

Nutrition for Early Chronic Kidney Disease in Adults

National Kidney and Urologic Diseases Information Clearinghouse



National
Institute of
Diabetes and
Digestive
and Kidney
Diseases

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Your kidneys do many things to keep you healthy. They filter wastes and extra water from your blood. To keep the body working properly, the kidneys balance the salts and minerals—such as calcium, phosphorus, sodium, and potassium—that circulate in your blood. The kidneys also release hormones that help make red blood cells and keep bones strong.

If your kidneys abruptly shut down because of an accident, poisoning, or other sudden sickness affecting the kidneys, you would quickly experience nausea and swelling from the buildup of wastes and fluid in your body. You would need to be hospitalized immediately to treat the effects of kidney failure.

When you have chronic kidney disease (CKD), however, you may not notice changes in your health. In CKD, the kidneys continue to work, they just don't do their job as well as they should. Wastes may build up so gradually that your body even becomes used to the condition. Salts containing phosphorus and potassium may rise to unsafe levels, causing heart and bone problems. You may be low in red blood cells, a condition called anemia, causing you to tire easily.

Millions of Americans are at risk of developing CKD because they have diabetes, high blood pressure, or both. High levels of blood glucose (sugar) put people who have diabetes at risk for heart disease, stroke, amputation, and eye and kidney problems. People with high blood pressure are at risk for damaged blood vessels, including the tiny vessels in the kidneys.

Diabetes

Whether you have type 1 or type 2 diabetes, what you eat affects your blood glucose, the body's main source of energy. Following a meal plan to keep your blood glucose at a healthy level may prevent CKD from developing.

Talk with your health care provider about your blood glucose targets and ask how often to check your blood glucose level. The results from your blood glucose checks will tell you if your diabetes care plan is working. Also ask your doctor for an A1C test at least twice a year. The A1C number reflects your average blood glucose for the past 3 months.

Following regular habits can help keep your blood glucose at a healthy level.

- Eat about the same amount of food each day.
- Eat your meals and snacks at about the same times each day.
- Do not skip meals or snacks.
- Take your medicines at the same times each day.
- Participate in physical activity every day.

For more information about nutrition for diabetes, see *What I Need to Know About Eating and Diabetes* from the National Diabetes Information Clearinghouse (see contact information under "Additional Reading"), or contact a registered dietitian.



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High Blood Pressure

Blood pressure is expressed as two numbers. The top number represents the force of your blood pushing against the artery walls when your heart beats. The lower number represents the pressure between beats. Normal blood pressure is less than 120/80 mmHg. It is recommended that people with kidney disease keep their blood pressure below 130/80 mmHg.

As blood pressure rises, the risk of damage to arteries, heart, brain, and kidneys increases. Controlling blood pressure through healthy food choices and regular physical activity can delay or prevent the development of chronic kidney disease.

The National Heart, Lung, and Blood Institute (NHLBI) supported research that compared a typical American diet with an eating plan that is lower in saturated fat, cholesterol, and total fat and that emphasizes fruits, vegetables, and lowfat dairy foods. People who followed the lowfat plan were able to reduce their blood pressure much more effectively than those who ate a typical diet. This eating plan—known as the DASH eating plan—also includes whole grain products, fish, poultry, and nuts. Limiting sodium (salt) is another important feature of the DASH eating plan.

Facts About the DASH Eating Plan is a fact sheet available from NHLBI (see contact information under “Additional Reading”). It provides detailed nutrition information and meal plans.

Medical Nutrition Therapy

When treatment for a medical condition includes nutrition advice, health care providers use the term medical nutrition therapy (MNT). Your doctor may refer you to a registered dietitian to help with your food plan. Many insurance policies cover MNT when recommended by a doctor. If you qualify for Medicare, you can receive a benefit for MNT from a registered dietitian or nutrition professional when your doctor provides a referral indicating that you have diabetes or kidney disease. Medicare covers 80 percent of the Medicare-approved amount for MNT after you have paid the \$100 deductible for Part B services.

One way to locate a qualified dietitian is to consult the American Dietetic Association website at www.eatright.org, which features a “Find a Nutrition Professional” page. Users can enter their address or ZIP code and a list of dietitians in that area will appear. Click on “Renal nutrition” in the specialty field.

Keep Track of Test Results

If you have CKD, your doctor will order regular blood tests. Ask your doctor for copies of your laboratory reports and ask to have them explained. Note any results that are out of the normal range. Talk with your doctor or your dietitian about what you can do to make healthier food choices. When you learn how to read your reports, you will see how the foods you eat affect your kidneys. Remember that you are the most important member of your health care team.

Hope Through Research

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) has many research programs aimed at slowing the progression of chronic kidney disease. For example, the NIDDK is sponsoring the Chronic Renal Insufficiency Cohort study to determine the risk factors for rapid decline in kidney function and development of cardiovascular disease.

