FAQ & EDUCATION HUB

PATIENT-CENTERED

Kidney Health Knowledge Base

Your comprehensive guide to understanding kidney health, preventing kidney disease, and living well at every stage. Whether you're newly diagnosed, supporting a loved one, or simply curious about protecting your kidneys, this resource is designed to answer your most important questions — clearly and compassionately.

Kidney Basics

SECTION 4A – 4C

4A. Where Are Your Kidneys & What Do They Do?

Your kidneys are two bean-shaped organs, each about the size of your fist, located just below your rib cage on either side of your spine. Though they're relatively small — together weighing only about 10 ounces — they perform some of the most vital functions in your body. Every single day, your kidneys filter approximately 200 quarts of blood, removing waste products, excess fluids, and toxins that would otherwise build up and poison your system. The cleaned blood is returned to circulation, and the waste is excreted as urine.

But filtering blood is only part of the story. Your kidneys are remarkably versatile organs that regulate a wide range of processes essential to your health and survival. They maintain the delicate balance of electrolytes — such as sodium, potassium, and calcium — that your muscles, nerves, and heart depend on to function properly. They help regulate your blood pressure by controlling the volume of fluid in your bloodstream and releasing the enzyme renin, which signals blood vessels to tighten or relax. They also produce erythropoietin, a hormone that stimulates your bone marrow to create red blood cells, and they activate vitamin D, which is critical for calcium absorption and bone strength.

When your kidneys are working well, you likely never think about them. But when kidney function declines — whether from disease, injury, or chronic conditions — the effects can be felt throughout your entire body. That's why understanding your kidneys and protecting their health is so important, regardless of your age or current health status.

Filter Blood

Remove waste, toxins, and excess fluid — processing ~200 quarts of blood daily

Balance Electrolytes

Regulate sodium, potassium, calcium, and other minerals critical for organ function

Control Blood Pressure

Manage fluid volume and release renin to keep blood pressure in a healthy range

Activate Vitamin D

Convert vitamin D into its active form, supporting strong bones and calcium absorption

4B. How to Keep Your Kidneys Healthy

The good news is that kidney health is largely within your control. By adopting a few essential habits, you can dramatically reduce your risk of kidney disease and help your kidneys function optimally for decades. These lifestyle strategies benefit not only your kidneys but your heart, brain, and overall well-being.

Daily Habits That Protect Your Kidneys

- **Stay hydrated:** Drink 6–8 glasses of water daily. Proper hydration helps kidneys flush out toxins efficiently.
- **Eat a balanced diet:** Emphasize fruits, vegetables, whole grains, and lean proteins. Limit sodium, processed foods, and excess sugar.
- **Exercise regularly:** Aim for at least 150 minutes of moderate physical activity per week to maintain healthy blood pressure and weight.
- **Don't smoke:** Smoking damages blood vessels, reducing blood flow to your kidneys and accelerating decline.
- **Limit alcohol:** Excessive drinking strains your kidneys and can cause acute kidney damage.

Medical Monitoring

- **Monitor blood pressure:** High blood pressure is a leading cause of kidney disease. Target below 130/80 mmHg.
- **Control blood sugar:** Diabetes is the #1 cause of kidney failure. Keep your A1C within your doctor's recommended range.
- **Avoid NSAID overuse:** Over-the-counter painkillers like ibuprofen and naproxen can damage kidneys when used frequently.
- **Get annual checkups:** A simple blood test (creatinine/GFR) and urine test (albumin) can catch problems early.
- **Know your family history:** If kidney disease runs in your family, get screened more frequently.

4C. Risk Factors for Kidney Disease

Chronic kidney disease (CKD) often develops silently over years, with few or no symptoms in early stages. Understanding your personal risk factors is the first step toward prevention and early detection. Some risk factors, such as family history, cannot be changed — but many others can be managed through lifestyle choices and medical care.

Diabetes (Type 1 & Type 2)

Diabetes is the single most common cause of kidney failure in the United States. High blood sugar over time damages the tiny blood vessels in your kidneys' filtering units (glomeruli), gradually reducing their ability to clean your blood. Approximately 1 in 3 adults with diabetes has some degree of CKD.

High Blood Pressure

Hypertension is the second leading cause of kidney failure. When blood pressure is too high, it damages the delicate blood vessels in and around the kidneys. Over time, the kidneys lose their ability to filter blood effectively. Controlling blood pressure is one of the most impactful steps you can take.

