

# Chronic Kidney Disease, Dialysis, and Keeping Fit

A Practical Guide



NATIONAL KIDNEY  
FOUNDATION®



Join our free  
**ONLINE KIDNEY  
COMMUNITIES**



NATIONAL **KIDNEY**  
FOUNDATION®

**You're not alone.** Get support and hear from others who have experience with dialysis, transplant, living donation, and being a parent or care partner—you never know when you'll inspire someone else!

Join today at

[kidney.org/online-communities](https://www.kidney.org/online-communities)



# Contents

The Importance of Exercise . . . . .	5
Before You Start. . . . .	6
Types of Exercise . . . . .	8
Making an Exercise Plan . . . . .	10
Patients on Dialysis and Exercise . . . . .	11
Exercise After Kidney Transplant . . . . .	15
Nutrition and Hydration. . . . .	17
Staying Safe While Exercising. . . . .	19
Tracking Progress and Staying Motivated . . . . .	22
We are Here to Help . . . . .	24



Chronic kidney disease (CKD) is a long-term condition that affects the kidneys' ability to function effectively. Over time, CKD can lead to a range of health issues, including high blood pressure, anemia, and bone health problems. The disease often progresses silently, making it crucial to manage it proactively.

Exercise is important because it can improve some common health issues people with CKD face. Physical activity can help control blood pressure, improve muscle function, and enhance overall well-being. A simple 20-minute walk daily can make a big difference in your health.

## The Importance of Exercise

Exercise isn't just for those who are already fit; it's an important part of helping to manage chronic diseases, including CKD. Doing regular exercise is good for you in a number of ways. It's not just about getting stronger; it also helps you feel better emotionally and may also slow down the progression of CKD. *Here's how:*

### Physical Benefits

Exercise is good for your body in many ways. It can strengthen your heart, help you build muscle, and give you more energy. Many people with CKD often feel tired and notice their muscles getting weaker. Exercise can help turn this around, making you feel more energetic and stronger.

### Psychological Benefits

Regular exercise can also lift your spirits and help you feel less stressed or down. Many people with long-term health issues like CKD often feel anxious or sad, and exercise can make a big difference in improving these feelings.

Plus, when you see what your body can achieve, it boosts your self-confidence. If you join a group for exercise, like a walking group or a fitness class, you also get the chance to meet new people and make friends, which can make you feel even better.

## How Exercise Can Help

Exercise can make a big difference in slowing down the effects of CKD. It can help keep your blood pressure in a healthy range and make sure your body uses sugar properly.

This is really good for your kidneys. Plus, if you have other health problems like diabetes or heart issues, which many people with CKD do, exercise can help manage those too.

## Before You Start

### Talk to Your Doctor

Before you start any kind of exercise program, it's really important to talk to your doctor. Exercise may have an effect on how certain medicines work and other parts of your treatment. Some people have even needed to change their medicines to fit better with their new exercise routine.

### Check-Ups You Might Need

Your doctor might want to do tests like blood work or heart checks to see how fit you are and what kind of exercise is safe for you. These tests give you and your doctor a starting point to make an exercise plan just for you.







### **Make a Plan You Can Stick To**

After you've talked to your doctor and maybe had some tests, the next step is to make a plan. Choose goals that you can really achieve. It could be as simple as walking for 20 minutes a day or going to a yoga class once a week. When you set goals you can reach, you're more likely to stick with your exercise routine.



## Types of Exercise

When it comes to exercise, variety is key. Mixing up your routine with stretching, strength training, and cardiovascular activities can offer a well-rounded approach to fitness. This is especially helpful for people with conditions such as muscle stiffness or high blood pressure. Use this guide to help you choose the right mix of activities.

 <b>EXERCISE</b>	 <b>BENEFITS</b>	 <b>EXAMPLES</b>	 <b>TIPS</b>
Flexibility	Improve joint mobility	Stretching, Yoga	Avoid overstretching
Strength Training	Build muscle mass	Weightlifting, Resistance bands	Start with lighter weights
Cardiovascular	Improve heart health	Walking, Cycling	Monitor heart rate





## Stretching and Bending

Stretching and yoga are great for making your joints move more easily and loosening stiff muscles. This is really good for people with CKD, who might get muscle cramps or feel stiff.

Try doing 10 minutes of stretching and bending before and after you do any harder exercises to make your workout even better.

## Building Muscle

Lifting light weights or using resistance bands helps build muscle and make your bones stronger. This is especially important for people with CKD, who might notice their muscles getting weaker. Just make sure to start with lighter weights and slowly work your way up to avoid hurting yourself.

