EQUAL HEALTH:

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HEALTHY KIDNEYS FOR A HAPPY LIFE

Chronic Kidney Disease (CKD) is a leading cause of disability and death among Blacks and Hispanics living in the U.S.

Uniformed Services University of the Health Sciences
Center for Health Disparities Research & Education
Community Outreach & Information Dissemination Core

Centers of EXcellence in Partnerships for Community Outreach, Research on Health Disparities, and Training program (Project EXPORT)

Chronic Kidney Disease

What is Chronic Kidney Disease (CDK)?

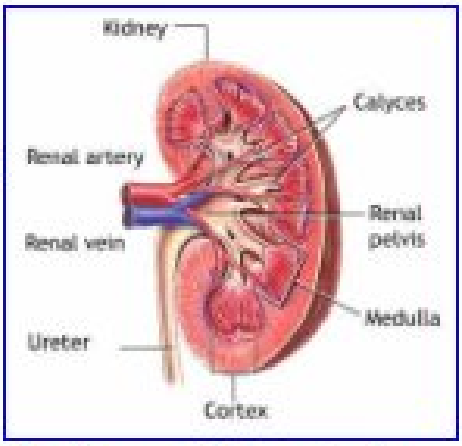
Chronic kidney disease (CKD) is a slowly progressive condition in which the kidneys gradually loose their capacity to function properly. When CKD is diagnosed early, the kidney damage can be reduced or even stopped. But without treatment kidney damage can become very severe and progress to chronic kidney failure and end stage renal disease (ESRD) when patients must be treated by hemodialysis or a kidney transplant. The most common causes of CKD and its complications are diabetes and high blood pressure.

Racial and Ethnic Disparities in CKD

Kidney disease has a greater impact upon African Americans (AA) than all other racial and ethnic groups in the U.S. placing them at the highest risk of progressive kidney disease to chronic kidney failure and end stage renal disease (ESRD). ESRD is when the kidneys have lost most of their normal function, and on average, African Americans are affected at a younger age (55.8 years) than are Whites (62.2 years). Overall, the number of new cases of ESRD among AA is 4 times higher than among non-Hispanic Whites. This is an important health problem for AA who in 1996 represented almost 13 percent of the total U.S. population but nearly 30 percent of ESRD patients. Hispanics also seem to be at higher risk for ESRD according to data from 1997 which suggests that

11 percent of Medicare benefits for ESRD are for patients of Hispanic heritage.

What is normal kidney function?



Most people know that a major function of the kidneys is to remove waste products and excess fluid from the body. These waste products and excess fluid are removed through the urine. The production of urine involves highly complex steps of excretion and reabsorption. This process is necessary to maintain a stable balance of body chemicals. The critical regulation of the body's salt, potassium and acid content is performed by the kidneys. The kidneys also produce hormones that affect the function of other organs. For example, a hormone produced by the kidneys stimulates red blood cell production. Other hormones produced by the kidneys help regulate blood pressure and control calcium metabolism. The kidneys are powerful chemical factories that perform the following functions:

- remove waste products from the body
- remove drugs form the body
- balance the body's fluids
- release hormones that regulate blood pressure
- produce an active form of vitamin D that promotes strong, healthy bones
- control the production of red blood cells

What is the best treatment of CKD?

The treatment of CKD will depend on many factors which only a clinical care provider can assess adequately. Only a doctor or clinical provider can determine the best treatment or management of a particular patient with CDK. Very often patients are referred to a medical specialist on kidney diseases (Nephrologist). This specialist makes a comprehensive evaluation of the patient's overall health and kidney function. Based on this information, he or she will design the best management or treatment plan and will explain to the patient how to follow his or her response to the management plan. The goal of careful management of CDK is to prevent progression into chronic renal failure, the need for dialysis and the appearance of the known complications of advanced renal disease and end-stage renal disease (ESRD).

Can CKD be cured?

Detection and early diagnosis of CKD are the only ways to reduce or prevent the complications of this condition.

Complications of CKD can be prevented

Detection and early diagnosis of CKD are the only ways to reduce or prevent the complications of this condition. The complications of CKD include high blood pressure, anemia (low blood count), poor nutrition and damage to nerves. CKD is an important risk factor of heart disease and arteriosclerosis; and medical studies show that

patients with CKD and diabetes are at higher risk of of more serious heart disease. High blood pressure (HBP) is a big problem in patients with CKD for two reasons. First, because untreated CDK can cause high blood pressure, and for this reason all persons with HBP should be tested for CKD. The second problem is that untreated high blood pressure, which can occur alone, can cause CKD. The most serious complication of CKD is its progression to chronic kidney failure (CKF) and end-stage renal disease (ESRD) — renal is another medical word for kidney. Patients with ESRD need dialysis or a kidney transplant to live. What is most important to remember is that all these complications may be reduced or eliminated if the condition of CKD is recognized and diagnosed early and is followed by good medical management.