Family History

If a parent, sibling, or close relative has had kidney disease or kidney failure, your risk is significantly higher. Conditions like polycystic kidney disease (PKD) are directly inherited. Even non-genetic CKD tends to cluster in families due to shared genes and lifestyle patterns.

Age, Obesity & Other Factors

Being over age 60, having obesity, a history of heart disease, frequent use of NSAIDs, recurrent urinary tract infections, or being of African American, Hispanic, or Native American descent all increase your risk. The more risk factors you have, the more important regular screening becomes.

Self-Assessment Tools

SECTION 4D | INTERACTIVE TOOLS

Knowledge is power — especially when it comes to your kidney health. The self-assessment tools below are designed to give you a quick snapshot of your kidney function and your risk for kidney disease. They are not a substitute for a medical diagnosis, but they can help you start an informed conversation with your healthcare provider. If any of your results suggest elevated risk, we encourage you to schedule an appointment with your doctor promptly.

1

GFR Calculator

Your Glomerular Filtration Rate (GFR) is the gold standard measurement of kidney function. By entering your creatinine level, age, sex, and race, this calculator estimates how well your kidneys are filtering waste from your blood. A GFR of 60 or higher is generally considered normal, while a GFR below 60 for three months or more may indicate CKD.

What you'll need: Your most recent serum creatinine lab result (available from your doctor or patient portal).

2

Kidney Risk Score

This quiz-style tool evaluates your personal risk factors — including age, blood pressure, diabetes status, family history, and lifestyle habits — to generate an overall kidney disease risk score. It takes less than five minutes and provides personalized recommendations based on your results.

Best for: Anyone who wants a quick risk assessment without needing lab results.

3

ESRD Risk for Living Donors

If you're considering donating a kidney to a loved one, this specialized tool estimates your long-term risk of developing End-Stage Renal Disease (ESRD) after donation. It factors in your health profile, age, blood pressure, BMI, and family history to help you and your transplant team make an informed decision about your candidacy.

Important: This tool supplements — but does not replace — your transplant center's evaluation.

Types of Kidney Disease

SECTION 4E STORY-STYLE EDUCATION

Kidney disease is not one condition — it's a family of disorders that affect the kidneys in different ways. Some forms develop slowly over many years, while others strike suddenly. Some are inherited at birth, and others are triggered by infections, medications, or chronic conditions. Understanding the different types can help you recognize warning signs, ask the right questions, and seek appropriate care.

Chronic Kidney Disease (CKD)

CKD is the most common form of kidney disease, affecting an estimated 37 million Americans — many of whom don't know they have it. It develops gradually, often over years or decades, as the kidneys slowly lose their ability to filter blood. The most common causes are diabetes and high blood pressure, which together account for roughly two-thirds of all CKD cases. Because CKD is typically silent in its early stages, regular screening is critical for at-risk individuals. Left untreated, CKD can progress to kidney failure, requiring dialysis or a transplant.

Acute Kidney Injury (AKI)

Unlike CKD, acute kidney injury occurs suddenly — sometimes within hours or days. It can be triggered by severe dehydration, blood loss, infections (like sepsis), certain medications, or a blockage in the urinary tract. AKI is a medical emergency but is often reversible with prompt treatment. However, repeated episodes of AKI can increase the risk of developing CKD over time.

Polycystic Kidney Disease (PKD)

PKD is an inherited condition in which clusters of fluid-filled cysts grow within the kidneys, gradually enlarging them and impairing their function. It is one of the most common genetic disorders, affecting approximately 600,000 people in the United States. There are two main forms: autosomal dominant PKD (the more common adult-onset type) and autosomal recessive PKD (a rarer, more severe form that appears in infancy). While there is no cure, treatments can manage symptoms, slow cyst growth, and delay kidney failure.

Glomerulonephritis

Inflammation of the kidney's filtering units (glomeruli). Can be caused by infections, autoimmune diseases (like lupus), or may be idiopathic. May cause blood or protein in urine, swelling, and high blood pressure.

Kidney Stones

Hard mineral deposits that form inside the kidneys and can cause excruciating pain as they pass through the urinary tract. Common types include calcium oxalate and uric acid stones. Risk increases with dehydration, certain diets, and family history.

Urinary Tract Infections (UTIs)

While most UTIs affect the bladder, untreated infections can spread to the kidneys (pyelonephritis), causing fever, back pain, and potentially permanent damage if not treated with antibiotics promptly.

