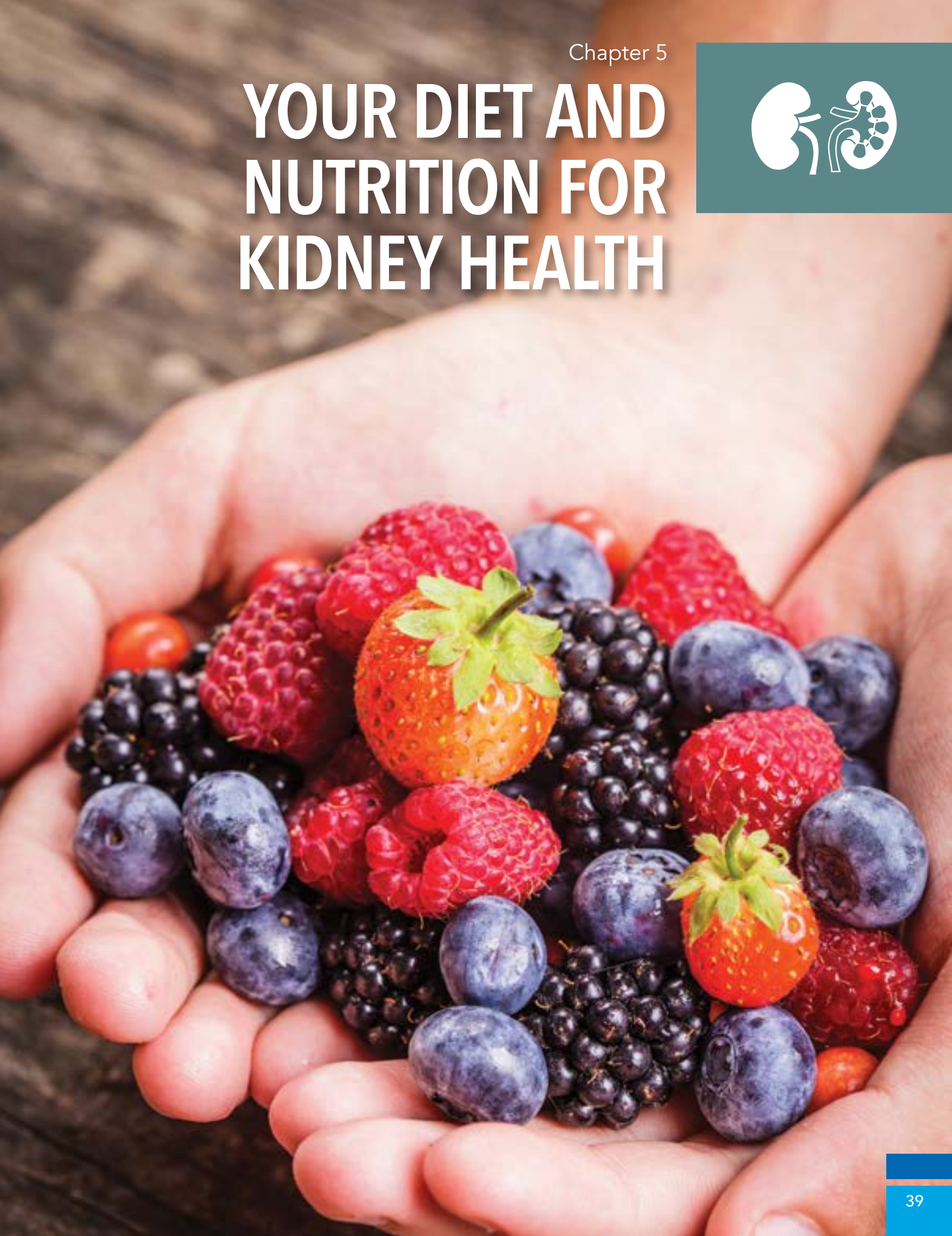
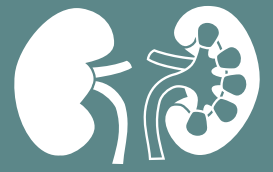
You may also need to be vaccinated against Hepatitis B - a virus that can cause liver damage. You should check with your healthcare team about these vaccinations.

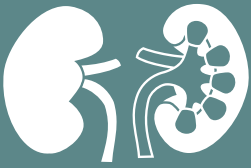


Summary

- Your medications can help you to slow down the decline of your kidney function, manage the complications of CKD and/or manage other medical conditions.
- It is very important to take your medications as prescribed.
- You should know as much as you can about all the medications you are taking and bring an up-to-date list with you to all healthcare appointments.
- Do not stop taking medications without first talking with your doctor.
- There are some medications that you should avoid such as ibuprofen and other non-steroidal anti-inflammatory medications (NSAIDs), herbal and complementary medicines.

YOUR DIET AND NUTRITION FOR KIDNEY HEALTH





Your diet and nutrition for kidney health

HELPFUL HINT

Changing your diet can be difficult and stressful. It's easier when you start with small changes. Try eating foods similar to the ones you enjoy but that are low in sodium. Or add a vegetable or fruit to one of your meals.

Do this each day for a week. Then try it for a month. The key is to make small changes over time so you can adjust to new flavours and form habits that last.

What you eat affects your kidneys so diet and nutrition are an important part of your treatment plan. If you have moderate or severe kidney disease, you may need to make even more changes to the foods you eat, such as limiting phosphorus. There is no standard "kidney diet". What you eat may change as your kidney function or your medications change.

