National Kidney Foundation™

Inside this issue:

NEXT ISSUE

15th Anniversary Issue

Family Focus

A publication of the National Kidney Foundation

Vol 14, No 4
Fall 2005

KDOQI GUIDELINES ON CARDIOVASCULAR DISEASE

The New National Kidney Foundation Clinical Practice Guidelines

for Cardiovascular Disease in Dialysis Patients

By William Henrich, MD

The NKF has written and published a total of 16 guidelines on a variety of medical issues related to chronic kidney disease, including cardiovascular disease. Here, Nadine Ferguson of our Programs Division discusses the KDOQI Guidelines at a recent annual Clinical Meetings.

HEART DISEASE IS A MAJOR PUBLIC HEALTH PROBLEM IN THE GENERAL POPULATION, but it occurs in a much higher percentage and much earlier in life for people on dialysis. Although it has been well-known that individuals on dialysis have had problems with heart disease, it was only recently realized that heart disease and related health problems are the cause of death for about half of all people on dialysis. In fact, heart disease is the leading cause of death in people with chronic kidney disease (CKD).

There are many reasons for this increase in the high rate and severity of heart disease in people with CKD. Individuals with CKD often have a long history of high blood pressure, and this is a major cause of early damage to the heart and to the blood vessels, which supply the heart with blood. Problems of too much fluid, abnormal blood fat concentrations (cholesterol), calcium deposits in blood vessels due to abnormal levels of calcium and phosphate in the blood and the buildup of substances normally removed by the kidney, which have bad effects on blood vessels, all add to blood vessel injury and later damage to the heart and other organs. It should be noted that kidney failure causes changes in blood vessels not just in the heart but in the legs, arms and brain as well. So it is not surprising that less blood flow to these parts of the body may also be present in people on dialysis. A decrease in blood flow to the legs could result in pain with exercise, whereas circulatory problems to the brain can cause either temporary or permanent damage. Finally, it is also well-known that the leading cause of kidney failure in the United States is diabetes,

Continued on page 2

This publication is a part of the National Kidney Foundation's Kidney Learning System (KLS)™ and is made possible through an educational grant from AMGEN.

National Kidney Foundation™
30 East 33rd Street
New York, NY 10016

NON-PROFIT ORG.
U.S. POSTAGE
PAID
Shakopee, MN
Permit No. 211

FROM THE EDITOR

Karren King

MANY PEOPLE MAY NOT KNOW THAT THERE IS A STRONG RELATIONSHIP between cardiovascular disease (CVD) and chronic kidney disease (CKD) and that those with CKD may be at higher risk for developing CVD. This issue of *Family Focus* not only hopes to educate you about CVD and why those with CKD need to know about it, but also what you can do to be "heart healthy."

This issue marks the last one for the 2005 *Family Focus* Editorial Board. A great deal of thought, planning, time and effort goes into making each issue of this newspaper the best we believe it can be. *Family Focus* would not be possible without the great efforts of the National Kidney Foundation staff and the volunteers who make up the Editorial Board. As the editor of *Family Focus*, I want to acknowledge and thank each of them. This year we are losing several dedicated individuals who have graciously donated their time and expertise to *Family Focus* over the past several years. Pedro Recalde, Fitness Editor, Bobbie Knotek, Nursing Editor, and Roberta Bachelder, End Stage Kidney Disease Network representative, will be leaving us. They and their contributions will be greatly missed.

By the time you receive this issue of *Family Focus,* the new Editorial Board will have met to plan the next four issues for 2006. I can assure you that while it may be a new year and the Editorial Board may have some new faces, some things will remain unchanged. We will continue to strive to bring you what we believe to be the most relevant and important information you will need to be an informed consumer and effective advocate for your own health care. We also want *Family Focus* to remain YOUR newspaper. To help us accomplish this, it is important that you continue to allow us to hear from you. Family Focus

Karren King, MSW, ACSW, LCSW
For the Editorial Board

Clinical Practice Guidelines...

Continued from page 1

and diabetes is a disease which, over time, leads to blood vessel damage and can cause heart disease even without kidney failure. In fact, having both kidney failure and diabetes is a major reason why there is so much vessel damage in people who are beginning dialysis treatment.

Because of the very common, severe blood vessel disease in people on dialysis, the National Kidney Foundation (NKF) recently started a project to give doctors and other health care providers clinical practice guidelines for the treatment of cardiovascular (heart and blood vessel) disease in people on dialysis. The NKF has written and published a total of 16 guidelines on a variety of medical issues related to CKD, including cardiovascular disease (CVD). Each of these 16 guidelines follows a specific format: they are the result of a complete review of the medical literature on each subject, followed by a discussion among kidney disease and other experts on the best way to diagnose and treat each specific medical problem. The guidelines on cardiovascular disease were written by 19 kidney care and other experts from around the world, and were published in the April 2005 supplement of the *American Journal of Kidney Diseases*.

It is hoped that the cardiovascular disease guidelines will give doctors and other health care providers a practical, up-to-date summary of the best treatment for people on dialysis. From their review of the literature that exists, the experts learned that there is a great need for more research and studies in the area of the care and treatment of people on dialysis.

For more information on the guidelines, visit **www.kdoqi.org**.

William Henrich, MD is Chairman of Medicine at the University of Maryland School of Medicine. Dr. Henrich and Dr. Alfred K. Cheung, MD were co-chairs of the NKF Clinical Practice Guidelines for Cardiovascular Disease in Dialysis Patients. Family Focus

Family Focus

NKF Family Focus *is published quarterly by the National Kidney Foundation.*

Opinions expressed in this newspaper do not necessarily represent the position of the National Kidney Foundation.

Heart Disease in Children With Chronic Kidney Disease

By Rulan Parekh, MD, MS

Like adults, children with CKD are also at risk for developing heart disease.

HEART DISEASE AFFECTS MILLIONS IN THE UNITED STATES EACH YEAR. Common in older adults, heart disease especially affects those with many risk factors such as obesity, high blood pressure and diabetes. We are used to the idea that our grandparents may have heart disease, but not our children. It has now been shown, however, that children can also have heart disease, especially those with chronic kidney disease (CKD). Research shows that the number of children with CKD admitted to the hospital for heart failure is rising in the U.S.[1]. Also, children, adolescents and young adults with CKD may have a shorter life span due to heart disease[2].

Heart disease can present itself in children in many different ways, such as hardening of the arteries, heart failure or abnormal heart rhythms[3]. Children with CKD who are at the highest risk for developing heart disease are those on dialysis compared to transplant recipients, and African American children more than Caucasian children[2].

The most common cardiac risk factors which can lead to heart disease in children with CKD include hypertension (high blood pressure), high cholesterol, obesity and too much fluid in the body[3]. These cardiac risk factors are very common and hypertension can occur in over 75 percent of children with kidney disease[3]. In addition, calcium and phosphorus, which are regulated by diet and dialysis, may build up in the body and contribute to hardening of the arteries, especially for those children on dialysis. Inflammation, infection and malnutrition are also cardiac risk factors among people with CKD and could speed up the progression of heart disease. However, more research is needed to understand how these contribute to cardiovascular disease in children.

It has now been shown… that children can also have heart disease, especially those with chronic kidney disease (CKD).

In order to manage cardiac risk factors and check for early signs of heart disease, it is important for children to be screened early and often during their time on dialysis and after transplantation. In children with CKD, the goal should be to prevent the onset of heart disease. The National Kidney Foundation's KDOQI Guidelines recommend screening children with kidney disease for heart disease not less than once a year (see table below) [4]. Risk factors such as blood pressure and weight should be checked closely on a regular basis at clinic visits. For adolescents on dialysis or with a transplant (Stage 5 CKD), a lipid (cholesterol) panel should be done during the first visit with a doctor, at two to three months after a change in treatment such as going from dialysis to transplant or from hemodialysis to peritoneal dialysis and at least once a year[4]. A cholesterol panel checks the blood for levels of good or bad cholesterol. It is usually done after a period of fasting of at least eight hours; in children, however, screening cholesterol panels do not have to be done while fasting. Imaging the heart by echocardiography for damage related to high blood pressure or fluid overload is also recommended once a year in children with high blood pressure [5]. Echocardiography is a non-invasive test which uses ultrasound to study the heart. As many as 70 percent of children starting dialysis have some thickened heart muscle, which may be due to uncontrolled high blood pressure and too much fluid. Electrocardiograms (ECGs) are not done regularly in children since these tests are not sensitive enough to see the thickened heart muscle [6, 7]. Other methods of detecting hardening of the arteries in children are not usually available at this time.

