

# Understanding Chronic Kidney Disease (CKD)

## What is chronic kidney disease?

Chronic kidney disease (CKD) means that your kidneys aren't working as well as they should, potentially causing other health problems. CKD may get worse over time, but you can take steps to keep your kidneys as healthy as possible.

## What do healthy kidneys do?

- **They filter wastes from your blood.** Your kidneys remove salts, excess water, and other wastes by making urine (see the picture below).
- **They adjust minerals.** Your kidneys adjust the levels of important minerals like sodium, potassium, calcium, and phosphorus in your blood.
- **They make hormones.** These hormones help your body maintain healthy blood pressure, maintain bone health, and produce red blood cells.

## What causes CKD?

CKD is most often caused by:

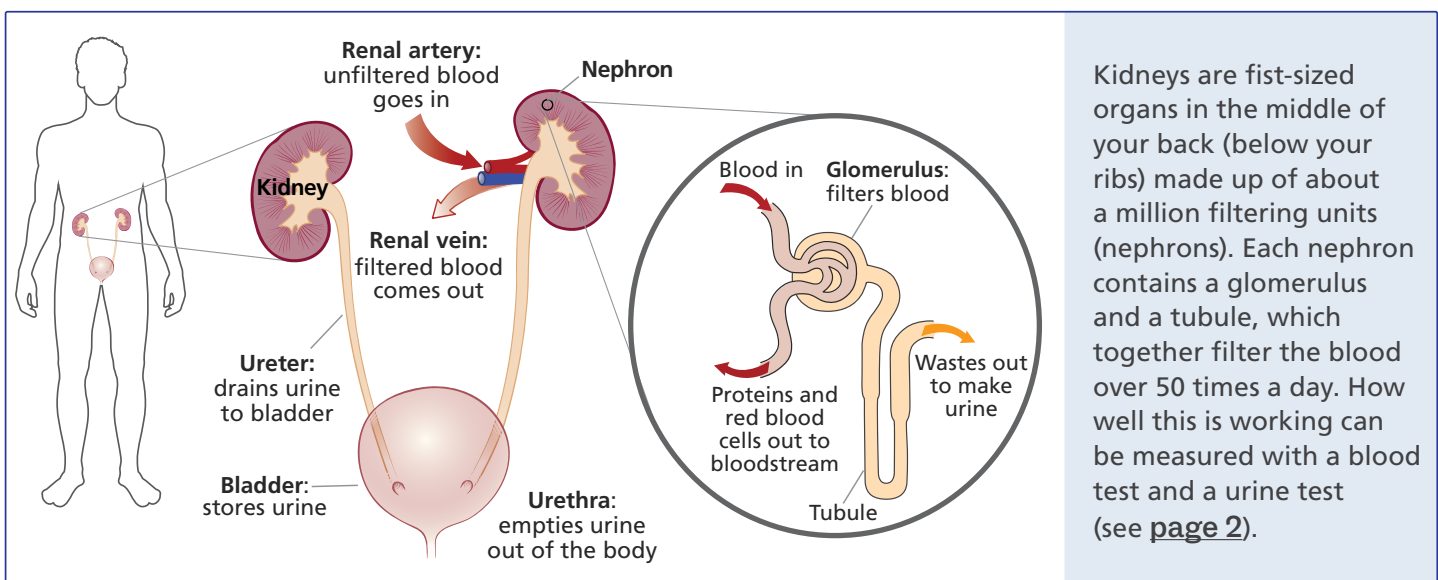
- **Diabetes.** High blood glucose (blood sugar) can damage many body organs, especially the kidneys. Anyone with diabetes has a higher risk of CKD.

- **Hypertension (high blood pressure).** This can damage the delicate blood vessels in your kidneys.
- **Extended use of pain relievers.** Those who take common over-the-counter pain relievers, such as Advil, Motrin, Aleve, and other "NSAIDs," for headaches, arthritis, and other painful conditions have a higher risk of developing CKD.