The role of protein

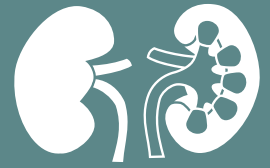
Your body uses protein to help fight infections, heal wounds and keep your muscles strong and healthy. Most Canadians get more protein than they need. High protein diets may put extra stress on the kidneys. It is best to choose modest-size servings of protein.

Most people should have no more than two to three servings of high protein foods per day. High protein foods include milk, eggs, legumes (like dried peas, beans and lentils), nuts, and fish, poultry or lean meat. A modest-size protein serving of cooked legumes is $\frac{3}{4}$ cup (170 mL). A modest serving of cooked fish, poultry or lean meat is $\frac{1}{2}$ cup or 2.5 ounces, about the size of a deck of cards.

NOTES:



Your diet and nutrition for kidney health



Limit sodium to 1500 - 2000 milligrams per day

The average Canadian gets over twice the amount of sodium (salt) that the body needs! Sodium is a mineral added to processed foods like deli meat, snack foods, and fast food. It can also be hidden in foods like bread, muffins, canned vegetables, cheese, pickles, condiments and tomato sauce.

How does sodium affect your kidneys?

When your kidneys are fully functioning, they remove the excess sodium from your blood. With reduced kidney function, your kidneys cannot remove all of the sodium you eat and the sodium stays in your blood. This can raise your blood pressure and can cause swelling in the ankles and lower legs. If you have high blood pressure, you are at higher risk of damaging the tiny blood vessels in your kidneys. To reduce your blood pressure, limit your intake of sodium to 1500 - 2000 milligrams (mg) per day.

How much is 1500 - 2000 milligrams of sodium?

One teaspoon of table salt contains 2300 milligrams of sodium. Most of the sodium we eat is *not* from the saltshaker – it is “hidden” in foods. That’s one reason why it’s important to read food labels. Another reason is that the sodium content of foods can vary between brands and products – the food label can help you choose the best products for you.

Reading food labels will help you quickly compare similar food products. The “% Daily Value” can be used as a general guide when you read a food label. The “% Daily Value” tells you if there is a little or a lot of a nutrient. A “% Daily Value” of 5% or less is a *little* and a “% Daily Value” of 15% or more is a *lot*. However, it is important to keep in mind that the “% Daily Value” for sodium is based on a daily intake of 2400 milligrams for a person *without* kidney disease so you will need to pay particular attention to the milligrams of sodium in a product to keep your intake at 1500 - 2000 mg of sodium per day.



NOTES:



Your diet and nutrition for kidney health

NOTE:

For more information about kidney-friendly baking and cooking substitutions, visit the Kidney Diet and Information section of www.kidneycommunitykitchen.ca.

NOTES:

Cutting back on sodium

One way to limit your sodium intake is to replace processed foods with more homemade foods. Most of our sodium comes from prepared foods such as canned soup, frozen entrées, processed meats and snack foods. If you replace processed products with fresh and unprocessed foods, you can reduce your sodium intake.

Try cutting back on salt and salty ingredients. When you cook, try using pepper, onions, garlic, lime, lemon, or vinegar to flavour your foods instead of salt. You usually don't need to add salt when baking, especially since baking powder and baking soda are high in sodium. *Do not use* NoSalt®, HalfSalt® or similar salt replacement products in place of table salt. They are made with potassium chloride and can be dangerous for people with kidney disease.

Avoid phosphate additives

Phosphorus is a mineral found in many foods. Early in chronic kidney disease, you should avoid foods with phosphate additives, even if your phosphorus is in the normal range. Phosphorus in food additives is extremely well absorbed and may damage the kidneys. In later stages of CKD, you may also need to avoid naturally occurring phosphorus or take medications to help control your levels.

How do I avoid phosphate additives?

Phosphate additives are used in many foods to lengthen the shelf life, enhance flavour or improve the look and feel of a product. Look for the word "phosphate" or "phosphoric acid" in the list of ingredients to see if your food contains phosphate additives. Other examples of phosphate additives are "sodium phosphate", "calcium phosphate", "triphosphate" and "phosphoric acid". To reduce your intake of phosphate additives, avoid these foods:

"Seasoned" meats: Both fresh and frozen meats may contain added phosphates. It's important to read food labels and ask your butcher if your poultry or meat is treated with sodium phosphate.

Fast food: Most fast foods contain phosphate additives. Choose fast foods only occasionally and in small amounts. If you have a

Your diet and nutrition for kidney health



craving for fast food, try to make your own hamburgers, fries and chicken nuggets from scratch to avoid added phosphates.

Processed meats and cheeses: Processed meats like ham, salami, and sausages commonly contain added phosphates, as do processed cheeses like cheese slices, Cheez Whiz® and Velveeta®. When shopping, read the list of ingredients and select meats and cheeses without phosphate additives. Natural cheeses do not contain additives.