Kidney Cancer (Renal Cell Carcinoma)

Though less common, kidney cancer can develop — especially in smokers, those with obesity, or people with inherited conditions. Early detection through imaging is key, as small tumors can often be treated successfully with surgery.

Frequently Asked Questions

SECTION 4F

We've gathered the questions patients and caregivers ask most often. If you don't see your question here, don't hesitate to reach out to your healthcare team — no question is too small when it comes to your health.

About Kidney Disease

Can kidney disease be cured?
It depends on the type. Acute kidney injury can often be fully reversed with prompt treatment. However, chronic kidney disease (CKD) is generally not curable — the damage that has already occurred is usually permanent. The good news is that CKD can often be slowed or stabilized with medication, lifestyle changes, and careful management of underlying conditions like diabetes and hypertension.

What are the early warning signs?
CKD is often called a "silent disease" because symptoms may not appear until significant damage has occurred. Early warning signs can include fatigue, swollen ankles or feet, changes in urination (more or less frequent, foamy or dark urine), persistent itching, loss of appetite, nausea, and difficulty concentrating. If you experience any of these, see your doctor for a simple blood and urine test.

Is kidney disease hereditary?
Some forms are directly inherited, such as polycystic kidney disease (PKD) and Alport syndrome. Even when kidney disease isn't directly genetic, having a family history of CKD, diabetes, or high blood pressure significantly raises your risk. If kidney disease runs in your family, early and regular screening is essential.

How fast does CKD progress?
Progression varies widely. Some people remain stable at the same stage for decades, while others progress more rapidly. Factors that accelerate progression include uncontrolled diabetes, high blood pressure, smoking, obesity, and high-protein diets. Working closely with a nephrologist and following your treatment plan can dramatically slow progression.

About Treatment & Daily Life

Will I need dialysis?
Not necessarily. Many people with CKD — especially those in Stages 1 through 3 — never progress to the point of needing dialysis. Dialysis becomes necessary in Stage 5 (kidney failure), when the kidneys can no longer sustain life on their own. Even at Stage 5, a kidney transplant may be an alternative to long-term dialysis.

Can I still work and travel with CKD?
Absolutely. Most people with early-to-moderate CKD continue working, traveling, and enjoying active lives. As the disease progresses, you may need to make accommodations — such as scheduling dialysis sessions around travel or work — but many patients maintain full careers and rich social lives with proper planning.

Do I need to see a specialist?
Your primary care doctor can manage early-stage CKD, but a referral to a nephrologist (kidney specialist) is typically recommended when GFR drops below 30, when the cause of kidney disease is unclear, when protein in the urine is significant, or when your kidney function is declining rapidly.

Can children get kidney disease?
Yes. Children can develop kidney disease from birth defects, inherited conditions (like PKD or reflux nephropathy), infections, or autoimmune disorders. Pediatric kidney disease requires specialized care, and early detection is especially important for preserving kidney function as the child grows.

Diagnosis & Early Detection

SECTIONS 4G & 4H

4G. How Kidney Disease Is Diagnosed

Diagnosing kidney disease typically begins with two simple, widely available tests that your doctor can order during a routine checkup. These tests are painless, affordable, and incredibly informative — yet millions of at-risk Americans have never had them. If you have diabetes, high blood pressure, a family history of kidney disease, or are over 60, you should be screened at least once a year.

Blood Test (Serum Creatinine)

Measures creatinine, a waste product from muscle metabolism. Your lab uses this to calculate your estimated GFR — the best overall indicator of how well your kidneys are filtering. A GFR below 60 for 3+ months suggests CKD.

Urine Test (Albumin-to-Creatinine Ratio)

Detects albumin (a protein) in your urine. Healthy kidneys keep proteins in the blood. If albumin leaks into urine, it's a sign of kidney damage — sometimes even before GFR drops. Persistent albuminuria confirms CKD.

Imaging & Biopsy (If Needed)

Ultrasound can reveal structural abnormalities, cysts, stones, or blockages. In some cases, a kidney biopsy — a small tissue sample taken with a needle — is needed to identify the specific type of kidney disease and guide treatment.

4H. Why Early Detection Matters

Kidney disease is one of the most treatable chronic conditions — *when caught early*. The tragedy is that an estimated 9 in 10 people with CKD don't know they have it, because symptoms often don't appear until the kidneys have already lost more than half their function. By the time someone feels sick, the window for the most effective interventions may have narrowed significantly.