Can you tell if you have CKD?

Not when it is early. But, with time, the kidneys become injured, and stop working as good blood filters. When the kidneys can not work normally, the concentration of urea and creatinine in the blood become abnormally high. Urea and creatinine are the two most common substances measured in laboratory tests to detect kidney disease. The blood levels of urea and creatinine help doctors estimate if the kidneys are working well or not. In ESRD the levels of urea and creatinine can be very high.

If you have CKD you need to learn and memorize your most recent GFR value. Ask your provider for your numbers.

The Glomerular Filtration Rate (GFR) value is the best measure of the level of kidney function and the stage of kidney disease.

CKD Examination

The most widely recognized risk factors for chronic kidney disease are (1) Older age, (2) Diabetes, (3) High blood pressure, (4) Having a family member with chronic kidney disease, (5) Being African American, Hispanic, Asian and Pacific Islander or Native American. If you are in one of these groups or think you may be at increased risk for kidney disease, ask your doctor about getting tested. Remember that the best way to delay or prevent end stage kidney disease is an early detection.

If you are diagnosed with CKD

- Ask questions from your clinical care provider
- Ask about and memorize your numbers: Blood urea and creatinine; and the GFR. Always learn the date when they were measured for the last time and how they changed from the time before.

- **A test for protein in the urine**—Protein in the urine may mean that the kidneys are not working well. A clinical care provider must interpret the meaning of a positive urine protein test result. Protein may show up in the urine with fever or after heavy exercise. If protein is present in tests done several times over several weeks, then CKD is diagnosed.

- **A test for blood creatinine** - Creatinine increases in the blood when the kidneys start to loose their normal function. High value of blood creatinine is an indicator of kidney disease.

- **Glomerular Filtration Rate** —the Glomerular Filtration Rate or **GFR**, tells how well or badly are the kidneys functioning. One easy way to estimate the GFR is using the blood creatinine value with your age, race, sex and other information to calculate your GFR value. If you know your blood creatinine you can estimate your own GFR using the GFR calculator available at http://www.kidney.org/professionals/kdoqi/gfr_calculator.cfm. If you have CKD you need to learn and memorize your most recent GFR value. Ask your provider for your numbers.

The Glomerular Filtration Rate (GFR) value is the best measure of the level of kidney function and the stage of kidney disease.

Do you want to learn more about CKD?

- Call The National Kidney Foundation (410) 494-8545.
- Visit the Website of the National Kidney Foundation at http://www.kidney.org/kidneyDisease/

Was this information useful to you?

We want to hear your impressions about his brochure and your ideas for making it better and more useful to you or others in your community.

1. What I learned about chronic kidney disease.

☐ Nothing was new to me. I knew all of this information already.

☐ Some information was new. There were some things I didn't know.

☐ Most of the information was new. There were many things I didn't know.

☐ All the information was new to me. I did not know any of this!

2. What would you do now to prevent complications of CKD?

   - ☐ Nothing. I am not concerned about having kidney disease.
   - ☐ I will make an appointment to see my doctor or clinical care provider and ask him or her about my kidney function.
   - ☐ I will ask my doctor if I have any evidence of CKD.
   - ☐ I will learn my blood urea and creatinine; and GFR numbers and the date when they were measured.

3. Would you like to learn more about chronic kidney disease?

   - ☐ No, this information was enough for me.
   - ☐ Yes, for myself.
   - ☐ Yes, for a relative or a friend.

4. Did you know that CKD is more common among Black people of all cultural backgrounds living in the U.S.?

   - ☐ No, and it makes no difference to me.
   - ☐ No, I am glad I am now aware of it.
   - ☐ Yes, but this was helpful anyway.
   - ☐ I knew that it was a risk factor for African Americans but not for recent Black immigrants to the U.S.

Mission of the Center

The Uniformed Services University Center for Health Disparities Research and Education (USUCHD) aims to promote health-related change and ultimately reduce health disparities among racial and ethnic minorities through research, education, training, and community outreach and information dissemination.

Community Outreach and Information Dissemination Core

The core's general objective is to actively involve community partners in research, training opportunities, and educational offerings to maximize the understanding and reduction of health disparities in minority populations. This broad objective is achieved through multiple activities, including the extraction, synthesis and compilation of relevant materials and information from the other primary EXPORT Center Components. The activities respond to specific operational objectives established each year in response to the accumulated experience of the community outreach team, the health concerns and needs of our community partners and the Community Based Organization with whom we work collaboratively to reduce health disparities among racial and ethnic minorities.

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