Children with CKD are at risk for heart disease. It is important that parents and children understand the long-term risk and work with their nephrologists (kidney doctors) to prevent it.

1. Chavers, B.M., et al., Cardiovascular disease in pediatric chronic dialysis patients. *Kidney International*, 2002. 62(2): p. 648-53.
2. Parekh, R.S., et al., Cardiovascular mortality in children and young adults with end-stage kidney disease. *Journal of Pediatrics,* 2002. 141(2): p. 191-7.
3. Parekh, R.S. and S.S. Gidding, Cardiovascular complications in pediatric end-stage renal disease. *Pediatric Nephrology,* 2005. 20(2): p. 125-31.
4. *National Kidney Foundation: KDOQI Clinical Practice Guidelines for Managing Dyslipidemias in Chronic Kidney Disease. Am J Kidney Dis,* 2003. 41((suppl 3)): p. S1-S92.
5. *KDOQI Clinical Practice Guidelines for Cardiovascular Disease in Dialysis Patients. Am J Kidney Dis,* 2005. 45(4 Suppl 3): p. S1-153.
6. Mitsnefes, M.M., et al., Changes in left ventricular mass in children and adolescents during chronic dialysis. *Pediatric Nephrology,* 2001. 16(4): p. 318-23.
7. Mitsnefes, M.M., et al., Severe left ventricular hypertrophy in pediatric dialysis: prevalence and predictors. *Pediatric Nephrology,* 2000. 14(10-11): p. 898-902.

Rulan Parekh, MD, MS is an Assistant Professor of Pediatrics and Internal Medicine at Johns Hopkins University. She is currently a member of the National Kidney Foundation KDOQI Advisory Board.

RISK FACTORS	ASSESSMENT	THERAPY
BLOOD PRESSURE	Clinic blood pressure measurement	Medications Annual echocardiagram Achieving dry weight if applicable
CHOLESTEROL	Fasting lipid profile yearly	Diet modification Exercise Medications
TOBACCO USE	History of use in older children	Smoking cessation programs
OBESITY	Clinic weight and height Calculate Body Mass Index (kg/m^2)	Diet modification Exercise Weight loss programs
FAMILY HISTORY	Early heart attack/stroke less than age 50	Monitor cardiovascular risk factors closely

KIDNEY TRANSPLANTATION:
A Matter of the Heart

By Benjamin Fritz, MD

Good heart health is important when planning for a transplant.

GETTING A KIDNEY TRANSPLANT CAN GREATLY IMPROVE THE QUALITY OF LIFE FOR PEOPLE WITH KIDNEY FAILURE. However, it is important that any problems with the cardiovascular system be found and treated before a kidney transplant operation. The operation is demanding and can place stress on the heart and blood vessels (cardiovascular system).

Many people ask, "What kind of cardiovascular check-up is necessary before I receive my kidney?" The process starts when you have your kidney transplant evaluation. You will meet with the transplant doctor for a medical history and physical examination. As part of the complete history taking process, the transplant doctor will ask questions about your exercise abilities, such as walking or climbing stairs. During the examination, the doctor will feel for a pulse in different parts of your body and listen to your heart. If abnormalities are found, additional tests may be needed.

More advanced cardiovascular tests are often done before getting approval for a kidney transplant. These tests focus on either the heart or the blood vessels.

The heart, a muscular organ which pumps blood to the entire body, can be tested in a variety of ways. The strength of the heart muscle and the function of the heart valves can be seen with ultrasound (called an echocardiogram). Several methods can be used to study the blood flow to the heart, which is important because blood delivers the oxygen and nutrients the heart needs to pump effectively. A popular method called a myocardial perfusion scan uses a radioactive dye that can show if blood flows normally to the entire heart and gets into the muscle cells. Another way, called a cardiac angiogram, involves the direct injection of dye into the arteries supplying the heart and watching if the blood flows well to all the right areas.

A kidney transplant must be connected directly to one of the major blood vessels in the body in order to function. It is therefore very important to make sure that your blood vessels are healthy before the operation. Like the blood vessels to the heart, the blood vessels to the body can be tested in a variety of ways. The simplest way is through ultrasound, in which the blood flow to the arms and legs can be seen directly. More advanced tests involve the use of special dyes and imaging equipment, such as a CT angiogram or MR angiogram. These special imaging examinations will help the transplant team determine how healthy your blood vessels are prior to a transplant.

Typically, most people will need several cardiovascular tests before receiving approval for a kidney transplant. People with a history of cardiovascular disease, such as prior heart attack or bypass operation, will usually need the most testing.

A common question is: "Can the cardiovascular tests disqualify me from getting a kidney transplant?" The answer is yes, because of the demanding nature of the kidney transplant operation. The transplant center is responsible for ensuring the safety of all individuals receiving a kidney transplant. In some people with severe cardiovascular disease, a kidney transplant operation may seem too risky.

The risk of developing cardiovascular disease after a kidney transplant is higher than in the general population. However, compared with people on dialysis, the risk is lower. It is very important to keep good exercise habits, control blood pressure and avoid smoking after transplantation.

Dr. Benjamin Fritz, M.D. is a transplant nephrologist at the Northern California Kidney Transplant Center in Santa Rosa, California. Family Focus

NKF LAUNCHES NEW BRANDING SYSTEM

National Kidney Foundation™

THE NATIONAL KIDNEY FOUNDATION (NKF) UNVEILED A NEW BRAND IDENTITY in August designed to unify the organization's signature programs and communications with one single, strong image. This new identity highlights the National Kidney Foundation's role as a leader in promoting kidney health while communicating the interconnectedness of our programs, our Affiliates, our volunteers and our staff. The new logo creates a consistent brand family, which will build greater awareness and recognition among patients, professionals and the public of the mission and vision of the NKF.

National Kidney Foundation™ KLS KIDNEY LEARNING SYSTEM

The new logo's main graphic, a series of interlocking kidneys, immediately communicates the Foundation's dominant purpose, kidney health, as well as the interdependence of the various NKF components. The logo's red and orange color scheme connotes a dynamic organization filled with vitality, life and warmth.

National Kidney Foundation™ KEEP KIDNEY EARLY EVALUATION PROGRAM

With this new brand identity, the NKF will increase the recognition of all its sub-branded programs, such as the Kidney Walk, Kidney Cars, Kidney Early Evaluation Program (KEEP), Kidney Learning System (KLS) and Kidney Disease Outcomes Quality Initiative (KDOQI), which are instrumental in helping achieve the NKF's mission and improve outcomes for the 20 million adults in the United States with chronic kidney disease.

National Kidney Foundation™ KDOQI KIDNEY DISEASE OUTCOMES QUALITY INITIATIVE

NKF Young Investigator Seeks Better Understanding

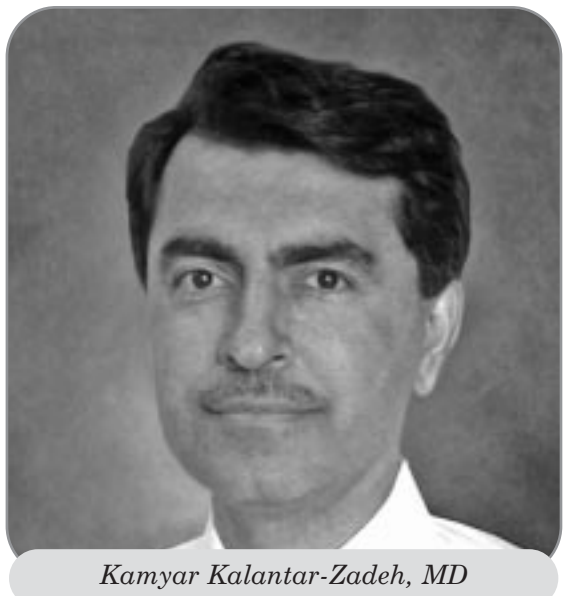
By Kamyar Kalantar-Zadeh, MD, PhD, MPH

A young doctor continues his search for risk factors for heart disease in people on dialysis.