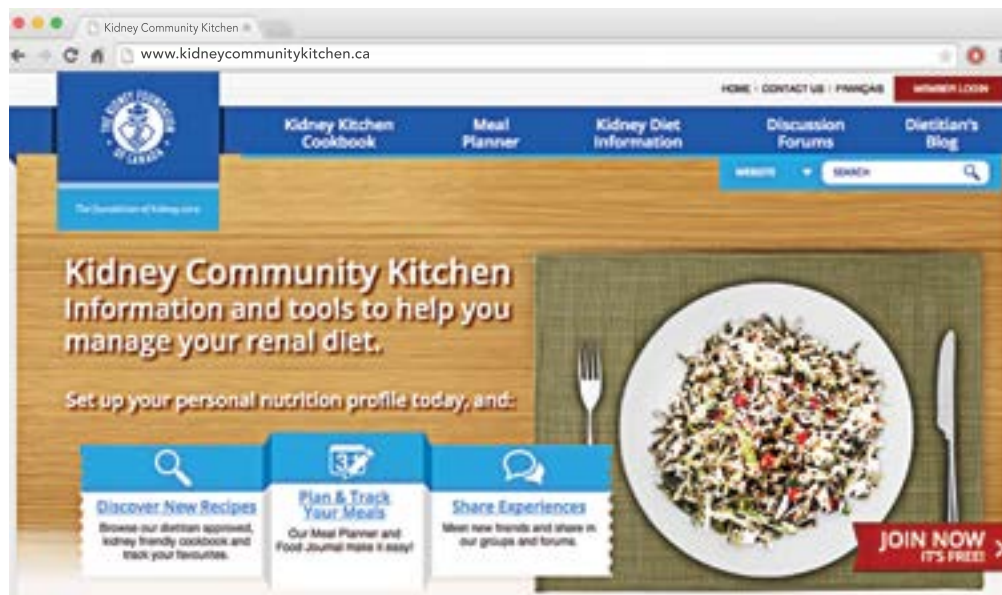
Beverages: Colas, dark sodas, and some iced teas are examples of drinks that may have phosphate additives. Generally, clear sodas are acceptable but always check the ingredients for phosphoric acid or phosphate.

What if my phosphate levels are high?

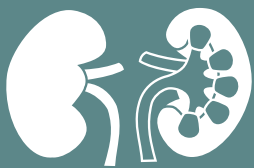
If your phosphate levels are high, you will be encouraged to limit your intake of foods that are naturally high in phosphorus. Your doctor may recommend you take a medication known as a phosphate binder. Phosphate binders are taken with meals. They work in your digestive system to reduce the absorption of phosphorus.

See **Book Two:**

Living with kidney failure for more information on phosphate binders.



For more information about kidney diet and nutrition, including kidney-friendly recipes, fact sheets such as *Eating Out on a Kidney Diet*, discussion forums, and a meal planner, visit the Kidney Community Kitchen at: kidneycommunitykitchen.ca



Chapter 5

Your diet and nutrition for kidney health

See **Book Two:**

Living with kidney failure for diet and nutrition information for people with kidney failure.

When should I see a dietitian?

Making changes to the foods you eat can be difficult and sometimes stressful for you and your family. It often requires that you change your eating habits including what you eat, how much you eat, how often you eat out and where you eat out. A registered dietitian specializing in kidney nutrition will be able to help you. You should also speak with a dietitian if you:

- Have more than one diet and need help putting them together; for example, if you also have diabetes
- Are losing weight or are having trouble eating
- Need meal plan ideas or want to learn how to adapt your favourite recipes

The online Kidney Community Kitchen has an “Ask a dietitian” feature. You can use it to contact a dietitian for general advice about foods and nutrition for people with kidney disease.

www.kidneycommunitykitchen.ca



Summary

- What you eat affects your kidneys, so diet and nutrition are an important part of your treatment plan.
- Choose modest-size servings of protein.
- Aim to limit sodium to 1500 – 2000 mg per day.
- Avoid foods with phosphate additives.

LIVING WELL WITH REDUCED KIDNEY FUNCTION





Chapter 6

Living well with reduced kidney function

HELPFUL TIP

You may have many worries and concerns about living with kidney disease. It may help to write down all your concerns and beside each one, identify someone who can provide you with support, information and/or encouragement.

A diagnosis of chronic kidney disease can affect you physically, emotionally, socially and spiritually. People have different reactions when they learn they have kidney disease. It can be difficult to cope with a chronic condition that will affect you for the rest of your life. This chapter will focus on some ways to help you feel better and more in control, so that you can live well with kidney disease. We will look at getting support from people around you, staying active by doing things you enjoy and being an active member of your healthcare team.

Build a support network

It's a good idea to tell the people around you about your kidney disease. This could be your spouse, close friends, family members, doctor, social worker, church member or anyone else you feel comfortable with. Talking about your health and your feelings and being as open and honest as you can about your situation, may help those around you better understand how to help and support you. You will probably find that it helps to share your feelings and hear how others are feeling as well.

You might benefit by connecting with others who have kidney disease. The Kidney Foundation of Canada's **Kidney Connect** program provides a few ways for you to share your feelings, questions and concerns with others who have similar experiences living with kidney disease. This program is free and also available to your friends and family members.

To arrange peer support by phone, just call the Peer Support line at 1-866-390-PEER (7337), contact your local Branch of The Kidney Foundation of Canada or request peer support using our online form at www.kidney.ca.

The Kidney Foundation of Canada also provides support through kidneyconnect.ca. This online social network is available in both English and French so that members of the kidney community can connect online, share experiences and ideas, and help fight the isolation some people experience when confronted with kidney disease. The social network features live chat, forums, blogs, support groups, and events. It is available at www.kidneyconnect.ca.

Living well with reduced kidney function



Be physically active

One of the most powerful things you can do for your health is to stay physically active. Staying active can help you feel good by lifting your mood, helping you sleep better at night, and helping you to manage stress. It will also improve your mobility and help you stay independent for longer.