## Get Your Heart Pumping

Walking, biking, and swimming are all good for your heart and can give you more energy. These are also good for helping to keep your blood pressure in check. Starting with a 30-minute walk, three times a week is a good way to get started.

## Making an Exercise Plan

Creating a workout plan is a great first step. It's important to set up a daily exercise plan, figure out how much exercise you need every week, and understand why rest days are important.

## Setting Up a Routine

Having a regular exercise schedule can help you get the most out of being active. You may think about doing different exercises at different times of the day.

For example, you could stretch in the morning, lift some light weights in the afternoon, and take a walk in the evening.



## How Often and for How Long

Most experts say you should aim for about 150 minutes of heart-pumping exercise each week. You can break this down in different ways to best fit your schedule. For example, you could do five 30-minute workouts or three longer ones that last about 50 minutes each.

## Taking Breaks

Don't forget! Rest days are just as important as the days you exercise. Your muscles need time to recover so you don't get hurt. Make sure to take at least one or two days off each week to rest and recover.

## Patients on Dialysis and Exercise

People on dialysis who exercise regularly report they sleep better, have more energy and more muscle strength, and are better able to do the things they need to do in their lives.

## Exercise Timing for People on Dialysis

Timing your exercise around your dialysis sessions is important for avoiding fatigue and muscle cramps. It's usually best to avoid working out right before or after your dialysis session.

Some people find that exercising on non-dialysis days or at least 3 to 4 hours before or after a session works best for them. Some helpful tips include:

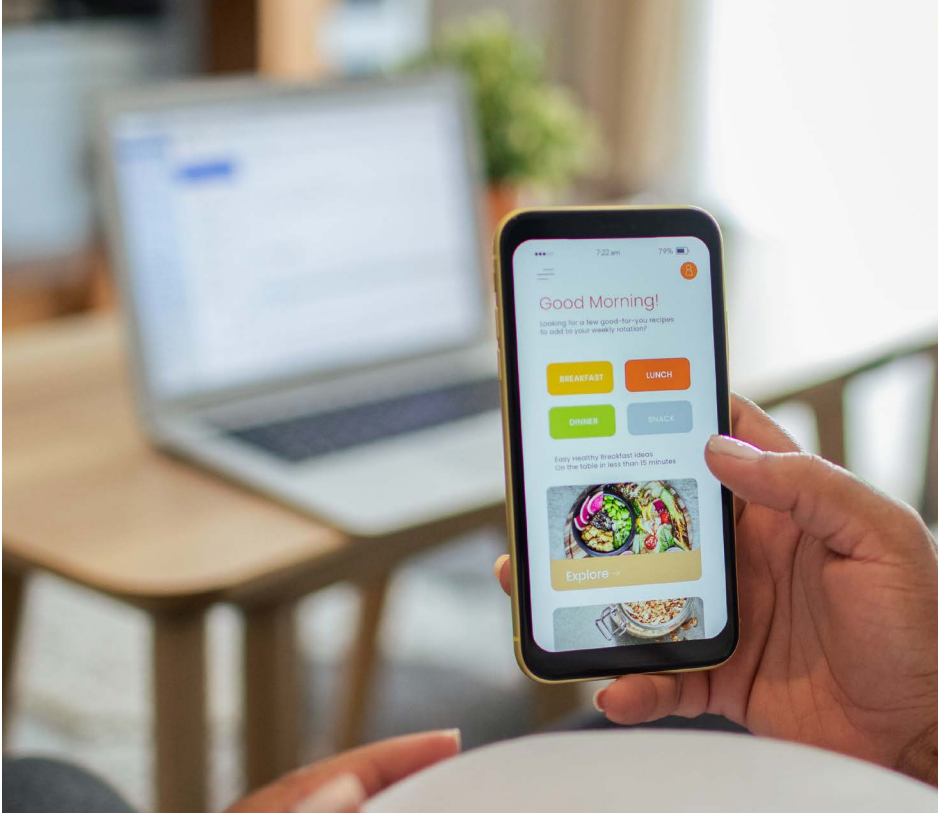
- Be careful about exercising right after hemodialysis, as it may lower your blood pressure too much.

- If you want to do weight or resistance training, you should check with your dialysis team before starting, since people on:
  - » Hemodialysis should avoid any stress on your fistula or graft arm.
  - » Peritoneal dialysis need to make sure that your catheter stays securely in place.
- Ask your hemodialysis team about exercise with a minibike or any other exercises that can be done during treatments.
- If you are on peritoneal dialysis, you might be more comfortable exercising on an empty stomach.
- Skip exercise if you've missed a dialysis session and have extra fluid.

### **Choose Low-Impact Exercises**

People on dialysis often find that low-impact exercises are the most comfortable. Swimming and cycling are good choices because they're easier on your joints but still give you a solid workout. Water aerobics is another good choice that is easy on the joints and can improve strength and flexibility.