37M

Americans with CKD

Approximately 37 million U.S. adults have chronic kidney disease

90%

Unaware

9 in 10 adults with CKD don't know they have it

1 in 3

At Risk

1 in 3 American adults is currently at risk for kidney disease

Early detection allows your healthcare team to identify the cause, slow or halt progression, prevent complications like heart disease, and preserve your quality of life. Treatments are most effective in Stages 1–3, when kidney damage is mild to moderate. In early stages, medications (such as ACE inhibitors, ARBs, or SGLT2 inhibitors), blood pressure control, blood sugar management, and lifestyle changes can make a profound difference. In many cases, early intervention can delay or even prevent the need for dialysis or transplant by years or decades.

> The single most important thing you can do for your kidney health is to get tested — especially if you have risk factors. A 5-minute blood and urine test could change the course of your life.

CKD Stages Explained

SECTION 4I

Chronic kidney disease is classified into five stages based on your Glomerular Filtration Rate (GFR) — a measure of how efficiently your kidneys filter waste from your blood. Understanding your stage helps you and your healthcare team create the right treatment plan and set realistic expectations. Remember, CKD doesn't always progress — many people stabilize at an early stage with proper care.

Stage 1 — GFR 90 or higher

Kidney damage with normal function. Your kidneys are working well, but there are signs of damage (e.g., protein in urine or structural abnormalities). Focus: Identify the cause, control blood pressure and blood sugar, adopt a kidney-friendly lifestyle. Most people feel completely normal at this stage.

Stage 2 — GFR 60 to 89

Kidney damage with mildly reduced function. Kidneys are slightly less efficient but still handling most tasks well. Focus: Continue managing risk factors, monitor GFR and urine protein regularly, and discuss a kidney-protective medication plan with your doctor.

Stage 3 — GFR 30 to 59

Moderate kidney damage. Divided into 3a (GFR 45–59) and 3b (GFR 30–44). Waste products may begin to build up. Symptoms like fatigue, fluid retention, and changes in urination may appear. Focus: Referral to a nephrologist, dietary modifications, medication adjustments, and vigilant monitoring.

Stage 4 — GFR 15 to 29

Severe kidney damage. Kidneys are struggling significantly. Symptoms become more noticeable: nausea, swelling, bone pain, poor appetite, difficulty concentrating. Focus: Prepare for possible kidney replacement therapy (dialysis or transplant), start vascular access planning, and work closely with your care team.

Stage 5 — GFR below 15

Kidney failure (End-Stage Renal Disease). Kidneys can no longer sustain life on their own. Dialysis or a kidney transplant is required to survive. Focus: Begin dialysis or pursue transplant evaluation, manage symptoms and complications, and maintain the best possible quality of life with your medical team.

Important: Your GFR can fluctuate based on hydration, medication, illness, and other factors. A single low GFR reading does not automatically mean you have CKD — your doctor will look at trends over time (typically 3+ months) before making a diagnosis.

Living Well & Treatment Decisions

SECTIONS 4J – 4O SUPPORT GUIDES

4J. Living Well with Kidney Disease

A CKD diagnosis can feel overwhelming, but it does not mean your life stops. Millions of people live full, active, and meaningful lives while managing kidney disease. The key is building a support system, staying informed, and working closely with your healthcare team to manage symptoms and slow progression. Focus on what you *can* control: your diet, exercise, medication adherence, stress management, and emotional well-being. Support groups — both in-person and online — can provide invaluable encouragement and practical tips from others who truly understand what you're going through.

4K. When to Create an AV Fistula

If your CKD is progressing toward Stage 4 or 5, your nephrologist may recommend creating an arteriovenous (AV) fistula — a surgical connection between an artery and a vein in your arm that creates a strong access point for hemodialysis. An AV fistula is considered the "gold standard" for dialysis access because it lasts longer, has fewer complications, and works more effectively than other types of access (such as grafts or catheters).

Timing is everything. An AV fistula needs **at least 2–3 months** to mature before it can be used for dialysis — and sometimes longer. That's why doctors recommend creating one well before you actually need to start treatment, ideally when your GFR drops below 20–25. Planning ahead gives your fistula time to develop, avoids the need for emergency catheter placement, and gives you more control over the timing of your dialysis start.

4L. Starting Dialysis — Myths & Realities

Myth: Dialysis means my life is over.