The recommended level of activity is 150 minutes of moderate intensity exercise (such as walking, cycling or swimming) per week (or roughly 30 minutes, 5 times per week), in addition to the routine activities of daily living (such as cleaning, gardening or walking the dog).

The truth is there are a lot of reasons why it can be hard for you to maintain your physical activity. The thought of doing 30 minutes of activity may feel overwhelming and well beyond what you are currently doing. You are not alone. The important thing is to make sure that you try to be active throughout the day. Take a look at what you are currently doing, start slowly, build gradually and try not to sit for long periods of time. This might mean a two-minute walk to the end of your driveway or even walking on the spot. Then, add thirty seconds or a minute, as you feel able, until you are regularly active throughout the day.

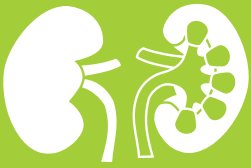
Find activities that you enjoy and that work well for you and your situation. Many people find it easier and more fun to stay active when they are with a friend or in a group. Call your local community centre, public health unit or YMCA to find out what activities or clubs are offered in your community.

It is always a good idea to talk to your healthcare team if you are planning to start a new or more intense plan of physical activity than what you are currently doing. If you have any symptoms (such as joint or muscle pain, chest pain, dizziness, etc.) you should discuss your problems or concerns before starting a new activity. If you need additional guidance, registered physiotherapists are an excellent resource to help you meet your health and physical activity goals.

NOTE:

WHAT'S BEST FOR YOU?

- What activities do you enjoy?
- Setting a goal is a great strategy to help keep you on track.
- How can you add half an hour of activities to your daily routine?
- Keep an activity journal – give yourself credit for the work that you do and use the journal as a record to discuss with your healthcare team any concerns you may have.



Living well with reduced kidney function

NOTES:

Be an active member of your healthcare team

The more you know about kidney disease and protecting your remaining kidney function, the more you will feel in control and confident in making decisions about your health. To learn more about kidney disease, speak with a member of your healthcare team and ask for educational material you can take home with you. If you have questions about the information, or if there is anything you do not understand, you can call the clinic or ask about it at your next appointment.

The Kidney Foundation of Canada web site and this handbook are also good places to start. Some Kidney Foundation Branches hold educational workshops and information sessions. Contact The Kidney Foundation Branch office in your province to see what is planned. You will find branch contact information and a calendar of events on The Kidney Foundation of Canada's web site at **www.kidney.ca**.

DEPRESSION

Sadness, loss of appetite, trouble sleeping and lack of interest in sex or daily living can be signs you're depressed. Feeling down at times is a normal part of life and it can help to share your feelings with people in your support network. Speak to your doctor if you feel down for longer than a few weeks.

Use caution when looking for health information on the Internet

The Internet can be a good source of health-related information. However, since individuals, groups and organizations can easily create their own web sites and post any information they want, even if it's not



NOTES:

- (This information is printed with permission from *The "How to" Health Guide*, available free online on the Health Charities Coalition of Canada web site at **www.healthcharities.ca**.)

Your healthcare team

Life with kidney disease can be a challenge but you have a healthcare team to support you. In the earlier stages of kidney disease, your primary care provider will likely provide most of your



Chapter 6

Living well with reduced kidney function

See **Chapter Seven:**

Developing a personal care plan of action for more information on how you can develop an action plan to actively manage your health.

care. Your kidney healthcare team may also include nephrologists, nurses, dietitians, social workers and others. They are all there to help you live well with kidney disease. If you have a question or need assistance of any kind, just ask them.

You

You are at the centre of your healthcare team. No one knows how your illness or treatment impacts on you, your family and friends, and your life better than you. Your role is to learn as much as you can about how to manage your kidney disease and to be actively involved in your own care.



Your primary care provider

Your primary care provider will monitor how well your kidneys are functioning and help you manage any other health issues such as diabetes or high blood pressure. When you go to an appointment, be prepared with any questions you may have such as:

- What medical tests can I expect in the next few months?
- What, in your opinion, are the most important things I should be doing to protect my remaining kidney function?
- Do I need to adjust my medications?
- May I have a copy of my last blood and urine test results?

Pharmacist

A pharmacist specializes in medications and how they interact. When you see your pharmacist, tell them you have kidney disease and provide them with a list of all the medications and supplements you are taking – that includes any vitamins, minerals, or herbal remedies. Your pharmacist will make sure the medications you take are safe for your kidneys. Here are some other questions to ask your pharmacist:

- When and how to take each medication
- What medications, vitamins, and herbs to avoid



A nephrologist is a doctor who specializes in kidney care. You may be referred to a nephrologist. The nephrologist will monitor your kidney function, talk about your treatment options, and what you may expect of your kidney function in the future.

Nurses are specially trained to provide professional, personalized care. They will look after your well-being and plan your care, provide information and answer any questions or concerns you may have. They will work with other members of the healthcare team to help solve any problems that may occur.

You can ask your doctor for a referral to a dietitian. A dietitian can help you choose the foods and beverages that are best for you to eat and drink. They can also suggest foods that will help lower your blood pressure, improve your blood sugar or help you lose or gain weight if you need to in order to help protect your kidneys.

NOTES:

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Get Connected

Build your support network and connect with others through **kidneyconnect.ca**



Living well with reduced kidney function

NOTES:

Social worker

You can ask your doctor for a referral to a social worker. A social worker can help you with the non-medical issues related to your kidney health. You may benefit from discussing emotional, financial, family, school, work, or other concerns as you try to understand and adjust to the changes that result from having kidney disease.