Other causes include immune system diseases, chronic diseases that inflame the kidneys, inherited conditions, and problems that interfere with the flow of urine.

## Key facts about CKD

- **You likely feel fine.** You might not have symptoms until your kidneys are about to fail.
- **You need to get tested.** Blood and urine tests are the only way to know if you have CKD. Do them every year.
- **It won't go away.** Without treatment, CKD gets worse over time. It can lead to kidney failure, which can only be treated with dialysis or a transplant.
- **You're in charge.** See [page 4](#) for steps to take to keep your kidneys healthier longer and stop CKD from getting worse.



Kidneys are fist-sized organs in the middle of your back (below your ribs) made up of about a million filtering units (nephrons). Each nephron contains a glomerulus and a tubule, which together filter the blood over 50 times a day. How well this is working can be measured with a blood test and a urine test (see [page 2](#)).

## How will my doctor test my kidney function?

Your doctor will determine how severe your disease is and how best to treat it based on your symptoms and regular lab work, which includes these 2 tests:

- 1 Estimated glomerular [gloh-MER-yuh-lar] filtration rate (or eGFR).** This is a blood test that measures how well your kidneys are functioning. Your eGFR tells you and your doctor the CKD stage you are in (see [page 3](#)). Knowing the stage will help you and your doctor focus your treatment plan to try and keep the disease from progressing.
- 2 Microalbumin [mi-cro-al-BY00-min].** This is a urine test that detects the amount of blood protein that is in your urine. The protein in your blood is called albumin [al-BY00-min]. Healthy kidneys can filter waste but keep proteins (like albumin) inside your body. Finding protein in your urine means that your kidneys are not working as well as they should. **The normal rate for microalbumin is less than 30 milligrams (mg) every 24 hours.** If your number is higher or is increasing from the last time you were tested, your doctor may need to change your treatment plan.

### My Current Numbers

eGFR: \_\_\_\_\_

Microalbumin: \_\_\_\_\_

CKD Stage: \_\_\_\_\_

### My Current CKD Medications

\_\_\_\_\_  
\_\_\_\_\_

### My Scheduled Follow-up Appointments

\_\_\_\_\_  
Doctor Date

\_\_\_\_\_  
Doctor Date

Depending on the results of these 2 tests, your doctor may need to monitor your eGFR and microalbumin several times each year. Since you will likely not have any symptoms in the early stages of CKD, **it is very important that you keep your scheduled follow-up appointments.** These tests might be the only way you and your doctor know how to manage your CKD.

## How can I help prevent my kidneys from failing?

When your kidneys fail, you have options, such as kidney transplant, dialysis, or conservative care (hospice). You can slow the progression of kidney disease by:

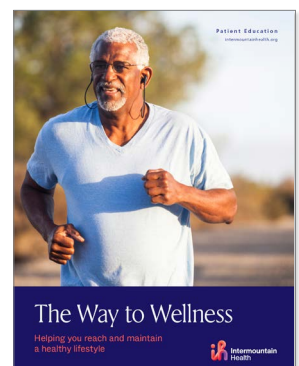
- **Managing other medical conditions.** Carefully follow your treatment plan for diabetes or high blood pressure.
- **Living a healthy lifestyle.** Eat a balanced diet, maintain a healthy weight, get more physical activity, and stop smoking. Use the Intermountain booklet, *The Weigh to Health*, to get started.
- **Modifying your diet.** Limit sodium (salt) and excess sugar. Make an appointment with a **registered dietitian nutritionist (RDN)** to help you plan a kidney-healthy diet.
- **Taking medications correctly.** Don't let yourself run out or take medications more or less often than prescribed.
- **Avoiding medications that can hurt your kidneys.** Medications like ibuprofen can make CKD worse. Give your healthcare provider a list of all medications you're taking so they can make sure they are not affecting your kidney function.