MANY PEOPLE WITH KIDNEY FAILURE WHO ARE ON DIALYSIS HAVE A HIGHER RISK OF HEART AND BLOOD VESSEL (cardiovascular) disease than the general population. The recipient of an National Kidney Foundation Young Investigator Grant, Kamyar Kalantar-Zadeh, MD, PhD, MPH, has been studying the risk factors for cardiovascular disease in people on dialysis in order to find more effective ways to improve outcomes in these individuals.

In the general population, the risk factors for cardiovascular disease include smoking, diabetes, high serum cholesterol, high blood pressure and obesity. Some of these risk factors are common in people on dialysis. However, according to Dr Kalantar-Zadeh, many studies have failed to find any link between these risk factors and the higher risk of dying for people on dialysis. For example, a recent study (called the 4D Study) did not show any survival benefit of lowering cholesterol in 1,200 people with diabetes who were on dialysis and received a medication that effectively lowered their serum cholesterol for up to five years.

"Many observational studies of dialysis patients have reported findings that differ from those in the general population," Dr. Kalantar-Zadeh says. For example, people on dialysis who are obese appear to live longer than those who are underweight. Similarly, those on dialysis with low serum cholesterol levels appear to have a higher risk of death. More surprising are studies that have shown greater survival in people on hemodialysis with higher blood pressure values, Dr. Kalantar-Zadeh adds. Similar contradictory relationships or those that disagree with each other, have also been seen in individuals with heart failure, cancer or AIDS. Some researchers have referred to these relationships, that contradict each other as "reverse epidemiology," since they have been reported mostly in epidemiologic (observational) studies, he points out.



Kamyar Kalantar-Zadeh, MD

Seeing such contradictory relationships between known cardiovascular risk factors and survival in people on dialysis has caused confusion among both doctors and patients. However, Dr. Kalantar-Zadeh says that these findings do not necessarily mean that raising blood pressure or serum cholesterol would improve survival in those on dialysis.

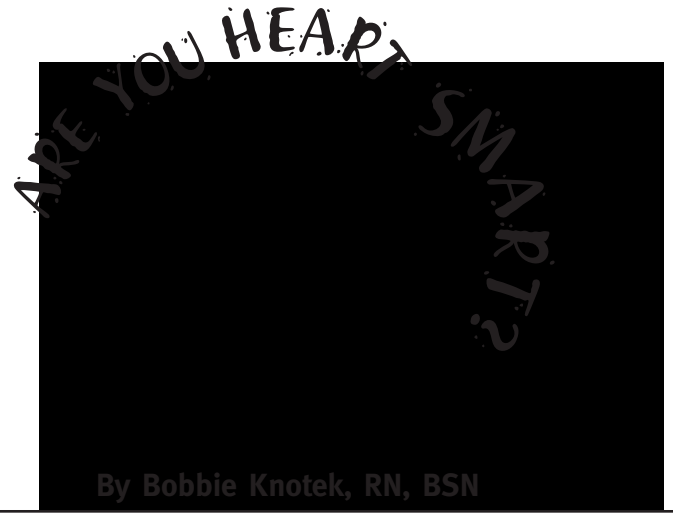
Dr. Kalantar-Zadeh has been studying the patient database of a large dialysis chain across the nation to look at the causes and effects of reverse epidemiology. "By doing so," he says, "we hope to learn the causes of the high death rate in people on dialysis, so that better treatments can be developed to improve survival.

"We think nutritional factors or inflammation may play an important role in creating these unusual conflicts in individuals on dialysis," Dr. Kalantar-Zadeh adds. Many studies have shown that in people on dialysis, other factors help to predict poor survival, such as anemia, high serum phosphorus or calcium levels, malnutrition and inflammation. Fortunately, some of these risk factors, such as anemia or high phosphorus and calcium, can be effectively treated.

"More studies are needed to find ways to improve nutritional status or to correct inflammation and to study whether such interventions can improve survival in people on dialysis," says Dr. Kalantar-Zadeh.

Dr. Kamyar Kalantar-Zadeh is the recipient of an NKF Young Investigator Grant. He is an associate professor of medicine in the Division of Nephrology and Hypertension at Harbor-UCLA Medical Center in Torrance, CA, and also directs their Dialysis Expansion Program and Epidemiology. Family Focus

"In the general population, the risk factors for cardiovascular disease include smoking, diabetes, high serum cholesterol, high blood pressure and obesity."



ALTHOUGH THE HEART IS ONE OF THE MOST IMPORTANT organs in the body, many of us take our heart for granted. We smoke, eat the wrong foods and feel we are too busy to exercise. Often, it takes chest pain, shortness of breath or a heart attack to make us start taking better care of the only heart we will ever have.

Do not be one of those people who waits for heart problems to begin. Start taking better care of your heart today! You can start by taking the quiz listed below. Then read the other articles in this newspaper for ideas on how you can take better care of your heart.

1. *True or False*: Part of your heart lies under the flat breastbone in the middle of your chest.

2. The adult heart is about the size of a fist and weighs: (*choose one*)
   a) less than a pound
   b) about two and a half pounds
   c) five pounds
   d) eight pounds

3. At rest, how much blood does the heart pump through the body? (*choose one*)
   a) two cups of blood every minute
   b) five quarts of blood every minute
   c) 12 quarts of blood every minute
   d) 20 quarts of blood every hour

4. Did you know your heart is a muscle? It is called the: (*choose one*)
   a) quadriceps muscle
   b) myocardium
   c) triceps muscle
   d) biceps muscle

5. Your heart muscle is different than other muscles in the body because it: (*choose one*)
   a) has to have a constant supply of oxygen to stay healthy
   b) is the only muscle that can go without oxygen for short periods of time
   c) gets a new supply of oxygen every five minutes
   d) does not need oxygen

6. The heart pumps blood around the body through small tubes called: (*choose one*)
   a) lymph nodes
   b) arteries and veins
   c) spinal fluid
   d) the peritoneal cavity

7. Which blood vessels deliver oxygen rich blood to the heart muscle?: (*choose one*)
   a) carotid arteries
   b) femoral veins
   c) coronary arteries
   d) pulmonary arteries

8. The inside of your heart is divided into _____ spaces called chambers. These chambers, separated by tissue walls, keep low oxygen blood (from your body) and high oxygen blood (from your lungs) from mixing. (*choose one*)
   a) two
   b) three
   c) four
   d) five

11. *True or False*: The heart pumps blood to your spleen where it "picks up" fresh oxygen for your body.

12. *True or False*: The large blood vessels that send oxygen-filled blood to your heart muscle are called carotid arteries.

13. When the blood vessels carrying blood to the heart muscle get partly or completely blocked off, the heart gives these "warning signs" that it is not getting enough oxygen: (*choose one*)
   a) chest pain (also called angina)
   b) pain that moves up the neck to the head
   c) left arm pain
   d) all of the above

14. When a blood vessel that carries blood to the heart muscle becomes totally blocked, that section of heart muscle tissue "dies." When heart muscle tissue "dies," this is called a: (*choose one*)
   a) stroke
   b) seizure
   c) heart attack
   e) pulmonary embolism

15. Your blood moves through the heart's chambers through four one-way "doors," called _____. These one-way doors control where and when the blood can go as it moves through the chambers of the heart. (*choose one*)
   a) capillaries
   b) valves
   c) arteries
   d) veins

16. *True or False*: A small, electric current passes through special nerves and tissue in the heart every few seconds "telling" the heart when to contract (beat).

17. Coronary heart disease (also called coronary artery disease, CAD and coronary atherosclerosis) happens when: (*choose one*)
   a) cholesterol and fats "clog up" the arteries of the heart
   b) the blood gets too thin
   c) the heart beats too fast
   d) the heart beats too slow

18. *True or False*: Nearly 13 million people in the United States have some form of coronary artery disease.

19. *True or False*: People who smoke are three times more likely to get heart disease and 3,000 times more likely to get lung cancer.

