


YOUR JOURNAL

Chronic Kidney Disease

A man wearing a red jacket, blue jeans, and a light-colored cap is working on a metal structure, possibly a roof or a large piece of machinery. He is holding a yellow measuring tape and looking down at his work. The background is a clear blue sky.

**A personal journal
and useful guide
to help you better
understand and
cope effectively with
Chronic Kidney Disease.**

UNDERSTANDING CHRONIC KIDNEY DISEASE

Chronic Kidney Disease (CKD) develops when the kidneys lose their ability to remove waste and balance fluids and minerals in the body. Kidney disease can develop quickly or it can develop slowly. About twenty million Americans have chronic kidney disease. Most don't even know they have it and the disease progresses slowly over a long period of time. That's why early detection is so important. If detected early, CKD can be slowed down or even stopped.

Cause

The causes of **chronic kidney disease** are not always known. However, the two main causes are diabetes and high blood pressure (hypertension). Diabetes is the most common cause of CKD in the United States, resulting in more than one-third of new cases. Even when medications and diet are able to control diabetes, the disease can cause damage to many organs, including the kidneys and heart.

High blood pressure is the second main cause of chronic kidney disease. Most people with high blood pressure do not have any symptoms. The only way to know if your blood pressure is high is to have it measured by a doctor.

High blood pressure makes the heart work harder and, over time, can damage blood vessels in the body, including the kidneys. If the blood vessels in the kidneys are damaged, they may stop doing their job of removing wastes and extra fluid from the blood. The extra fluid may then raise blood pressure even more.

Symptoms

Some people with **chronic kidney disease** do not have any symptoms. However, some may have:

- Fatigue
- Nausea or vomiting
- Loss of appetite
- Frequent headaches
- Sleep problems
- Swelling or numbness of the hands and feet
- Frequent urination or urinary retention
- Itchy skin
- Muscle cramps
- Darkening of the skin

Chronic kidney disease is a progressive disease. If the disease progresses, symptoms may occur more frequently or become more severe.

Diagnosis

Doctors will estimate the level of kidney function based on your glomerular filtration rate, or GFR. Glomerular filtration rate is the process by which the kidneys filter the blood, remove excess waste and fluid. This is the best way to know how much kidney function you have. This is a simple calculation that is done by a blood test and it tells the doctor your stage of kidney disease. Any person with kidney disease, or at risk for kidney disease should know their GFR number.

In addition an ultrasound may be needed to measure the size of the kidneys, blood flow to the kidneys, and determine whether urine flow is blocked. In some cases, a kidney biopsy may be done to determine the cause of **chronic kidney disease**.

Stages of Chronic Kidney Disease

The stages of **chronic kidney disease** are determined by the GFR, as defined by the National Kidney Foundation. The lower the GFR the less kidney function you have. The stages of CKD are:

Stage	Description	GFR (mL/min/1.73m)
1	Kidney damage with normal or elevated GFR	90 or Greater
2	Kidney damage with mildly reduced GFR	60 - 89
3	Moderately reduced GFR	30 - 59
4	Severely reduced GFR	15 - 29
5	Kidney failure (ESRD)	Less than 15 or dialysis

Complications

Regardless of what causes kidney disease, problems begin to occur when the kidneys cannot adequately filter and remove waste products from the bloodstream. As kidney function declines, other complications occur such as anemia, malnutrition and secondary hyperparathyroidism. Secondary hyperparathyroidism is a condition of high PTH or parathyroid hormone. It begins as early as stage 3 CKD. PTH rises when the kidneys lose the ability to activate vitamin D. Left untreated, it can damage many of the body's organs and tissues. Active vitamin D therapy is used to prevent and treat secondary hyperparathyroidism.

Prevention

If you are at increased risk of having CKD, you can lower your chances of developing it by the following:

- Become familiar with the warning signs of kidney disease
- Have your GFR tested on a regular basis
- Drink plenty of fluids
- Exercise regularly
- Limit alcohol
- Control your diabetes
- Control your blood pressure (your doctor may prescribe medication)
- Maintain proper weight
- Don't smoke

Depending on your stage and cause of CKD, you may need to follow a low protein diet. Check with your doctor to see if this is right for you.

Treatment

Although dialysis is not a cure, it is a life-saving process that artificially replaces some of the functions of the kidney. There are two types of dialysis: hemodialysis and peritoneal dialysis. Hemodialysis uses an artificial kidney (hemodialyzer) to remove waste and fluid from your blood. Hemodialysis takes place in an outpatient center and takes about four hours. With peritoneal dialysis, your abdominal area (called the peritoneal cavity) is slowly filled with dialysate through a catheter. Extra fluid and waste products are drawn out of your blood and into the dialysate. After a time, the dialysate is drained from the body and fresh dialysate is replaced.