Reality: While dialysis is a significant commitment, many patients continue working, traveling, and enjoying hobbies. Home dialysis options (peritoneal dialysis or home hemodialysis) offer even greater flexibility and independence.

Myth: Dialysis is extremely painful.

Reality: Most patients report that dialysis itself is not painful. You may feel some discomfort from the needle insertion (with hemodialysis) or fullness (with peritoneal dialysis), but these sensations are manageable. Side effects like fatigue or low blood pressure are common but treatable.

Myth: Everyone on dialysis is waiting for a transplant.

Reality: Not everyone is a candidate for — or desires — a transplant. Some patients do very well on long-term dialysis and prefer it. The choice between dialysis and transplant is deeply personal and should be made with your care team.

Myth: You can't eat anything enjoyable on dialysis.

Reality: Dietary restrictions exist, but a skilled renal dietitian can help you create meal plans that are both kidney-friendly and delicious. Many favorite foods can be adapted with simple substitutions.

4M. Choosing Between Dialysis & Transplant

Dialysis

- **Hemodialysis:** Filters blood through a machine, typically 3 times/week for 3–5 hours. Can be done at a center or at home.
- **Peritoneal Dialysis:** Uses the lining of your abdomen to filter blood. Done daily at home, often overnight while you sleep.
- **Pros:** No surgery required to start (with catheter), widely available, no need for immunosuppressant drugs.
- **Cons:** Time-consuming, dietary and fluid restrictions, potential for fatigue and complications, ongoing for life (unless transplanted).

Kidney Transplant

- **Living donor:** A kidney from a healthy, compatible living person (family, friend, or altruistic donor). Best long-term outcomes.
- **Deceased donor:** A kidney from an organ donor who has passed away. Wait times vary by region (average 3–5 years).
- **Pros:** Better quality of life, fewer dietary restrictions, longer survival, freedom from dialysis schedule.
- **Cons:** Major surgery with recovery time, lifelong immunosuppressant medications, risk of organ rejection, not all patients are eligible.

4N–4O. Understanding CKD Complications

As CKD progresses, the kidneys' declining function can trigger a cascade of complications throughout the body. Being aware of these potential complications empowers you to work proactively with your healthcare team to prevent or manage them.

Cardiovascular Disease

CKD significantly increases the risk of heart attack, stroke, and heart failure. In fact, people with CKD are more likely to die from heart disease than from kidney failure itself. Blood pressure management and cholesterol control are critical.

Bone & Mineral Disorders

Failing kidneys can't properly balance calcium, phosphorus, and vitamin D, leading to weakened bones (renal osteodystrophy), calcification of blood vessels, and increased fracture risk.

Anemia

Healthy kidneys produce erythropoietin (EPO), which stimulates red blood cell production. As kidney function declines, EPO drops, leading to anemia — causing fatigue, weakness, shortness of breath, and difficulty concentrating.

Fluid Overload & Electrolyte Imbalances

When kidneys can't remove excess fluid or regulate electrolytes, swelling (edema), high potassium (hyperkalemia), and metabolic acidosis can develop — all of which can be life-threatening if unmanaged.

CKD Complications & Family Risk

SECTIONS 4P & 4Q

4P. CKD and Complications — A Deeper Look

The complications of chronic kidney disease extend far beyond the kidneys themselves. Because the kidneys interact with virtually every organ system, declining kidney function can affect your heart, bones, blood, nerves, immune system, and mental health. Understanding these connections helps you anticipate challenges and take preventive action.

Neuropathy: Uremia (buildup of waste products in the blood) can damage nerves, causing numbness, tingling, burning sensations, or weakness — especially in the hands and feet. **Immune suppression:** CKD weakens the immune system, making infections more common and potentially more severe. Vaccinations and hygiene become especially important. **Mental health:** Depression and anxiety are common among CKD patients. The emotional burden of living with a chronic illness, combined with physical symptoms like fatigue and dietary restrictions, can take a significant toll. Don't hesitate to seek counseling or join a support group — mental health is a vital part of kidney care.

4Q. Family Risk Awareness

If you've been diagnosed with CKD, one of the most loving things you can do is share that information with your family. Kidney disease often runs in families — not just through genetic conditions like PKD, but also through shared risk factors like diabetes, hypertension, and lifestyle habits.

01

Talk Openly

Share your diagnosis with immediate family members — parents, siblings, and children. Explain that kidney disease can be hereditary and that early detection dramatically improves outcomes.