20. Heart attacks are dangerous because they can: (*choose one*)
   a) damage muscles that keep one-way doors (valves) between the heart's chambers closed
   b) make the heart too weak to effectively pump blood to the body
   c) "short circuit" the heart's electrical system, causing random, out-of-pattern heart beats
   d) all of the above

See answers on page 15

Centers for Disease Control Takes Aim At Cardiovascular Disease

By Roberta Bachelder, MA

The CDC educates the public on cardiovascular disease, its signs and symptoms.

THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) HAS MADE CARDIOVASCULAR DISEASE (CVD) ONE OF ITS PUBLIC EDUCATION PRIORITIES. The CDC has targeted CVD, commonly called heart disease, as one of the nation's leading "killers" in 2005. An alarming one fourth (70 million) of all Americans live with CVD. In addition, the CDC reports that the two greatest causes of CVD are uncontrolled high blood pressure and uncontrolled high blood cholesterol, or too much cholesterol in your blood. Did you know that:

- More than 30 percent of adults in the United States have high blood pressure.
- More that 31 percent of adults in the U.S. have pre-high blood pressure (or when one's blood pressure measures 120/80 to 139/89).
- Lowering high blood pressure by 12–13 points can reduce the risk of heart attack, stroke and death.
- 80 percent of people diagnosed with high blood cholesterol do not control it through diet and medicine.

People with chronic kidney disease (CKD) are among the highest risk groups for heart disease due to the fact that high blood pressure, diabetes and high blood cholesterol are common in that population. There may be other lifestyle risk factors in some of the CKD population such as smoking, physical inactivity, obesity and poor nutrition.

Here is what people with CKD can do to lower their risks for advanced heart disease and the possibility of stroke according to the CDC guidelines:

- People can lower their risk for CVD by controlling high blood pressure and high blood cholesterol levels.
- A class of drugs called statins can lower deaths from heart disease by reducing cholesterol levels; medications that lower blood pressure levels can reduce the risk for strokes, heart disease and other heart problems such as heart attacks.
- People with CKD may take beta blockers. Beta blockers are medications that slow down the nerve impulses that travel through the heart. As a result, the resting heart rate is lower, the heart does not have to work as hard and the heart requires less blood and oxygen. If a beta blocker is taken within days or weeks of a heart attack, people have a better chance of survival.
- People need to learn about the signs and symptoms of heart attacks and stroke and the importance of calling 911 quickly.

The National Institutes for Health (NIH) has a quick checklist of the signs that a heart attack may be coming. Knowing the signs and symptoms of a heart attack can help save a life.

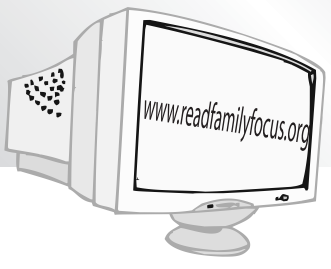
- ✓ CHEST DISCOMFORT. Most heart attacks involve discomfort in the center of the chest that lasts for more than a few minutes, or goes away and comes back. The discomfort can feel like uncomfortable pressure, squeezing, fullness or pain.
- ✓ DISCOMFORT IN OTHER AREAS of the upper body. This can include pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- ✓ SHORTNESS OF BREATH. This often comes along with chest discomfort. But it also can occur before chest discomfort.
- ✓ OTHER SYMPTOMS. These may include breaking out in a cold sweat, nausea or lightheadedness.

For more information about prevention of CVD, heart disease and stroke you can visit these Web sites:

- National Kidney Foundation **www.kidney.org**
- National Institutes of Health **www.nhlbi.nih.gov**
- Centers for Disease Control **www.cdc.gov**
- Forum of ESRD (End-Stage Renal Disease) Networks **www.esrdnetworks.org** Family Focus

Family Focus
is available on the Web.
To find this issue or back issues of the newspaper go to

www.readfamilyfocus.org



People can lower their risk for CVD by controlling high blood pressure and high blood cholesterol levels.

You Can Lower Your Risk of Heart Disease

By John M. Newmann, PhD, MPH

Adopting a heart healthy lifestyle is good for the heart and the kidneys.

THE MANY HEALTH CHALLENGES THAT WE ALL FACE DURING OUR LIFETIMES CAN BE EVEN MORE SERIOUS FOR PEOPLE WITH CHRONIC KIDNEY DISEASE (CKD). In the general population, people age 60, on average, live an additional 21.9 years. People on dialysis between the ages of 60-64 live, on average, an additional 4.3 years; and transplant recipients ages 60-64 can expect to live, on average, an additional 11.8 years. [1] These are only averages, and if you are reading this, you are not likely to be "average." Some form of heart disease, such as heart attacks or strokes, is the major cause of death in the United States for those with normal kidney function. But heart disease is also the major cause of death among those with CKD, especially people who are on dialysis. Individuals with CKD have heart failure and heart attacks more often than those with normal kidney function. For example, according to the United States Renal Data System (USRDS) 2004 Annual Data Report, about 10 percent of people who have Medicare may experience heart failure, compared with 40 percent of those with CKD, and about 70 percent of individuals on dialysis (seven times more than individuals with Medicare who do not have CKD!) [2] Therefore, the risks of dying from heart disease are not only greater for people with CKD, but death usually comes at much younger ages, when compared with people who have normal working kidneys.[1]

The major risks of heart disease for anyone are well-known:

- high blood pressure
- excessive weight (obesity)
- smoking
- no regular physical exercise
- stress

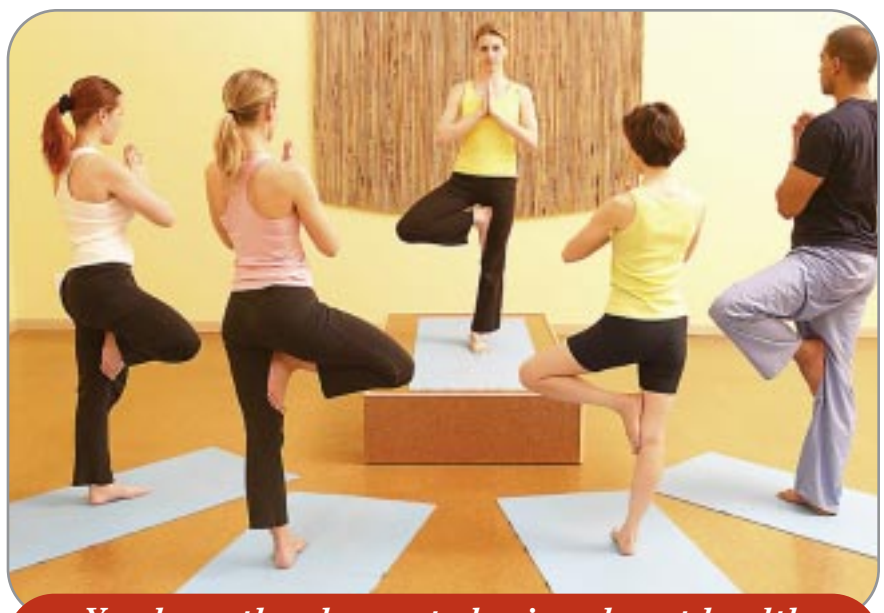
People on dialysis have added risks:

- gaining too much weight from fluids between dialysis treatments (causing the heart to work harder to pump more fluid) has been shown to raise the risk of death by 12 percent [3]
- taking off too much fluid weight during the first hemodialysis treatment of each week (quickly lowering the volume the heart has been pumping) has been linked with some reported deaths on Mondays and Tuesdays. [4]
- high blood levels of potassium from eating or drinking too many high potassium foods and/or liquids (high blood levels of potassium cause severe muscle weakness, and the heart is one big muscle)
- high blood sodium levels from eating too many high sodium or salty foods increases thirst and blood pressure

This is not news. All of us know high blood pressure, smoking, weighing too much, lack of regular exercise and stress are huge risk factors for heart disease—but all of us do not necessarily do anything on a regular basis to lower those risks. Some of us who began hemodialysis in the 1960s, 70s and 80s wanted to feel stronger and counter the challenges to the heart that go along with CKD. Our nephrologists (kidney doctors) gave us referrals for Medicare covered physical therapy evaluations to begin regular exercise for heart conditioning, muscle strengthening and stretching; in some cases, we meditated for relaxation and to lower stress levels. Some of us tried yoga, Tai Chi, gardening, walking, tennis and swimming—whatever we enjoyed, with a doctor's approval. We had "forward thinking" kidney dietitians who suggested we work on limiting potassium and sodium intake. We expect and hope many others who began dialysis since 1990 have experienced good heart healthy nutritional counseling from dietitians and physical therapy referrals from nephrologists, and have tried many of these activities to lower risks of heart disease.