Physiotherapist

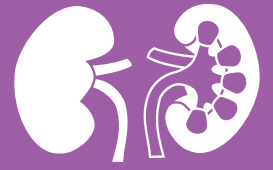
You can ask your doctor for a referral to a physiotherapist if you are struggling with either limited physical function or in becoming more physically active. Physiotherapists work with people of all ages and with a wide range of health conditions to meet their personal health goals. A physiotherapist can help you address your barriers to becoming physically active, develop your own safe and effective physical activity plan, and regain your strength and function.



Summary

- Kidney disease affects you physically but it can also affect you emotionally, socially and spiritually. When you are first diagnosed, you may not want to tell others about your disease. You may feel angry, guilty, sad, or lonely. These feelings are normal.
- It helps to talk about it: build your support network and connect with others who have experience living with kidney disease through the Kidney Connect program or **kidneyconnect.ca**.
- Stay physically active and involved. Identify your favourite activities and ways to incorporate them into your day.
- You are the most important member of your healthcare team. The more you know about kidney disease, the more you will feel in control and confident in making decisions about your health.
- Start a health file for all your medical test results.

DEVELOPING A PERSONAL CARE PLAN OF ACTION





Developing a personal care plan of action

HELPFUL HINT

There's a lot you can do to improve your overall health and support your kidney health. Try setting small goals and work toward them before moving on to the next one. That way, any changes you make will be gradual and long-lasting.

The most effective way to manage your kidney disease is for you to work in partnership with your healthcare team and maintain a healthy lifestyle.

This chapter includes tools and information to help you take an active role in managing your own day-to-day care, set some personal health goals and record important information about your health and well-being. You can live a healthy life, even with a chronic disease. Here are some suggestions to help you:

- **Work actively with your healthcare team to develop a care plan that works best for you.**
- **Give accurate information about your living situation, as well as your physical and emotional well-being.**
- **Speak up and let your healthcare team know about your concerns. Never be afraid to ask questions.**
- **Listen to and follow the health advice and recommendations of your healthcare team.**
- **Learn as much as you can about how to manage your disease.**
- **Prepare for all of your health appointments by writing down your goals for the visit and what questions you would like answered.**
- **Make sure that you receive copies of all your medical tests - blood work, urinalysis, ultrasound, x-rays, etc.**



Create a “health diary”

One way to help manage your kidney disease is to create a “health diary” or journal. Many people will ask questions about your medical history. These might include members of your healthcare team, your insurance company, government agencies, friends or family. *What medications are you on? Do you have any allergies? What is your blood pressure normally?* The list goes on.

A health diary is a good way to keep track of this information (and reduce your frustration at being asked the same questions over and



Prepare for medical appointments

One question you will need to answer at *all* appointments is what medications you are currently taking. You should always bring an up-to-date list of your medications with you. Or, you can bring along a bag with all of your medication bottles.

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Developing a personal care plan of action

NOTES:

Set personal goals

There are many positive changes you can make to take care of your kidney health. Some of these changes can be challenging to make: that is why it is good to start with smaller, manageable goals and build from there. Here are some suggestions about setting your goals:

- Make sure your goal is specific and realistic.
- Write down your goal and share it with trusted friends or family members so that they can encourage you.
- Break a larger goal into smaller steps.
- Identify potential barriers to achieving your goal and ways to overcome them.
- Think about how confident and ready you feel to make a change. If you don't feel confident about your progress, start instead by taking a smaller, more manageable step towards your goal.
- Keep track of your progress and reward yourself for your successes!
- Ask for help if you are having trouble staying motivated.

The following pages contain log sheets where you can record important information about your health and treatment. Feel free to photocopy these sheets as needed. You can also download these log sheets from The Kidney Foundation of Canada's web site at **www.kidney.ca**.





MY PERSONAL LOG



Important contacts

[illegible]

[illegible]



Health status

My Health Goal

Date	Weight	Blood Pressure	Creatinine	eGFR	Hemoglobin	Other (e.g. phosphorous, potassium, cholesterol, glucose, etc.)

My Current Status

[illegible]

[illegible]



Exercise log

[illegible]

[illegible]



My goals: action planning

NOTES:

Keeping a record of your goals and how you are trying to reach them can help you stay motivated and increase your chances of success. Focus on small steps to achieve bigger, longer-term goals and reward yourself along the way! Identify potential challenges and plan for how to overcome them.

Date: _____ My goal: _____

To reach my goal I will:

1. _____

2. _____

3. _____

What are some things that might make it more difficult for me to achieve my goal and how will I overcome them?