02

Encourage Screening

Urge family members to get a simple blood test (GFR) and urine test (albumin) at their next doctor's visit, especially if they have diabetes, high blood pressure, or are over 50.

03

Adopt Family-Wide Healthy Habits

Reducing sodium, staying active, maintaining a healthy weight, and avoiding smoking benefits everyone — not just the person with CKD. Making it a family effort creates accountability and support.

04

Know Your Genetic Risk

If PKD or another genetic kidney condition has been diagnosed in your family, ask your doctor about genetic counseling and targeted screening for at-risk relatives, including children.

CKD Diet Basics

SECTION 4R

Diet is one of the most powerful tools you have for managing CKD and slowing its progression. What you eat directly affects the workload on your kidneys, your blood pressure, blood sugar, fluid balance, and electrolyte levels. A "kidney-friendly" or "renal" diet isn't about deprivation — it's about making smart, informed choices that protect your kidneys while still enjoying delicious, satisfying meals.

The specifics of your diet will depend on your CKD stage, lab results, and whether you're on dialysis. Always work with a renal dietitian who can personalize your plan. That said, here are the core principles that apply to most CKD patients:

Limit Sodium

Aim for less than 2,000 mg/day. Excess sodium raises blood pressure and causes fluid retention. Avoid processed foods, canned soups, deli meats, and fast food. Season with herbs, spices, lemon, and garlic instead of salt.

Monitor Potassium

Damaged kidneys can't efficiently remove potassium, and high levels can cause dangerous heart rhythms. Your dietitian will guide you on whether to limit high-potassium foods like bananas, oranges, potatoes, and tomatoes.

Control Phosphorus

Excess phosphorus pulls calcium from bones and causes calcification of blood vessels. Limit dairy, nuts, cola, processed meats, and foods with phosphate additives. Phosphorus binders may be prescribed.

Manage Protein

In early CKD, moderating protein intake reduces kidney workload. On dialysis, protein needs actually *increase* to replace what's lost during treatment. Your dietitian will tailor your protein goals to your stage.

4S. Smoking & Alcohol

🚬 Smoking & Your Kidneys

Smoking is one of the most damaging things you can do to your kidneys. It constricts blood vessels, reducing blood flow to the kidneys and accelerating their decline. Smokers with CKD progress to kidney failure significantly faster than nonsmokers. Smoking also dramatically increases the risk of cardiovascular disease — already the leading cause of death in CKD patients. **Quitting at any stage provides measurable benefits.** Ask your doctor about smoking cessation programs, nicotine replacement therapy, or prescription medications that can help.

🍷 Alcohol & Your Kidneys

Moderate alcohol consumption (up to 1 drink/day for women, 2 for men) has not been shown to directly cause CKD in most people. However, excessive drinking can cause acute kidney damage, raise blood pressure, interfere with medications, contribute to dehydration, and worsen liver disease — which in turn harms the kidneys. If you have CKD, discuss alcohol with your doctor. Some medications used to treat kidney disease interact poorly with alcohol, and your fluid intake may already be restricted.

4T. Obesity & Kidney Disease

Obesity is an independent risk factor for developing CKD and for accelerating its progression. Excess body weight forces the kidneys to work harder (a condition called hyperfiltration), increases the risk of diabetes and hypertension, promotes chronic inflammation, and contributes to glomerular damage. Studies show that even modest weight loss — as little as 5–10% of body weight — can significantly improve kidney function markers, lower blood pressure, and reduce proteinuria. A combination of dietary changes, regular physical activity, and behavioral support offers the best results. For patients with severe obesity, bariatric surgery has been shown to improve kidney outcomes in some cases.

Safe & Unsafe Foods for CKD

SECTIONS 4U – 4Y

One of the most common questions from newly diagnosed CKD patients is: *"What can I eat?"* The answer is more encouraging than you might expect. A kidney-friendly diet doesn't mean eating bland or boring food — it means making informed choices about which foods to enjoy freely, which to eat in moderation, and which to avoid or limit. Below is a practical reference guide organized by category.