If you are on peritoneal dialysis and would like to swim, talk to your dialysis team about how to protect your exit site and which kinds of water are safe to swim in.



## Keeping Track of Your Health

It's really important to keep a close eye on how you're doing if you're on dialysis and starting to exercise. Your healthcare team should know about your exercise plans and may need to check your blood pressure, heart rate, and your dialysis prescription more often.

This makes sure that the exercise you choose is both good for you and doesn't cause any problems with your dialysis treatment.



## **Talk to Your Kidney Dietitian**

Dialysis and exercise both have an impact on the nutrients in your body. Dialysis can remove some important nutrients, while exercise uses up energy and can affect things like your blood sugar and electrolyte levels. Sweating may also affect how much fluid you need.

That's why it's a good idea to talk to a kidney dietitian. They can tell you which foods to eat and how much fluid to drink to keep everything well-balanced.

This is especially important if you're planning to exercise more, as you'll need the right fuel and fluid to keep you healthy and help your body recover well afterward.

A dietitian can also help you adjust your meal timing around your exercise and dialysis schedules for the best results.

## Listen to Your Body

Everyone's different, so what works for one person might not work well for you. Pay attention to how you feel during and after exercise.

If something doesn't feel right, it's important to stop and talk to your healthcare provider.

## Exercise After Kidney Transplant

After a kidney transplant, staying active is still important for keeping healthy. However, there are some special things to think about:

- **Talk to Your Healthcare Team:** Talk to your healthcare provider before starting or changing your exercise routine. They can help you understand how your medications and new kidney will react to physical activity.
- **Start Slow:** Your body has been through a lot. Start with low-impact exercises and gradually build up your strength.
- **Be Mindful of Surgical Sites:** In the early months after a kidney transplant, avoid exercises that put pressure on or involve the surgical area.
- **Monitor for Symptoms:** Pay close attention to how you feel during and after exercise. If you notice anything unusual, contact your healthcare provider immediately.



- **Nutrition and Hydration:** Your nutritional needs may be different post-transplant. Talk to your healthcare provider or a kidney dietitian about choosing foods and fluids that are best for you, especially when you are exercising.

By paying attention to these important tips, you can exercise in a way that's safe for you and also helps your new kidney work well for a long time.



## **Nutrition and Hydration**

Eating well and staying hydrated are important parts of an effective exercise routine. Here are some tips to help you make good choices before, during, and after your workouts.

### **Plan Your Pre-exercise Meal**

Eating the right foods before you exercise can give you the energy you need to get through your workout.

Try to eat a well-balanced meal about 1 to 2 hours before you start exercising. A meal with plenty of carbohydrates, a moderate amount of protein, and low fat is a good choice. For example, a sandwich made with whole-grain bread and lean meat, along with a side of fruit.

### **Stay Well-hydrated**

Hydration is super important, especially for people with CKD who may have limits on how much fluid they can have. Always check with your healthcare provider to find out how much you should be drinking when you exercise. A small glass of water before and after your workout is usually a good idea, but your doctor can give you personalized advice.



## **Eating After Exercise**

Once you've finished your workout, it's important to eat something to help your body recover. Your muscles need protein to repair themselves, and you'll need carbohydrates to regain your energy. A low-sugar protein shake or a bowl of whole-grain cereal with skim milk are usually good options.

## **Timing Matters**

The timing of your meals and hydration can also affect how well you perform and recover. Eating too close to your workout can make you feel sluggish, while not eating enough can leave you feeling weak. Similarly, drinking too much water can make you feel bloated, while not enough can lead to dehydration. Work with your healthcare provider to find the right balance for you.

## Special Foods and Supplements

Some people consider using special sports drinks, nutrition bars, or dietary supplements such as vitamins and minerals to enhance their exercise performance and recovery. However, these products often contain added sugars, electrolytes, or other compounds that may not be best for people with CKD. Before using any products, check with your healthcare provider to make sure it's right for you.

## Staying Safe While Exercising

Safety is a top priority when exercising, especially for people with certain health conditions. Here are some guidelines to help you exercise safely and recognize warning signs.

## Warm-Up and Cool-Down

Starting and finishing your workout the right way can make a big difference. A 5- to 10-minute warm-up, like a brisk walk, gets your body ready. After your workout, take another 5 to 10 minutes to cool down with some easy stretches. This helps your muscles relax, and your heart rate returns to normal.