1. _____

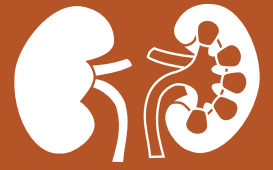
2. _____

3. _____

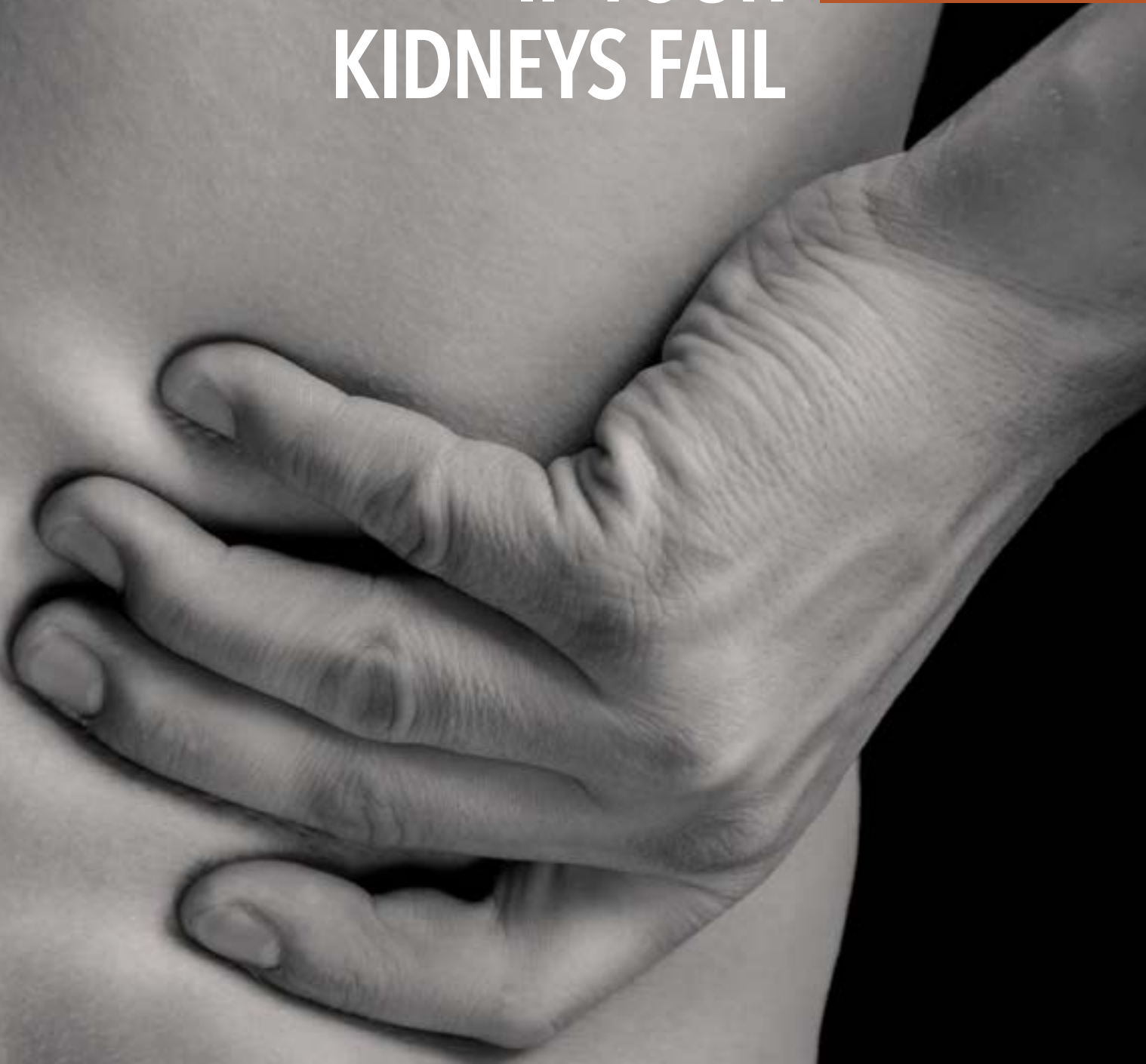
Who could help me to achieve this goal?

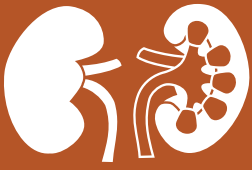
How will I reward or acknowledge my successes?





IF YOUR KIDNEYS FAIL





If your kidneys fail

NOTES:

In the early stages of chronic kidney disease, lifestyle changes (such as getting more exercise, stopping smoking and cutting down on sodium), managing other medical conditions and taking a few medications may be all the treatment needed to slow the damage to the kidneys. People often go for many years, or all of their life, without needing other forms of treatment. The kidneys are so good at doing their job that even diseased kidneys can keep you healthy for a long time. Damage to the kidneys may be slowed down or even stopped if you take steps to preserve your kidney function.

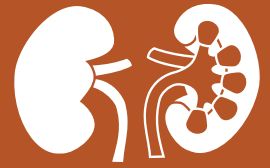
If your kidney function does continue to decline, you may start developing symptoms of kidney disease. Each person is different, but most people will start to develop symptoms when their kidney disease becomes severe. At that time you will need to discuss additional treatment options with your healthcare team.

Uremia

Uremia is a Greek word that means “urine in the blood”. Uremia develops as the kidneys fail and are unable to remove wastes from the body. There are many symptoms of uremia that occur as kidney function declines.

Signs and symptoms that may occur with uremia

- Weight loss
- Weakness
- Vomiting
- Loss of appetite
- Shortness of breath
- Leg cramps
- Itching
- Chest pain
- Easy bruising
- Swelling in ankles and legs
- Fatigue
- Nausea
- Bad taste in the mouth
- Restless legs
- Forgetfulness
- Difficulty sleeping
- Cold intolerance
- Skin colour changes
- Decreased sexual desire



There is a lot to learn and a lot to understand when you are living with kidney disease. The purpose of this handbook is to provide you with the information you need to take control of your healthcare in the early stages of kidney disease.

You can also contact The Kidney Foundation of Canada office in your area and consult the web site at **www.kidney.ca**.