Generally Safe Foods

Fruits	Apples, berries (blueberries, strawberries, raspberries, cranberries), grapes (red and green), pineapple, cherries, plums, watermelon (small portions)
Vegetables	Cabbage, cauliflower, bell peppers, onions, garlic, radishes, lettuce, cucumbers, zucchini, eggplant, green beans (small portions)
Proteins	Skinless chicken, fish (salmon, tuna in moderation), egg whites, small portions of lean beef or pork
Grains	White rice, white bread, pasta, unsalted crackers, couscous
Fats	Olive oil, canola oil, unsalted butter (small amounts)

Foods to Limit or Avoid

High Potassium	Bananas, oranges, potatoes, tomatoes, avocados, spinach, sweet potatoes, dried fruits, coconut water
High Phosphorus	Dairy (milk, cheese, yogurt), nuts and seeds, cola/dark sodas, processed meats, bran cereals, chocolate
High Sodium	Canned soups, deli/lunch meats, pickles, soy sauce, fast food, frozen dinners, salted snacks, condiments (ketchup, BBQ sauce)
High Protein (early CKD)	Red meat (large portions), organ meats, protein shakes/bars (unless recommended by dietitian)

Remember: "Safe" and "unsafe" depend on your *individual* lab values, CKD stage, and whether you're on dialysis. A food that's restricted for one patient may be fine for another. Always consult your renal dietitian for personalized guidance.

Special Diet Topics

SECTIONS 4Z – 4NEXT 4

4Z. Can I Eat Grapes with CKD?

Yes — grapes are generally considered a kidney-friendly fruit. Both red and green grapes are low in potassium and phosphorus, making them a safe and nutritious snack for most CKD patients. Red grapes, in particular, contain resveratrol — a polyphenol antioxidant with anti-inflammatory properties that may benefit cardiovascular health. A half-cup serving of grapes contains roughly 100 mg of potassium, which is well within safe limits for most patients. That said, dried grapes (raisins) are a different story — the drying process concentrates potassium significantly, so raisins should be limited or avoided. As always, check with your dietitian, especially if your potassium levels are elevated.

Juices to Avoid with CKD

Many fruit juices — often perceived as "healthy" — are surprisingly high in potassium, phosphorus, and sugar, all of which can be problematic for CKD patients. Concentrated juices deliver much higher doses of these nutrients than eating the whole fruit would.

Orange Juice

Extremely high in potassium (~450 mg per cup). One of the most commonly recommended juices to avoid in CKD. Even "not from concentrate" versions are problematic.

Tomato Juice

Very high in both potassium and sodium (~530 mg potassium, 600+ mg sodium per cup). A double threat for CKD patients managing both electrolytes.

Prune Juice

Extremely high in potassium (~700 mg per cup). Often used as a natural laxative, but CKD patients should use alternatives recommended by their doctor.

Coconut Water

Marketed as a hydration drink, but packed with potassium (~600 mg per cup). Dangerous for CKD patients with hyperkalemia. Avoid entirely unless approved by your doctor.

Safer alternatives: Apple juice (low potassium), cranberry juice (unsweetened — also supports urinary tract health), grape juice (in moderation), and lemonade made with fresh lemons are generally better choices.

High-Potassium Vegetables to Watch

Vegetables are a cornerstone of a healthy diet, but some are packed with potassium that compromised kidneys may struggle to excrete. If your labs show elevated potassium, these are the vegetables to limit or prepare with special techniques (such as leaching — soaking chopped vegetables in water for 2+ hours to reduce potassium content).

Potatoes & Sweet Potatoes

Among the highest-potassium vegetables (~900 mg per medium potato). Leaching and double-boiling can reduce potassium by up to 50%, making small portions more manageable.

Tomatoes & Tomato Products

Fresh tomatoes are moderate, but concentrated products (sauce, paste, ketchup, sun-dried) have very high potassium. Limit portion sizes and frequency.

Spinach, Beet Greens & Swiss Chard

Dark leafy greens are nutritional powerhouses but also potassium-dense. Boiling (rather than eating raw or steaming) reduces potassium content. Consider lower-potassium greens like lettuce, arugula, or kale in moderation.

Avocado

Although heart-healthy, one avocado contains ~700 mg of potassium. Even a quarter of an avocado has more potassium than many CKD patients should have in a single serving.

Salt in CKD

Sodium (salt) management is arguably the most impactful dietary change for CKD patients. Excess sodium causes your body to retain water, raising blood pressure, increasing the workload on your kidneys, and worsening swelling (edema). The recommended limit for most CKD patients is **less than 2,000 mg of sodium per day** — roughly less than one teaspoon of table salt.