Think of the many lifestyle changes you have made adjusting to and coping with kidney failure. Now you have to deal with the added news of the high risk of heart disease. However, you have the chance to begin (or continue with) a heart healthy lifestyle, which includes weight loss, no smoking, better food and fluid monitoring, low saturated fat intake, regular exercise and stress relief techniques—all under your doctor's guidance.

Continued on page 11



You have the chance to begin a heart healthy lifestyle, which includes regular exercise and stress relief techniques.

Emotions and Your Heart: Is There a Connection?

By Karren King, MSW, ACSW, LCSW

Research has shown there is a link between the physical body and one's emotions.

IT IS NOT UNUSUAL FOR PEOPLE WITH CHRONIC KIDNEY DISEASE (CKD) TO EXPERIENCE VARIOUS MOODS WHEN DEALING WITH THEIR ILLNESS. Research shows that 30 to 50 percent of the dialysis population experiences depression. [1] One study found that 1/4 of their dialysis population had symptoms of depression and 50 percent of those individuals were experiencing depression that was clinically significant, meaning it was severe enough to affect such things as sleeping and eating habits.[2] Although everyone becomes depressed at times, those on dialysis have been shown to have more depression than people who are not on dialysis.[3]

People on dialysis also have a higher rate of anxiety than individuals not on dialysis.[3] Almost half of the people on dialysis in one study had anxiety. [2] Research has also shown that people on dialysis not only experience hostility but, once again, also experience it more often than those who are not on dialysis.[4, 5]

So what does all of this have to do with cardiovascular disease (CVD)? Although there is no research linking these emotions with CVD in the dialysis population, there is ample evidence showing a positive relationship between each of these emotions and CVD in the general population.

Research has shown that when people experience depression they are not only at higher risk for developing CVD, but if they already have cardiac disease they are more likely to have cardiac complications such as a heart attack or needing coronary artery bypass surgery. [6, 7, 8] People who were depressed were also much more likely to die from CVD.[8] There have been similar findings for anxiety and hostility. Research documents that anxiety not only contributes to the development of CVD but as anxiety levels rise, symptoms of cardiac disease may worsen.[7, 9] If individuals have both depression and anxiety their cardiac risk is even higher than if they experienced only one of these moods.[7] Hostility has been shown not only to contribute to developing CVD but also to increase the likelihood of dying from cardiac causes.[10, 8]

There are a variety of reasons that depression, anxiety or hostility may be associated with CVD. It is possible that people who experience these moods may be more likely not to follow their dialysis or dietary prescriptions and that, in turn, may negatively affect their cardiovascular (CV) functioning. People may also be more likely to engage in high-risk behaviors, such as smoking, if they are experiencing these emotions, and such behaviors may have a negative impact on CV health. However, there are also many physiological effects which could have an impact on CV health when experiencing these emotions.[6, 7, 8]

The good news is that if you are feeling depressed, anxious or hostile there are things that can help. The first is to assess whether you are receiving enough dialysis and if your anemia is under control, as both of these can affect your quality of life and, consequently, your mood. Also, ask your physician to evaluate your physical health and review your medications to assure that neither is contributing to how you feel.

"Assuring there is support from family or friends can lower your risk of depression as well as having cardiac disease."

Assuring there is support from family or friends can lower your risk of depression as well as having cardiac disease.[7] If this support is lacking, talk to your social worker to explore other ways to improve your support network. Group counseling that focuses on ways to decrease hostility has been found to be successful not only in actually reducing that emotion but also in reducing cardiac deaths.[7] Therapy focusing on one's thoughts and behaviors has been shown to be effective in lowering depression and anxiety, as well as high blood pressure, which can contribute to death from CVD.[11] Relaxation techniques, including biofeedback, controlled breathing and simple relaxation exercises, have been found to have positive effects on CV health.[12, 7, 13] People with chronic kidney disease (CKD) who were educated about their illness prior to beginning dialysis were found to have improved moods, and these positive effects remained for the first six months after dialysis began.[14] If dialysis is in your future, this is yet another reason to make sure you learn about CKD! Medication to treat depression or anxiety may also be considered, especially if you have not responded to other types of treatment. Research has shown that those with CKD can benefit psychologically from medication treatment.[15]

Remember that while experiencing depression, anxiety or hostility may be normal, these emotions can have harmful effects on your physical health in addition to making you feel bad emotionally. There is help available to you. Do not be afraid to look for it.

REFERENCES:

1. Kimmel PL, Weihs K, Peterson RA: Survival in hemodialysis patients: the role of depression. *J Am Soc Nephrol* 4:12-27, 1993.
2. Kutner NG, Fair PL, Kutner MH: Assessing depression and anxiety in chronic dialysis patients. *J Psychom Res* 29:23-31, 1985.
3. Livesley WJ: Symptoms of anxiety and depression in patients undergoing chronic haemodialysis. *J Psychom Res* 26:581-584, 1982.
4. Fava M, Serafini E, DeBesi L, Adami A, Mastrogiacomo I: Hyperproilactinemia and psychological distress in women undergoing chronic hemodialysis. *Psychother Psychosom* 49L6-9, 1988.

Continued on page 13

The Federal Government Funds Studies on Heart Disease and Chronic Kidney Disease

By Dolph Chianchiano, JD, MPH

In their ongoing support of those with CKD, the federal government tackles the relationship between heart disease and CKD.

AS YOU LEARNED FROM OTHER ARTICLES IN THIS ISSUE of *Family Focus*, people with chronic kidney disease (CKD) are prone to heart and blood vessel problems, including high blood pressure. This might have something to do with unhealthy personal habits such as tobacco use and physical inactivity, which have been linked with these illnesses in the past, or there might be some unique things about people with CKD that makes them more at risk for cardiovascular disease.

The federal government is funding research through the National Institute of Diabetes and Digestive Diseases (NIDDK) to help us better understand the relationship between CKD and heart disease. A description of a few of these studies follows:

1 NIDDK started the Chronic Renal Insufficiency Cohort (CRIC) Study to find out about risk factors for a decline in kidney function and the development of cardiovascular disease. The CRIC study involves 3,000 people, ages 21 to 74, with mild to moderate CKD. Participants are being selected so that the group will be racially and ethnically diverse (40 percent white/ Caucasian, 40 percent African American and 20 percent from other ethnicities), and about half of the study participants will have diabetes. CRIC will take seven years to complete, during which changes in the health of the participants will be monitored. The study will look at the genetic, environmental, behavioral and nutritional factors in these populations. It will also look at health care issues and quality of life. The following tools will be utilized to assess quality of life: Beck Depression Inventory, Kidney Disease and QOL (Quality of Life), Mini Mental State Exam and Symptoms List.

All study participants will have a cardiogram at year one and year four of follow-up to document changes in heart function. The study began in April 2003 at seven clinical centers: University of Pennsylvania, Philadelphia; University of

Dolph Chianchiano, JD, MPH

Maryland-Johns Hopkins, Baltimore; University of Illinois at Chicago Clinical Centers; University of Michigan, Ann Arbor; Kaiser Permanente of Northern California/University of California, San Francisco; Tulane University, New Orleans; and Case Western Reserve University, Cleveland. The data-coordinating center is at the University of Pennsylvania.

2 The Folic Acid for Vascular Outcome Reduction in Transplantation (FAVORIT) project began in August 2001 and will end January 31, 2006. This NIDDK study will explore whether a high-dose combination of folic acid, vitamin B12 and vitamin B6 will lower the rate of cardiovascular disease among stable kidney transplant recipients. In addition to giving insights to improve care for transplant recipients, it is hoped that all people with CKD will benefit from this research since kidney transplant recipients have many of the same traits as people with cardiovascular disease and CKD. Recruitment for FAVORIT began in July 2002. Ultimately, 4,000 kidney transplant recipients will participate in the study.