Many patients are eligible to receive a kidney transplant and get back their kidney function. There are two kinds of donors: a living donor (from a close relative, friend, or stranger) or a non-living donor (someone who dies and donates their organs). The best kind of kidney donation is from a living donor, especially a close relative whose blood and tissue-type closely match the patient.

PERSONAL JOURNAL

Patient:

Name of Physician(s):

Address:

Phone:

Questions for Physician:

Test(s) Performed:

Diagnosis:

Medications Prescribed:

Pharmacy Name:

Address:

Phone:

Name of Hospital:

Address:

Phone:

Appointments:

Notes:

PERSONAL JOURNAL

Support Groups:

Names:

Phone Number(s):

Research and News:

In case of emergency, notify:

FREQUENTLY ASKED QUESTIONS

Q What is chronic kidney disease?

A Chronic kidney disease is a condition where the kidneys lose their ability to remove wastes and balance fluid and minerals in the body.

Q What are the kidneys and their functions?

A The kidneys are organs that primarily remove fluid and waste from the body in the form of urine. Some of the functions of the kidneys include regulating blood pressure and keeping the balance of important minerals in the body such as potassium, sodium, calcium, phosphorus and magnesium.

Q Does kidney disease run in families?

A The leading causes of kidney failure are diabetes and high blood pressure, which often run in families.

Q What is anemia?

A Anemia is a condition of having too few red blood cells. Red blood cells carry oxygen to organs and tissues. If your red blood cells are too low, organs and tissues do not get enough oxygen. Anemia is common in people with chronic kidney disease or those on dialysis.

Q What is secondary hyperparathyroidism?

A Secondary hyperparathyroidism is a condition that affects people with CKD. It is a result of vitamin D deficiency, associated with stages 3-5 CKD.

Q What is PTH?

A Parathyroid hormone, or PTH, is produced by several small, bean-like parathyroid glands in the neck. It's job is to tell the bones to release calcium into the bloodstream. PTH levels are also increased in CKD due to vitamin D deficiency. PTH levels should be checked often, beginning with stage 3.

Q What are the consequences of vitamin D deficiency?

A As kidney function declines, the ability of the kidney to make active vitamin D, which is needed by all the tissues and cells in the body, declines. The consequences of low vitamin D levels are many, including bone disease and recent evidence suggests there are consequences to the heart, to blood pressure and to overall vascular health.

Q How long can I live with chronic kidney disease?

A How long you can live with CKD depends on your age, other health problems, and how involved you become in your care. How good life can be with CKD depends on you!

Q What is end stage renal disease?

A End stage renal disease is chronic kidney disease stage 5. This is when the kidneys fail and dialysis or a kidney transplant is needed.

DATA, RESOURCES, HOTLINES, PUBLICATIONS and MEDIA CONTACTS

National Kidney Foundation (NKF)

30 East 33 Street
New York, NY 10016
(P) 800-622-9010
www.kidney.org

American Association of Kidney Patients (AAKP)

3505 E. Frontage Rd Ste. 35
Tampa, FL 33607
(P) 800-749-2257
www.aakp.org

American Kidney Fund

60 Executive Blvd. Ste. 1010
Rockville, MD 20852
(P) 800-638-8299
www.akfinc.org

iKidney.com

1102 N. Brand Blvd. #74
Glendale, CA 91202
www.iKidney.com

National Kidney and Urologic Disease Information Clearinghouse

3 Information Way
Bethesda, MD 20892
(P) 301-654-4415
800-891-5390
www.kidney.niddk.nih.gov

National Institutes of Health (NIH)

9000 Rockville Pike
Bethesda, Maryland 20892
(P) 301-496-4000
www.nih.gov

Centers for Disease Control and Prevention

1600 Clifton Rd
Atlanta, GA 30333
(P) 800-311-3435
www.cdc.gov

American Diabetes Association

1701 North Beauregard Street
Alexandria, VA 22311
(P) 800-342-2383
www.diabetes.org

NHLBI Health Information Center

National Heart, Lung and Blood Institute
(Hypertension)
P.O. Box 30105
Bethesda, MD 20824-0105
(P) 301-592-8573
www.nhlbi.nih.gov

PUBLICATIONS

Family Focus

An NKF Publication

www.kidney.org
(P) 800-622-9010

Kidney Care

An NKF Publication

www.kidney.org
(P) 800-622-9010

AAKP Renal Life

An AAKP Publication

www.aakp.org
(P) 800-749-2257

Kidney Beginnings: The Magazine

An AAKP Publication

www.aakp.org
(P) 800-749-2257



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"Chronic Kidney Disease" call **1-888-380-6500**



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National Kidney Foundation
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1-800-622-9010.



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