Practical tips for reducing sodium: Read nutrition labels carefully — sodium hides in unexpected places. Cook at home more often, where you control ingredients. Use herbs, spices, citrus, and vinegar for flavor. Rinse canned vegetables and beans before eating. Choose "no salt added" or "low sodium" versions of canned goods. Avoid restaurant and fast food, which is typically very high in sodium. Ask your dietitian about salt substitutes — some contain potassium chloride, which may be dangerous for CKD patients.

Fluid Guidelines

In early CKD, most patients don't need to restrict fluids and should drink water normally to stay hydrated. However, as kidney disease advances — particularly in Stage 4, Stage 5, or while on dialysis — the kidneys lose their ability to remove excess fluid. This can lead to dangerous fluid overload: swelling in the legs, hands, and face; shortness of breath; high blood pressure; and strain on the heart.

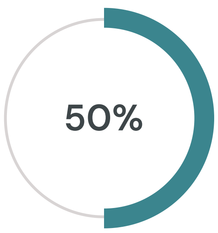
Your doctor may prescribe a specific fluid limit (often 32–48 ounces per day, but highly individual). Remember that "fluids" include not just water, but coffee, tea, juice, soup, ice cream, gelatin, and even certain fruits with high water content. Tips for managing thirst on a fluid restriction include sucking on ice chips (which are measured as half the volume of the ice), chewing sugar-free gum, rinsing your mouth with cold water without swallowing, and keeping sodium intake low (salt makes you thirsty).

Daily Sodium Target

Maximum sodium for most CKD patients — about 1 teaspoon of salt

Common Fluid Limit

Typical daily fluid allowance for advanced CKD or dialysis patients

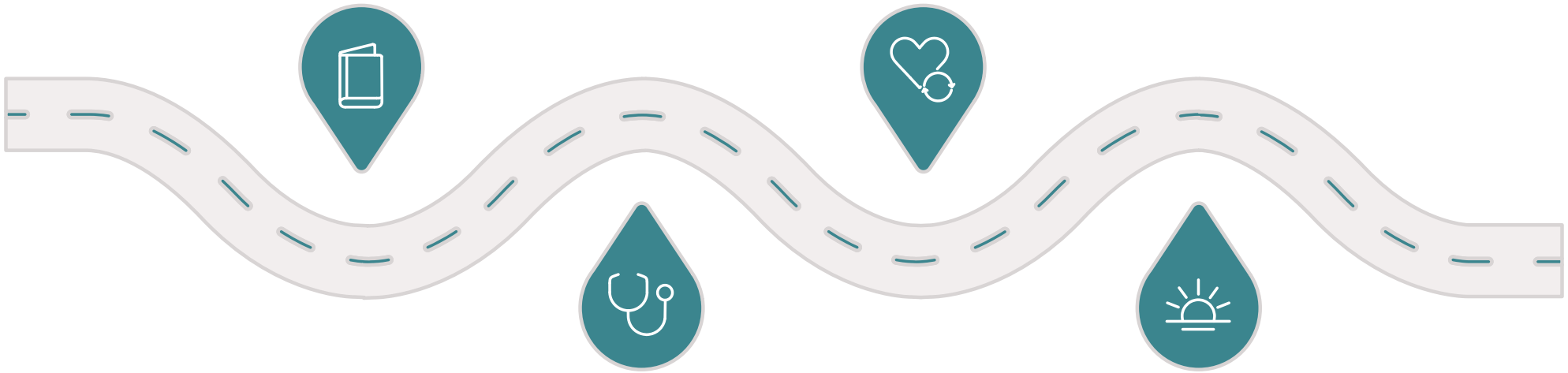


Potassium Reduction

Amount potassium can be reduced by leaching high-K vegetables in water

Your Kidney Health Journey Starts Here

Knowledge is the foundation of empowerment. Whether you're exploring this resource out of curiosity, concern, or a new diagnosis, you've already taken one of the most important steps: choosing to learn. Kidney disease can feel isolating, but you are far from alone — millions of people are navigating this same path, and a wealth of medical expertise, community support, and practical tools exist to help you thrive.



Remember the core principles: get screened if you're at risk, work closely with your healthcare team, follow a kidney-friendly diet tailored to your stage, manage blood pressure and blood sugar, stay active, and don't neglect your mental health. Early detection and proactive management can change the course of kidney disease — giving you more time, more energy, and more life.

> You are not defined by your diagnosis. With the right knowledge, support, and care, you can live a rich and fulfilling life — and we're here to help you every step of the way.