QUALITY OF LIFE WITH DIABETES AND CHRONIC KIDNEY DISEASE

National Kidney Foundation™

www.kidney.org

National Kidney Foundation's Kidney Disease Outcomes Quality Initiative

Did you know that the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative (NKF-KDOQI™) offers guidelines and commentaries 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.

Stages of Kidney Disease

There are 5 stages of kidney disease. They are shown in the table below. Your doctor determines your stage of kidney disease based on the presence of kidney damage and your glomerular filtration rate (GFR), which is a measure of your level of kidney function. Your treatment is based on your stage of kidney disease. Speak to your doctor if you have any questions about your stage of kidney disease or your treatment.

STAGES OF KIDNEY DISEASE

Stage	Description	Glomerular Filtration Rate (GFR)*
1	Kidney damage (e.g., protein in the urine) with normal GFR	90 or above
2	Kidney damage with mild decrease in GFR	60 to 89
3	Moderate decrease in GFR	30 to 59
4	Severe reduction in GFR	15 to 29
5	Kidney failure	Less than 15

*Your GFR number tells your doctor how much kidney function you have. As chronic kidney disease progresses, your GFR number decreases.

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More than 30 million Americans have diabetes and require a lifetime of treatment. You are not alone. Diabetes is a complex and very personal disease. The challenges of daily self-management are difficult but the benefits are real.

- **Knowledge and awareness** are at the heart of good diabetes self-management.
- **Self-empowerment** is the key to success. A positive approach can help you feel better and reduce your risk for complications.

Diabetes educators provide the support you need. They are healthcare professionals—nurses, dietitians, pharmacists, doctors (family practitioners, internists, endocrinologists), exercise physiologists, podiatrists, social workers—who specialize in the care and education of people with diabetes.

- The **AADE** (American Association of Diabetes Educators) **recommend 7 Self-Care Behaviors** to adopt:
  - **Healthy eating**
  - **Monitoring**
  - **Taking medication**
  - **Reducing risks**
  - **Being active**
  - **Problem-solving**
  - **Healthy coping**

Blood sugar control is important. Your A1C test tells you what your average blood sugar has been for the past 2-3 months. Keeping your A1C number at the level your doctor recommends will help get diabetes under control—and help keep it under control.

Diabetes is a progressive disease

- How you took care of your diabetes 10 years ago is different from how you should be taking care of it today. Diabetes care has changed over the past 10 years. The dose of medication you have been taking in the past may not be correct today.
- You are not on one therapy forever. Education, screenings and checkups are important and help determine which therapy is most beneficial for you.

How does diabetes affect the body?

- High blood sugar levels can damage parts of your body, especially the kidneys, heart, eyes and nerves.
- High blood pressure and hardening of the arteries also develop from diabetes.

How does diabetes affect the kidneys?

- Diabetes may damage blood vessels in the kidneys, causing kidney damage, a decrease in kidney function and a buildup of waste products in your blood. There are other causes of kidney damage that are related to several factors, including changes in blood circulation within the kidneys. The changes that occur in the kidneys affect blood pressure and the blood vessels, and lead to the presence of protein in the urine.
- Diabetes can also cause damage to nerves in your body, making it hard to empty your bladder. The pressure caused by this may injure the kidneys or cause infection.

Diabetes is the leading cause of chronic kidney disease

Approximately **one third of people with diabetes develop kidney disease**. Diabetes is the most common cause of kidney failure. It affects people with both type 1 and type 2 diabetes. At least 50 percent of people with type 1 diabetes will get kidney damage (early stages of kidney disease)—of that 50 percent, one third will get severe kidney disease and kidney failure.

Certain population groups, such as African Americans, Hispanics and American Indians, have a higher risk of developing kidney failure from type 2 diabetes than Caucasians.

Not everyone with diabetes gets kidney disease.

1. Getting treatment for your diabetes and doing all you can to self-manage your diabetes may help prevent kidney disease or keep it from getting worse.

2. High blood pressure is one of the major factors that puts people with diabetes at risk for kidney disease. Keeping your blood pressure at the level your doctor suggests can help prevent kidney disease or keep it from getting worse.

3. Routine screening for kidney disease is important because early detection and treatment of kidney disease may prevent or limit the progression to kidney failure.

What is chronic kidney disease (CKD)?

Chronic kidney disease is having kidney damage (most commonly "spilling" protein into the urine) and/or having decreased kidney function that can become life threatening over time (see **Stages of CKD** on page 2). In chronic kidney disease, blood pressure often rises as well.