Use the checklist on [page 4](#) to record your plans for helping your kidneys stay as healthy as possible.

### The Weigh to Health

This helpful booklet provides information, tips, and tricks for making lifestyle changes that can help you prevent kidney failure and just feel better overall.

Ask your doctor for your copy of *The Weigh to Health*.



## Stages of chronic kidney disease

CKD can become kidney failure without warning if it goes untreated. Kidneys don't usually fail all at once. Instead, kidney disease often progresses slowly, over a period of years. If it is caught early, medications and lifestyle changes may help slow the process. A simple urine and blood test are used to determine if you have CKD. Your nephrologists will use the results of these tests, your age, race, gender, and weight to calculate your eGFR. The eGFR test is the best test to measure how well your kidneys are cleaning your blood.

There are 5 stages of CKD. Understanding these stages will help you manage your condition and prevent it from getting worse. You and your doctor can decide together what to do to manage your CKD. [Page 4](#) provides space for you to write down your goals and plans for keeping your kidneys as healthy as possible.

Stage	eGFR Level	Description of Function
1	<b>90 or more</b> (+/- protein in urine)	There are few symptoms in Stage 1 and 2.
2	<b>60 to 90</b> (+/- protein in urine)	There are few symptoms in Stage 1 and 2.
3	<b>30 to 59</b> (+/- protein in urine)	Anemia and/or early bone disease may appear. Medications can be used to treat both of these problems down the road. Increased tiredness may be a symptom of anemia. It is recommended that you attend a "CKD Education Class," explaining the types of kidney replacement therapy (types of dialysis, transplant, and conservative care).
4	<b>15 to 30</b> (+/- protein in urine)	This is the time to be preparing for dialysis and/or transplant. You should attend a "CKD Education Class" if you haven't already. If you should consider dialysis access, an evaluation by a surgeon will be required as it takes a few months for this to be ready to use. Most people will feel more tired.
5	<b>Less than 15</b> (+/- protein in urine)	Fatigue, decreased appetite, and nausea are more common and there may be more problems with fluid retention. Be sure to tell your nephrologist if you have these symptoms.

**To prevent kidney failure, I need to (check the items below that apply to YOU):**

- Get blood and urine tests.  
My most recent lab work was done on: \_\_\_\_\_ My next lab work date is: \_\_\_\_\_
- Get a flu shot every year and any other vaccines my doctor recommends.  
Other vaccines I need to get are:  
\_\_\_\_\_
- Take these CKD medications as prescribed: \_\_\_\_\_
- ONLY take acetaminophen for pain, or ask my doctor about alternatives.
- Monitor my blood pressure every day. My blood pressure should be lower than 140/90 (or 130/80 if my microalbumin is above normal).
- Make an appointment with a **registered dietitian nutritionist (RDN)** and/or a **nephrologist (kidney doctor)**.  
My appointment dates and times are:

RDN Name: \_\_\_\_\_ Nephrologist Name: \_\_\_\_\_  
Phone Number: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
Date/Time: \_\_\_\_\_ Date/Time: \_\_\_\_\_

- Lose weight. My goal weight is \_\_\_\_\_.  
To lose weight, I plan to use the Intermountain booklet, ***The Weigh to Health***.
- Stop smoking. I am going to:
  - Review the Intermountain booklet, ***Quitting Tobacco***.
  - Call 1-800-QUIT-NOW (800-784-8669) for support to quit smoking.
- Limit alcohol to no more than \_\_\_\_\_ drinks per day and \_\_\_\_\_ drinks per week.  
I will review the Intermountain fact sheet, ***Alcohol: Rethink Your Drink***.
- Get at least 150 minutes of physical activity each week.  
My exercise plan is to:  
\_\_\_\_\_  
\_\_\_\_\_



- Learn more about CKD at [intermountainhealthcare.org](http://intermountainhealthcare.org).

**Questions for my doctor**

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