Participating institutions are Rhode Island Hospital; University of Iowa; Albany Medical Center; Cedars Sinai Health System; Duke University Medical Center; Hennepin County Medical Center (Minneapolis); Indiana University; London (Ontario, Canada) Health Sciences Center; Medical College of Wisconsin; Ohio State University; Oregon Health Sciences University; SUNY Downstate Medical Center; University of Alabama at Birmingham; University of California at Los Angeles; University of California at San Francisco; University of Maryland Medical Center; University of Michigan Medical Center; University of Toronto; University of Wisconsin; and Washington University. The data-coordinating center is at the University of North Carolina.

3 **Continuation of the African American Study of the Kidney (AASK)**

In 1990, the NIDDK began a study to learn about ways to slow the progression of CKD caused by high blood pressure in African Americans. In 2001, as a result of the AASK study, an important discovery was made, namely that certain types of medicines that control high blood pressure are more effective than others for slowing kidney disease in African Americans. The main goal in continuing the AASK Study is to study the environmental, social, economic, genetic, physiologic and other factors that affect the progression of CKD related to high blood pressure in African Americans.

For more information about these studies and other research supported by NIDDK that could improve the health and well-being of people with CKD, check the Internet at **www.clinicaltrials.gov**.

A large amount of tax dollars goes into these studies, with the goal of improving the health and well-being of people with CKD. The cost of the research described in this article is $15 million per year. That level of support is especially significant in this era of budget tightening. Members of Congress need to know how much the kidney community appreciates this research funding so that they will continue to make resources available to study kidney disease in the future.

Therefore, we encourage you to write letters of thanks to your members of Congress for their support. Through the National Kidney Foundation's People Like Us patient empowerment initiative, we are strengthening the voices of people with chronic kidney disease and encouraging their involvement on public policy and other issues affecting their health. In learning to become effective, proactive patient advocates, People Like Us members have begun to regularly communicate and meet with their elected officials. For more information on contacting your members of Congress, or to learn more about People Like Us patient advocacy activities, please e-mail **peoplelikeus@kidney.org**.

HEALTHY LIFESTYLES:
Important for Everyone

By Patricia Painter, PhD

Quitting smoking is part of adopting a heart healthy lifestyle.

THE NATIONAL KIDNEY FOUNDATION *KDOQI CLINICAL PRACTICE GUIDELINES FOR CARDIOVASCULAR DISEASE (CVD) IN DIALYSIS PATIENTS* were published in April 2005. The Guidelines are just that—guidelines—and are recommendations for management of certain conditions. They are not requirements, but are considered the best practice based on research evidence.

Guideline number 14 is entitled "Smoking, Physical Activity and Psychological Factors." It is well-known that traditional risk factors for getting CVD, such as diabetes, hypertension (high blood pressure) and high cholesterol are very common in people on dialysis and should be looked at often and treated according to current recommendations. In addition to these usual medical risk factors, there are lifestyle factors, too, that are known to play an important role in getting cardiovascular disease—specifically smoking, physical inactivity and psychological factors such as depression, anxiety and hostility. This article will focus on the physical activity and smoking part of this KDOQI Guideline and what people on dialysis can do to lower their lifestyle risk factors to cut their overall cardiovascular risk.

Cigarette smoking is known to be a risk factor for CVD, and smoking should be discouraged in people with CKD. This recommendation is even more important due to the relationship between smoking and poor outcomes in people on dialysis and those with a transplant.

If you smoke, you need to stop smoking. This is not easy to do and you may need extra help with it. If your smoking is not talked about by your health care team, be sure to ask them for information. If there is no information available from your dialysis providers, then there are many avenues to take. **Make a commitment to yourself and your health to quit smoking**. Then: 1) Contact your local office of the American Lung Association or the American Heart Association and ask for information about quitting smoking. These organizations have educational materials and information about local smoking cessation programs that may be helpful. 2) Enroll in a smoking cessation program. These programs provide tips to help motivate and encourage you to quit smoking. There are many ways to quit and these programs can help you find the one that works best for you. 3) Talk to your doctor about using over-the-counter nicotine replacements such as nicotine patches, gum or lozenges. A nicotine nasal spray or inhaler is also available by prescription. A non-nicotine option is buprorion, which is an antidepressant medication that has been shown to help people quit smoking.

Make a commitment to yourself and your health to quit smoking.

Keep in mind that your doctor may be reluctant to suggest these medications because there is very little research available about the effects for people on dialysis. Nicotine may build up in your system when using the nicotine replacement therapies, so you may need to keep a careful eye on these levels. However, there are people on dialysis who use these medications and have been able to quit smoking.

Since you see your health care team in the dialysis unit on a regular basis, you should not hesitate to ask them for support in your efforts to quit smoking. Also, ask your family and friends for support. If others in the home are smokers, ask them to stop smoking in the house or in your presence—or ask them to quit with you.

Continued on page 15

You Can Lower Your Risk...

Continued from page 8

It is up to each of you to decide which side of the statistics you want to be on: the long-term survivors, who actively and consistently spend time and effort daily to lower heart disease risks; or the other side, where individuals are not sure that it makes a difference, or do not have the drive to make new life saving/life enhancing changes to their usual routines. Research has shown that heart healthy changes can improve your health status (for example, blood pressure, cholesterol and lipid lab tests), how you feel, your strength, endurance and overall mood. It is not too late to start now, no matter what your age!

REFERENCES:

1. U.S. Renal Data System, USRDS 2004 Annual Data Report, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2004; Figure 6.a: Expected remaining lifetimes (years) of the general U.S. population, 2001; of prevalent dialysis patients, 2002; of prevalent transplant patients, 2002. Interpreted by the author.
2. Ibid. Figure 9.1 Rates of heart failure, AMI, & cardiac arrest. Interpreted by the author.
3. Saran R, Bragg-Gresham J, Rayner H, et al: Nonadherence in Hemodialysis: Associations with Mortality, Hospitalization, and Practice Patterns in the DOPPS, *Kidney International* 64: 254-262, 2003.
4. Bleyer JB, Russell B, Satko SG: Sudden and cardiac death rates in hemodialysis patients. *Kidney International* 55:1553-1559, 1999.

John Newmann has had kidney disease since 1971 and received a transplant from his daughter in 1993, which he continues to enjoy. Family Focus

Heart-Healthy Nutrition for Adults on Dialysis

By Jordi Goldstein-Fuchs, DSc, RD

Foods that are heart healthy for people with CKD include, among others, oil from many kinds of fish.

THE NATIONAL KIDNEY FOUNDATION'S *KDOQI CLINICAL PRACTICE GUIDELINES FOR CARDIOVASCULAR DISEASE IN DIALYSIS PATIENTS* are now available for review. They were published in the April 2005 Supplement to the *American Journal of Kidney Diseases* [1].

These guidelines give information about evaluating and treating cardiovascular (heart) diseases such as acute coronary syndromes, valvular heart disease and cardiomyopathy. Guidelines for managing cardiovascular risk factors such as smoking, physical activity and psychological factors are also discussed.

Nutrition matters for people with heart disease are complex and many sided. Recommendations for treating high blood lipids (fats) and high blood pressure are discussed in the National Kidney Foundation KDOQI Guidelines for dyslipidemia [2] and hypertension. [3] Therefore, the new *Clinical Practice Guidelines for Cardiovascular Disease* focused on two key issues that had not been addressed: omega-3 fatty acids and an amino acid called homocysteine. Because experts disagree about how omega-3 fatty acids or homocysteine affect people with kidney failure (CKD Stage 5), the information is more of a discussion rather than an actual guideline or recommendation.

Fish oil is known to be a source of omega-3 fatty acids and is recognized for its ability to reduce inflammation and for a fat in the blood called triglycerides, which are often higher in people receiving dialysis treatment. Food sources for omega-3 fatty acids include flaxseed oil, canola oil, walnuts and some leafy greens.

It is not known for sure if people with CKD Stage 5 benefit from having omega-3 fatty acids in their diets. However, because there is a large amount of proof of the positive effect of omega-3 fatty acids on heart health, it is important for people on dialysis to be aware of the possible advantages of adding omega-3 fatty acids to their diets. Be sure to discuss your interest and concerns with your kidney dietitian and doctor. A sampling of food sources and content of the EPA and DHA fatty acids is shown in Table 1.