NOTES:

[illegible]



Glossary

NOTES:

Acute kidney injury Rapid, sudden loss of kidney function, often reversible.

Albumin A protein that, if present in the urine, may indicate damage to the kidneys.

Alpha-blockers Medication used to lower blood pressure if other blood pressure medications cannot be tolerated.

Angiotensin-converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARB) These are commonly prescribed blood pressure medications that are designed to protect your kidney function and reduce the amount of albumin in your urine.

Beta-blocker Medication used to manage heart conditions and blood pressure.

Bladder An expandable sack that collects and holds urine.

Calcium Mineral that is important for bone growth and body function.

Calcium channel blockers These medications reduce blood pressure.

Cholesterol A type of fat found in most body tissues.

Chronic kidney disease (CKD) Kidney function that is less than normal and will never get better. This condition might be mild or it may slowly get worse and could lead to complete kidney failure.

Conservative care A treatment option that aims to provide physical and emotional comfort care, instead of extended life. Also known as *non-dialysis supportive care*.

Creatinine Waste product of muscle activity.

Diabetes Disease of the pancreas in which the production of insulin is decreased or absent (Type 1) or in which the body does not use the insulin that the pancreas makes (Type 2).

Dialysis From Greek, meaning “to separate or dissolve.” A treatment for kidney failure that removes wastes and water from the blood.



Glossary

NOTES:

Kidney One of two organs located at the back of the abdominal cavity on each side of the spinal column.

Kidney Connect and kidneyconnect.ca The Kidney Foundation of Canada's peer support programs where people living with kidney disease can share their experiences.

Kidney failure Progressive deterioration in kidney function. Also called *end-stage kidney disease (ESKD)*.

Lupus Commonly used term for *systemic lupus erythematosus*.

Nephritis See *glomerulonephritis*.

Nephron The functional unit of the kidney that acts to maintain the body's chemical balance. Consists of a filter (glomerulus) attached to a tubule.

Non-dialysis supportive care A treatment option that aims to provide physical and emotional comfort care, instead of extended life. Also known as *conservative care*.

Phosphorus (phosphate) Mineral in many nutritious foods. The kidneys regulate it in the body fluids. At normal levels, keeps bones strong and healthy. At high levels, causes itching, painful joints, and bone disease.

Polycystic kidney disease An inherited disease of the kidneys in which the kidneys become very large and have a bumpy surface because of fluid-filled cysts.

Potassium Mineral in the body fluids regulated by the kidneys. At normal levels, helps nerves and muscles work well. At high levels, may stop the heart.

Protein Substance obtained from food that builds, repairs and maintains body tissues. High sources of protein are mainly from animal foods.

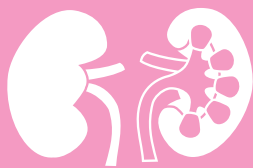
NOTES:

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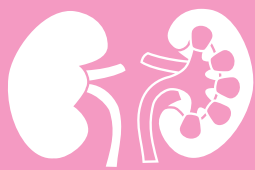
Medications

NOTES:

This chart lists some medications used in treating various aspects of kidney disease and kidney failure. This handbook does not discuss all of these medications.

GENERIC NAME	SOME COMMON BRAND NAMES	TYPE/CLASS OF MEDICATION
ACEBUTOLOL	Sectral®	Beta-blocker/blood pressure
ACETAMINOPHEN	Tylenol®	Pain/fever
AMILORIDE		Diuretic/water pill
AMLODIPINE	Norvasc®	Calcium channel blocker/blood pressure
ATENOLOL	Tenormin®	Beta-blocker/blood pressure
ATORVASTATIN	Lipitor®	Statin/cholesterol
BENAZEPRIL	Lotensin®	Angiotensin-converting enzyme (ACE) inhibitors
BISOPROLOL		Beta-blocker/blood pressure
CANDESARTAN	Atacand®	Angiotensin receptor blockers (ARB)
CAPTOPRIL	Capoten®	Angiotensin-converting enzyme (ACE) inhibitors
CARVEDILOL	Coreg®	Beta-blocker/blood pressure
CHLORTHALIDONE		Diuretic/water pill
DILTIAZEM	Tiazac®, Cardizem®	Calcium channel blocker/blood pressure
ENALAPRIL	Vasotec®	Angiotensin-converting enzyme (ACE) inhibitors
EZETIMIBE	Ezetrol®	Cholesterol
FELODIPINE	Plendil®	Calcium channel blocker/blood pressure
FENOFIBRATE	Lipidil®	Fibrate/cholesterol
FLUVASTATIN	Lescol®	Statin/cholesterol
FOSINOPRIL	Monopril®	Angiotensin-converting enzyme (ACE) inhibitors
FUROSEMIDE	Lasix®	Diuretic/water pill
GEMFIBROZIL	Lopid®	Fibrate/cholesterol

[illegible]



Medications

NOTES:

GENERIC NAME

SOME COMMON BRAND NAMES

TYPE/CLASS OF MEDICATION

SPIRONOLACTONE

Aldactone®

Diuretic/water pill

TELMISARTAN

Micardis®

Angiotensin receptor blockers (ARB)

TRANDOLAPRIL

Mavik®

Angiotensin-converting enzyme (ACE) inhibitors

TRIAMTERENE

Diuretic/water pill

VALSARTAN

Diovan®

Angiotensin receptor blockers (ARB)

VERAPAMIL

Isoptin SR®

Calcium channel blocker/blood pressure

NOTES:

NOTES:

☐ At a pre-dialysis/kidney care clinic ☐ Primary care provider's office
☐ In the renal/kidney unit at the hospital ☐ From The Kidney Foundation
☐ Online ☐ Other: _____

☐ Physician in hospital/nephrologist ☐ Primary care provider ☐ Nurse
☐ Social worker ☐ I ordered it myself ☐ Other: _____

☐ Yes ☐ No If no, when would it have been more useful to receive Book One: Living with reduced kidney function?

☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very Poor

75





Evaluation form

NOTES:

5. Did this handbook help you to understand how to protect and preserve your remaining kidney function?

☐ Yes ☐ No If no, what would have been more helpful to you?

6. Is there any information you feel should be added or removed from Book One: Living with reduced kidney function?

7. Please indicate how useful you found the information in this handbook to be overall.

Overall, how would you rate the information provided?

☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very Poor

How helpful was this handbook in addressing your specific concerns and questions about CKD?

☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very Poor

8. Please rate how each of the following aspects of this handbook met your needs:

The organization of the information

☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very Poor

Ease of use (was it easy to find the information you were looking for)

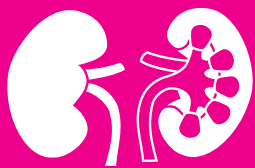
☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very Poor

Personalization (was it easy to make notes and track your personal information)

☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ Very Poor



[illegible]



Evaluation form

NOTES:

Thank you very much for taking the time to fill out this evaluation.
Please send your completed form to:

The Kidney Foundation of Canada
310-5160 Décarie Blvd., Montréal, QC H3X 2H9.

If you prefer, you can fill out an online version of this evaluation at
www.kidney.ca/handbooks/evaluation.

☐ I would like to receive additional information from The Kidney Foundation of Canada (e.g. e-newsletter).

☐ I would be interested in being contacted to provide feedback on Kidney Foundation programs, priorities, and advocacy initiatives.

Email: _____

Contact information



The foundation of kidney care.

BRANCH OFFICES

Atlantic Canada Branch (includes Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and Labrador)

Tel: 506-453-0533
Toll Free: 1-877-453-0533
Fax: 506-454-3639
Email: kidneyatlantic@kidney.ca
Web Site: www.kidney.ca/atlantic

British Columbia and Yukon Branch

Tel: 604-736-9775
Toll Free: 1-800-567-8112
Fax: 604-736-9703
Email: info@kidney.bc.ca
Web Site: www.kidney.ca/bc

Manitoba Branch

Tel: 204-989-0800
Toll Free: 1-800-729-7176
Fax: 204-989-0815
Email: info@kidney.mb.ca
Web Site: www.kidney.ca/manitoba

Northern Alberta and the Territories Branch (includes the Northwest Territories)

Tel: 780-451-6900
Toll Free: 1-800-461-9063 within Alberta and the Territories
Fax: 780-451-7592
Email: info@kidney.ab.ca
Web Site: www.kidney.ca/nab

Ontario Branch

Tel: 905-278-3003
Toll Free: 1-800-387-4474
Fax: 905-271-4990
Email: kidney@kidney.on.ca
Web Site: www.kidney.ca/ontario

Quebec Branch

Tel: 514-938-4515
Toll Free: 1-800-565-4515 within Quebec
Fax: 514-938-4757
Email: infoquebec@kidney.ca
Web Site: www.kidney.ca/quebec

Saskatchewan Branch

Tel: 306-664-8588
Toll Free: 1-888-664-8588 within Saskatchewan
Fax: 306-653-4883
Email: info@kidney.sk.ca
Web Site: www.kidney.ca/sk

Southern Alberta Branch

Tel: 403-255-6108
Toll Free: 1-800-268-1177
Fax: 403-255-9590
Email: info@kidneyfoundation.ab.ca
Web Site: www.kidney.ca/sab

NATIONAL OFFICE

Tel: 514-369-4806
Toll Free: 1-800-361-7494
Fax: 514-369-2472
Email: info@kidney.ca
Web Site: www.kidney.ca

Accurate at time of printing. For updates see www.kidney.ca



OUR MISSION

The Kidney Foundation of Canada exists for the enhancement of kidney health and the reduction and, if possible, the elimination of the burden of kidney diseases. The primary beneficiaries are people at risk of or affected by kidney disease.

The Kidney Foundation provides:

HOPE

New knowledge and treatments generating hope will exist in the following areas:

- Knowledge of the kidney and kidney disease.
- Methods by which the new knowledge from research results can be translated into the treatment, prevention, and slowing of the progression of kidney disease.

SUPPORT

To achieve optimal health status, all people affected by kidney disease have access to healthcare and to wellness, socio-emotional, and financial support including:

- Equitable access to appropriate cost-effective treatment, as close to home as possible, regardless of background and personal circumstances.
- Timely access to successful long-term organ transplantation, if desired and appropriate.
- Comfort for those who withdraw from or do not wish dialysis treatment.

EMPOWERMENT

All people affected by kidney disease are empowered to maximize their outcomes.

- People have the knowledge to make effective choices to prevent, minimize, and seek treatment for kidney disease.
- People can advocate for themselves and others when navigating the system.
- The kidney community has a sense of belonging and a collective voice.

ENGAGEMENT

- An informed Canadian public understands and responds to the impact of kidney disease.
- Effective provincial and federal policies and strategies exist for kidney research, kidney care, organ donation, and transplantation.