## Listen to Your Body

Being in tune with your body is key to a safe and effective workout. While exercise should challenge you, it shouldn't cause pain or extreme discomfort. Here are some things watch for:

- **Breathing:** It's normal to breathe faster when you exercise, but you should still be able to talk. If you're gasping for air, it's a sign to slow down.
- **Muscle Sensations:** A mild burn in your muscles is a good sign they're being worked, but sharp, sudden pain is a red flag.
- **Energy Levels:** Feeling tired is part of exercising, but there's a difference between workout fatigue and extreme exhaustion. If you feel like you can't go on, it's time to stop.
- **Mental State:** Exercise often boosts mood, but if you feel irritable, agitated, or mentally drained, consider winding down your session.
- **Heart Rate:** While it's normal for your heart rate to increase, it shouldn't feel like your heart is pounding. You may find it helpful to use a monitor to keep track of your heart rate.

If you start to feel something's not right, like you're too tired or hurting, it's a good idea to stop exercising right away. Take a break, drink water, and see if you feel better.



## Getting Medical Attention

Being aware of how you feel during exercise is key to your safety. If you notice any of the following symptoms, it's important to stop exercising immediately:

- Shortness of breath
- Chest pain or pressure
- Extreme tiredness
- Dizziness or lightheadedness
- Sudden headache
- Nausea or vomiting

These symptoms could be warning signs that something isn't right. If you experience any of them, stop your exercise session and consult your healthcare provider immediately. It's better to be cautious and get professional advice than to risk a serious health issue.



## Tracking Progress and Staying Motivated

Keeping track of your progress and setting achievable goals are key to sticking with your exercise plan. Here are some tips to help you meet your goals.

### Monitoring Tools

Tools like fitness trackers or exercise logs can help you monitor your progress. These tools can provide useful information, such as your heart rate, how many calories you've burned, and even how well you're sleeping. This data can help you fine-tune your exercise routine for better results.

### Set Achievable Goals

Small wins can lead to big victories. Setting manageable goals, like walking an extra 500 steps each day or adding a little more weight to your strength exercises, can keep you focused and motivated. These goals give you something to aim for and a good reason to keep exercising.

### Celebrate Every Win

Every milestone, no matter how big or small, is worth celebrating. Treat yourself when you reach a goal. It could be something simple like a favorite snack or something bigger like new workout gear. Rewards make the journey more fun and help keep your motivation high.





## Exercise Makes a Difference in Kidney Health

- Exercise isn't just about breaking a sweat; it's a big part of taking better care of your kidneys and improving how you feel day-to-day. With the right advice from your healthcare team and a workout plan that fits you well, you can get a lot of benefits:
- **Better Health Numbers:** Regular exercise can help with things like high blood pressure and sugar levels, and it may even slow your disease from getting worse.
- **Mental Boost:** Being active can help lift your spirits and make you feel less stressed or sad.
- **Meet People and Have Fun:** Being active can also be fun. Whether you're walking with a group or going to a fitness class, being around people can help keep you going.
- **Feel Good About Yourself:** Hitting even small exercise goals can make you feel proud and keep you motivated.

So, start by talking to your healthcare provider, set realistic, achievable goals, and start on your journey to a healthier you. Exercise is more than a good habit; it's a choice that can really improve your life.

## We are Here to Help

There are two ways to learn about the many free resources available to you:

Call the National Kidney Foundation Cares Patient Help Line toll-free at **855.NKF.CARES** (855.653.2273) or email **[nkfcares@kidney.org](mailto:nkfcares@kidney.org)**

Learn more at **[kidney.org](https://www.kidney.org)**

### **NKF PEERS**

Connect with a trained peer mentor who can share their experiences about dialysis, transplant, or living kidney donation with you.

Call **855.NKF.PEER** (855.653.7337) or go online **[kidney.org/patients/peers](https://www.kidney.org/patients/peers)**

## Setting a Standard for Care

The National Kidney Foundation, through its *Kidney Disease Outcomes Quality Initiative (KDOQI®)*, defines stages of kidney disease and offers guidelines that help your doctor and healthcare team make important decisions about your medical treatment.

The information in this booklet is based on those recommended guidelines.



*The information contained in this publication is based on current data and expert guidance available at the time of publication. The information is intended to help patients become aware of their disease and its management. This publication is not intended to set out a preferred standard of care and should not be construed as one. Neither should the information be interpreted as prescribing an exclusive course of management. Patients should always consult with their healthcare providers regarding decisions about their individual plan of care.*



# NATIONAL KIDNEY FOUNDATION®

The National Kidney Foundation is revolutionizing the fight to save lives by eliminating preventable kidney disease, accelerating innovation for the dignity of the patient experience, and dismantling structural inequities in kidney care, dialysis, and transplantation.

30 E. 33RD ST. | NEW YORK, NY 10016 | 800.622.9010

**KIDNEY.ORG**