HOMOCYSTEINE AND FOLIC ACID

Homocysteine is an amino acid. When homocysteine levels in the blood are too high (called hyperhomocysteinemia), it has been found to be a risk factor for heart disease in the general population. Whether this is true for people on dialysis is unknown. What has been shown is that high levels of homocysteine can be lowered by folic acid, a B vitamin. While high levels of homocysteine can be lowered, they do not always return to the normal range. It is not clear if the decrease in homocysteine blood levels that occurs by folic acid lowers the risk of heart disease.

Continued on page 13

Table 1. American Heart Association Guidelines for the American Population with Modifications for Consideration for Individuals Receiving Kidney Replacement Therapy.

AHA Guidelines for Omega-3 Fatty Acids	Considerations for Dialysis Patients
Patients without documented CHD (Coronary Heart Disease): Eat a variety of (preferably oily) fish at least twice per week. Include oils and foods rich in alpha-linolenic acid (flaxseed, canola and soybean oils; flaxseed and walnuts)	While the fish and oils can be included in the diet, the use of nuts, seeds and grains that are high in potassium such as flaxseed and walnuts (see Table 2) will need to be avoided or used on a case by case basis under supervision by an RD and MD. Patients who dislike fish can consider taking a low dose of eicosapentaenoic acid (EPA) and docosahexanenoic acid (DHA) supplement, providing less than 1 gram per day. EPA and DHA are the omega-3 fatty acids that provide anti-inflammatory and lipid lowering properties.
Patients with documented CHD: Consume approx. 1 gm EPA+DHA per day, preferably from oily fish. EPA+DHA supplements could be considered in consultation with the physician.	Clinical bleeding is unusual in doses less than 2 grams. However, patient's bleeding times should be monitored, especially if the patient is receiving anticoagulation therapy.
Patients needing triglyceride lowering: Two to four grams of EPA+DHA per day provided as capsules under a physician's care.	Bleeding times will need to be monitored as above. The patient's requirement for antioxidants may be increased and omega-3.

Table 2. EPA and DHA content of selected cold water fish. [1]

	EPA+DHA Content, g/3-oz Serving Fish (Edible Portion) or g/g Oil	Amount Required to Provide≈1 g of EPA+DHA per Day, oz (Fish) or g (Oil)
FISH		
Tuna		
Light, canned in water, drained	0.26	12
White, canned in water, drained	0.73	4
Fresh	0.24-1.28	2.5-12
Sardines	0.98-1.70	2-3
Salmon		
Chum	0.68	4.5
Sockeye	0.68	4.5
Pink	1.09	2.5
Chinook	1.48	2
Atlantic, farmed	1.09-1.83	1.5-2.5
Atlantic, wild	0.9-1.56	2-3.5
Mackerel	0.34-1.57	2-8.5
Herring		
Pacific	1.81	1.5
Atlantic	1.71	2
Trout, rainbow		
Farmed	0.98	3
Wild	0.84	3.5
Halibut	0.4-1.0	3-7.5
Cod		
Pacific	0.13	23
Atlantic	0.24	12.5
Haddock	0.2	15
Catfish		
Farmed	0.15	20
Wild	0.2	15
Flounder/Sole	0.42	7

Heart Healthy Nutrition...

Continued from page 12

Table 2. EPA and DHA content of selected cold water fisH[1] *Cont'd*

	EPA+DHA Content, g/3-oz Serving Fish (Edible Portion) or g/g Oil	Amount Required to Provide≈1 g of EPA+DHA per Day, oz (Fish) or g (Oil)
Oyster		
Pacific	1.17	2.5
Eastern	0.47	6.5
Farmed	0.37	8
Lobster	0.07-0.41	7.5-42.5
Crab, Alaskan King	0.35	8.5
Shrimp, mixed species	0.27	11
Clam	0.24	12.5
Scallop	0.17	17.5

Modified from: Kris-Etherton P, Harris W, Appel L: Fish consumption, fish oil, omega-3 fatty acids and cardiovascular disease. Circulation: 2002:106:2747-2757. NOTE: The intakes of fish given above are very rough estimates because oil content can vary markedly (>300%) with species, season, diet and packaging and cooking methods.

It is clear, however, that not enough folic acid in the diet—riboflavin (B2) pyridoxine (B6) and cobalamin (vitamin B12)—can raise homocysteine levels. Therefore, it is very important that people with CKD Stage 5 take a vitamin supplement that gives the recommended dietary allowances (RDA) for each of these three nutrients. There are many vitamin supplements available for people with CKD that have the nutrients you need and leaves out those that you do not want to take, such as fat soluble vitamin A. Ask your kidney dietitian and doctor which vitamin is best for your overall health. This supplement should have at least 1 mg of folic acid.

This is a complicated topic! If you are interested in learning more about omega-3 fatty acids and homocysteine, be sure to speak with your registered dietitian and nephrologist. They can best determine how to incorporate this information into your diet.

REFERENCES

1. National Kidney Foundation. *KDOQI Clinical Practice Guidelines for Cardiovascular Disease in Dialysis Patients. Am J Kidney Dis* 45:S1-S154, 2005 (suppl 3).
2. *National Kidney Foundation KDOQI Clinical Practice Guidelines for Managing Dyslipidemias in Chronic Kidney Disease* (2003a). *Am J Kidney Dis* 41;s1-s91 (suppl 3).
3. *National Kidney Foundation. KDOQI Clinical Practice Guidelines on Hypertension and Antihypertensive Agents in Chronic Kidney Disease. Am J Kidney Dis* 43:5, 2004, suppl 1.

Jordi Goldstein-Fuchs, DSc, RD has worked in the specialty area of kidney nutrition as both a researcher and Registered Dietitian for many years. She continues to work in these capacities in Reno, NV, and is Editor of the Journal of Renal Nutrition. Family Focus

Hurricane Relief Aid

THOUSANDS OF VICTIMS OF HURRICANES KATRINA, RITA and WILMA face homelessness and devastation, but kidney patients without access to dialysis treatment face life-threatening danger in addition to loss of property.

To help people with chronic kidney disease (CKD) in the affected areas get the services they need, the NKF has created a relief resource network posted on **www.kidney.org**, offering dialysis locations and treatment information, other direct patient assistance and information for health care professionals interested in volunteering for the effort.

"We are very gratified by the terrific cooperation we have seen by everyone involved in helping patients deal with this disaster. National Kidney Foundation Affiliates, other kidney organizations, the large dialysis organizations and the kidney-related industries have all worked hard and closely together on behalf of the people who are suffering," stated John Davis, CEO of the NKF.

To contribute to the Foundation's Patients Hurricane Relief Fund, visit **www.kidney.org** or mail checks to the National Kidney Foundation Patients' Hurricane Relief Fund, 30 E. 33rd Street, New York, NY 10016. One hundred percent of funds contributed to the Relief Fund will go directly towards patient assistance.

Emotions and Your Heart...

Continued from page 9

5. White Y, Grenyer BF: The biopsychosocial impact of end-stage renal disease: the experience of dialysis patients and their partners. *J Adv Nurs* 30:1312-1320, 1999.
6. Musselman DL, Evans DL, Nemeroff CB: The relationship of depression to cardiovascular disease: epidemiology, biology and treatment. *Arch Gen Psychiat* 55:580-592, 1998.
7. Rozanski A, Blumenthal JA, Kaplan J: Impact of psychological factors on the pathogenesis of cardiovascular disease and implications for therapy. *Circulation* 99:2192-2217, 1999.
8. Sirois BC, Burg MM: Negative emotion and coronary heart disease: a review. *Behav Modif* 27:83-102, 2003.
9. Medalie JH, Goldbourt U: Angina pectoris among 10,000 men. II Psychosocial and other risk factors as evidenced by a multivariate analysis of a five year incidence study. *Am J Med* 60:910-921, 1976.
10. Booth-Kewley S, Friedman HS: Psychological predictors of heart disease: a quantitative review. *Psychological Bulletin* 101:343-362, 1987.
11. Suinn RM: The terrible twos—anger and anxiety. Hazardous to your health. *Am Psychol* 56:27-36, 2001.
12. Mayne TJ, Ambrose TK: Research review on anger in psychotherapy. *J Clin Psychol* 55:353-363, 1999.
13. Alacron RD, Jenkins CS, Heestand DE, Scott LK, Cantor L: The effectiveness of progressive relaxation in chronic hemodialysis patients. *J Chronic Dis* 35:797-802, 1982.
14. Klang B, Bjorvell H, Berglund J, Sundstedt C, Clyne N: Predialysis patient education: effects on functioning and well-being in uraemic patients. *J Adv Nurs* 28:36-44, 1998.
15. Kimmel PL: Depression as a mortality risk factor in hemodialysis patients. *Int J Artif Organs* 15:696-700, 1992. Family Focus

A HEALTHY HEART:
What Can You Do About It?