This study of about 3,000 patients with chronic renal insufficiency, another way of describing CKD, will reflect the racial, ethnic, and gender composition of the people in the United States who have permanent kidney failure. The data collected and specimens obtained will serve as a national resource for investigating CKD, as well as cardiovascular disease. Establishing this group of patients and following them into the future also provides an opportunity to examine genetic, environmental, behavioral, nutritional, quality-of-life, and health resource use factors in this population. The main part of the study will consist of monitoring patients and following up at regular clinic visits with kidney function measurements, cardiovascular studies, and laboratory tests. In addition, participants will answer questionnaires to assess various demographic, nutritional, and quality-of-life factors.

Additional Reading

The following fact sheets and brochures, as well as other information, are available on request from the organizations listed. Most of them can also be found online at the web addresses given.

Dining Out With Confidence: A Guide for Patients with Kidney Disease
Nutrition and Chronic Kidney Disease
National Kidney Foundation
30 East 33rd Street
New York, NY 10016
Phone: 1-800-622-9010 or 212-889-2210
Email: info@kidney.org
Internet: www.kidney.org

Facts About the DASH Eating Plan
National Heart, Lung, and Blood Institute
Information Center

P.O. Box 30105
Bethesda, MD 20824-0105
Phone: 301-592-8573
TTY: 240-629-3255
Fax: 301-592-8563
Internet: www.nhlbi.nih.gov

A Healthy Food Guide for People with Chronic Kidney Disease

American Dietetic Association
120 South Riverside Plaza
Suite 2000
Chicago, IL 60606-6995
Phone: 1-800-366-1655
Email: knowledge@eatright.org
Internet: www.eatright.org

Kidney Beginnings: A Patient's Guide to Living with Reduced Kidney Function
American Association of Kidney Patients

3505 East Frontage Road
Suite 315
Tampa, FL 33607
Phone: 1-800-749-2257 or 813-636-8100
Email: info@aakp.org
Internet: www.aakp.org

What I Need to Know About Eating and Diabetes

National Diabetes Information Clearinghouse
1 Information Way
Bethesda, MD 20892-3560
Phone: 1-800-860-8747
Email: ndic@info.niddk.nih.gov
Internet: www.diabetes.niddk.nih.gov

The information in this fact sheet should not be used in the nutritional counseling of infants, children, and adolescents with chronic kidney disease. Families of pediatric patients with CKD should seek age-appropriate nutritional counseling from a pediatric renal dietitian.

For More Information

American Kidney Fund

6110 Executive Boulevard
Suite 1010
Rockville, MD 20852
Phone: 1-800-638-8299 or 301-881-3052
Email: helpline@akfinc.org
Internet: www.kidneyfund.org

Life Options Rehabilitation Resource Center

c/o Medical Education Institute, Inc.
414 D'Onofrio Drive
Suite 200
Madison, WI 53719
Phone: 1-800-468-7777
Email: lifeoptions@MEIresearch.org
Internet: www.lifeoptions.org

National Kidney Disease Education Program

3 Kidney Information Way
Bethesda, MD 20892
Phone: 1-866-4-KIDNEY (454-3639)
Email: nkdep@info.niddk.nih.gov
Internet: www.nkdep.nih.gov

About the Nutrition for Chronic Kidney Disease Series

The NIDDK Nutrition for Chronic Kidney Disease Series includes three fact sheets:

- Nutrition for Early Chronic Kidney Disease in Adults
- Nutrition for Later Chronic Kidney Disease in Adults
- Nutrition in Children with Chronic Kidney Disease

For free single printed copies of this series, please contact the National Kidney and Urologic Diseases Information Clearinghouse.

National Kidney and Urologic Diseases Information Clearinghouse

3 Information Way
Bethesda, MD 20892-3580
Phone: 1-800-891-5390
Fax: 703-738-4929
Email: nkudic@info.niddk.nih.gov
Internet: www.kidney.niddk.nih.gov

The National Kidney and Urologic Diseases Information Clearinghouse (NKUDIC) is a service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The NIDDK is part of the National Institutes of Health under the U.S. Department of Health and Human Services. Established in 1987, the Clearinghouse provides information about diseases of the kidneys and urologic system to people with kidney and urologic disorders and to their families, health care professionals, and the public. The NKUDIC answers inquiries, develops and distributes publications, and works closely with professional and patient organizations and Government agencies to coordinate resources about kidney and urologic diseases.

Publications produced by the Clearinghouse are carefully reviewed by both NIDDK scientists and outside experts. This fact sheet was reviewed by Lisa Murphy-Gutekunst, MEd, RD, CSR, Cleve-Hill Dialysis, Buffalo, NY; and Marcy Bushman, MPH, RD, LDN, Sigma-Tau Pharmaceuticals.

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This fact sheet is also available at www.kidney.niddk.nih.gov.



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