Testing for kidney disease

Signs of kidney disease are not always noticed by those who have them. It is important for people with diabetes to have yearly testing for kidney disease. If you have diabetes, high blood pressure or a family member with kidney failure, you should talk to your doctor about being tested. There are two simple tests for kidney disease.

1. **Urine test**. A simple urine test that looks for very small amounts of protein can detect early kidney disease. Protein in urine is a sign that the kidneys are damaged. This test is especially important if you are at increased risk for kidney disease because of diabetes, high blood pressure or a family history of these conditions.

2. **Blood test to estimate GFR (glomerular filtration rate)**. GFR estimates your kidney's filtration based on a simple blood test for a waste product called creatinine. A GFR calculator is available on the NKF Website at **www.kidney.org/gfr**

Knowledge and awareness of your risk for developing chronic kidney disease (CKD)

Proper care and self-management has been shown to slow the progression of kidney disease. **Blood glucose control** in people with diabetes slows the development and progression of chronic kidney disease. **Maintaining blood pressure** at a level recommended by your doctor can also slow the progression of chronic kidney disease.

In addition to regular testing for kidney disease, people with diabetes can look for signs of chronic kidney disease. (See chart below.)

EARLY SIGNS OF CKD	**LATE** SIGNS OF CKD
Protein in urine	Ankle and leg swelling, leg cramps
High blood pressure	Less insulin or diabetic medicine needed
	Weakness, paleness, anemia (low red blood cell count)
	Itching
	Nausea, vomiting
	Decrease in GFR rate

Partnering with your diabetes educator

People with diabetes and kidney disease need to see their diabetes educator **at least yearly** for monitoring, education and support. Ongoing checkups and follow-ups are important to prevent disease progression and detect early signs of disease complications.

- Establish your own **self-care behaviors**, set goals and schedule follow-up dates (see the **AADE 7 Self-Care Behaviors** on page 5).
- **If you are over 65**, your Medicare benefit provides for an initial visit of three hours with a dietitian, two hours with a diabetes educator and 10 hours of Diabetes Self-Management Training (DSMT). Be aware that **you must ask for a referral** from your doctor for every yearly visit.

Resources from the National Kidney Foundation

Are You At Increased Risk for Chronic Kidney Disease? [Order# 11-10-1814]

High Blood Pressure and Chronic Kidney Disease (Stages 1-4) [Order# 11-10-0204]

What You Need to Know About Urinalysis [Order# 11-10-1815]

GFR (Glomerular Filtration Rate): A Key to Understanding How Well Your Kidneys Are Working [Order# 11-10-1813]

Warning Signs of Kidney and Urinary Tract Disease [Order# 11-10-0203]

About Chronic Kidney Disease: A Guide for Patients and Their Families [Order# 11-50-0160]

What You Need to Know When You Have Chronic Kidney Disease [Order# 11-50-0132]

For a free copy of these publications call the NKF Cares Patient Help Line toll-free at **855.NKF.CARES** (855.653.2273) or email **nkfcares@kidney.org**

Learn more at **www.kidney.org**

YOUR HEALTHCARE TEAM

Diabetes educator:

name: _____

phone: _____

Primary care doctor:

name: _____

phone: _____

Heart doctor:

name: _____

phone: _____

Kidney doctor:

name: _____

phone: _____

Eye doctor:

name: _____

phone: _____

Foot doctor:

name: _____

phone: _____

TRACKING YOUR RESULTS

A1C (blood sugar):

baseline: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

Blood pressure:

baseline: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

TRACKING YOUR RESULTS

Total cholesterol:

baseline: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

HDL cholesterol:

baseline: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

TRACKING YOUR RESULTS

LDL cholesterol:

baseline: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

GFR (glomerular filtration rate):

baseline: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

TRACKING YOUR RESULTS

Albuminuria (protein in urine):

baseline: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

date: _____

result: _____

Notes

The **National Kidney Foundation** is the leading organization in the U.S. dedicated to the awareness, prevention, and treatment of kidney disease for hundreds of thousands of healthcare professionals, millions of patients and their families, and tens of millions of Americans at risk.

Help fight kidney disease.
Learn more at **www.kidney.org**

National
Kidney
Foundation™

30 East 33rd Street
New York, NY 10016
800.622.9010

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Awareness. Prevention. Treatment.