By Karren King, MSW, ACSW, LCSW

CHRONIC KIDNEY DISEASE (CKD) AND HEART DISEASE ARE CLOSELY LINKED. AS A RESULT, THIS ISSUE'S *FAMILY FOCUS* VOICES QUESTION EXPLORED HOW READERS ATTEMPT TO REMAIN "HEART HEALTHY."

THE RESPONSES SHOWED COMMON THEMES. Eighteen of the 27 respondents do some type of exercise. Many do what we think of as traditional forms of exercise like walking, running or biking. Others engage in sports such as golf. One person even shared how taking up competitive ballroom dancing one year ago impacted her life. Her blood pressure and cholesterol have lowered, she lost 80 pounds and her strength and energy have improved. Still others say they do household chores or gardening for physical exercise. Several shared that they do strength training in addition to aerobic exercise. Some exercise independently while others go to a gym. There are all levels of exercisers. One individual has run five miles a day, five days each week, for the past 36 years! Everyone who exercises, whatever form, has every right to feel proud. The key is to exercise even when it may not be easy. One woman said that regardless of how she feels she tries to "make" herself do some form of exercise. While she says it may be a struggle to get started, once she "gets going" she finds she has more energy. One respondent urges all who have CKD to find some form of physical activity they enjoy and not think of it as an exercise program but rather as a major part of their lifestyle. She has taken her own advice, and in her words, "I would never go back to my inactive state again!"

One respondent urges all who have CKD to find some form of physical activity they enjoy and not think of it as an exercise program but rather as a major part of their lifestyle.

MANY RESPONDENTS SAY THEY EAT "HEART HEALTHY." They eat fresh fruits and vegetables that are allowed on their diet, whole grains, chicken and fish such as salmon. They also follow diets which are low in saturated fat and use olive or canola oils when cooking. Avoiding salt and substituting herbs and other seasonings is how several respondents aid their hearts. The importance of keeping an eye on monthly laboratory reports and focusing on potassium and cholesterol levels was also stressed. They select foods carefully when eating out. Some report that it is easier to control their diets when they prepare "home cooked" meals and do not use packaged foods. One person pointed out that with something new and interesting always on her table it does not feel like a diet. An individual who has been on dialysis for 24 years stressed that "diet is a big thing" with kidney failure in general and following dietary recommendations now will make a BIG difference in how one feels later in life. It would seem this person could qualify as an expert in this area after 24 years on dialysis!

LIFESTYLE CHOICES MAY AFFECT ONE'S HEART. Several pointed out that they do not smoke or drink, although one person did share that she thinks of drinking a small quantity of red wine as something she does to help her heart. The importance of keeping body weight under control was also mentioned by several people. Keeping low levels of stress was the goal of several, with an individual reporting that yoga is helpful in achieving this.

TAKING SUPPLEMENTS SUCH AS FISH OIL and other medications to aid in controlling cholesterol and blood pressure was mentioned by several people as something they do to help maintain a healthy heart. Some shared that it was important to have regular examinations by their doctor. While it is important to remember that there is an entire health care team available to help you stay heart healthy and that it is important to always check with your doctor before starting any new treatment, the importance of being your own health advocate was stressed. One respondent urged those with CKD to learn about their medical condition, ask questions about things not understood and take an active role in their own health care.

THE RESPONDENTS SHOWED GREAT WISDOM IN THEIR WORDS. One pointed out that "having a healthy lifestyle and making healthy choices are major factors in empowering a person to have control over his or her health." Another shared that while "there are no guarantees in this world, there are medications, behaviors and health practices that can prolong life and make it very enjoyable." Ask yourself what you can begin to do today that may help you have a long and enjoyable life. You are definitely worth it. Family Focus

Family Focus VOICES

WE LOVE TO HEAR FROM OUR READERS, so every issue of *Family Focus* includes a special question.

Read the question below, also posted online at **www.familyfocusvoices.org**, and let us know what you think.

With all you have to do in your life, including dialysis, how do you maintain a balance?

You may visit the Web site above to share your thoughts, or send your response in writing to:

Family Focus Voices
30 East 33rd Street
New York, NY 10016

Healthy Lifestyles...

Continued from page 11

Few dialysis centers actually offer the opportunity to exercise and all nephrologists (kidney doctors) do not regularly encourage patients to be physically active. So starting an exercise plan may be entirely up to you. If you have difficulty walking or are unable to walk, have problems of muscle weakness, have nerve problems (reduced feeling) in your feet or hands or other bone or joint problems, you can ask for a referral to a physical therapist for treatment. Once you are treated for these problems you may be better able to do more physical activity. Physical therapy is covered under Medicare Part B—you just need a doctor's referral and a physical therapist who can help you with your specific problems.

If you live with or have suffered from CVD-related conditions, such as a heart attack, bypass surgery, chest pain or angina, you qualify in most states for cardiac rehabilitation. Unfortunately, many people on dialysis who have CVD are not referred for rehabilitation because they are on dialysis. This is not acceptable. Check with your cardiologist (heart doctor) and ask for a referral for cardiac rehabilitation. The cardiac rehabilitation program will only be covered by insurance for a short time (usually three months), during which time you should pay close attention and learn as much as you can about continuing the program on your own when insurance coverage stops. This includes understanding symptoms, how to progress with your exercise, when you should not exercise and when to contact your doctor if you have certain symptoms. Once you complete a cardiac rehabilitation program, you should be able to continue on your own at home or in a gym or club setting.

It is safe for people on dialysis to join an exercise program that starts slowly and progresses gradually.

It is safe for people on dialysis to join an exercise program that starts slowly and progresses gradually. There are many benefits to regular exercise. While you must make a commitment of time and effort, the benefits are well worth it in terms of improved strength and ability to "keep going" (which is endurance), overall functioning and quality of life. The commitment is up to you. You do not have to wait for your dialysis provider to start a program in the clinic.
Checking your physical functioning should be done to be sure your ability to walk, get around and do the things you need to do are not getting worse. If your doctor or someone in the dialysis clinic is not checking this on a regular basis, you can test yourself to keep track of your condition. Here are a few ways:

1) Keep a diary of your physical activity and review it often. Bring this to your doctor or go over it with your nurse, dietitian or social worker at the dialysis clinic. Look back every month or so to see what you were doing before to compare your current levels of activity.
2) You can do specific tests, like how long it takes to walk a certain distance near your house or around a track. Do this on a regular basis to be sure you are staying at the same level of functioning and even improving after you start a regular program of physical activity. The important thing is not to get used to low levels of functioning and not to think that this is "just the way it is" now that you are on dialysis.[1]

The bottom line is that the lifestyle choices each of us make can be the difference between a normal level of functioning and overall health or not. Making changes towards positive health attitudes and behaviors requires a commitment by each of us. Make a commitment to yourself, your health and your well-being and work towards quitting smoking (if you smoke) and towards regular physical activity. Your body will be grateful and appreciate your efforts, and you will lower your risk of having problems with CVD in the future.

REFERENCES

1. Painter P: *Exercise for the Dialysis Patient: A Comprehensive Program*. University of California at San Francisco, 2000.

Patricia Painter is an exercise physiologist and is adjunct associate professor in the Department of Physiological Nursing at the University of California at San Francisco. Family Focus

THE NKF HAS A BOOKLET ON FITNESS, *Staying Fit With Kidney Disease*, which is available for order by calling 800-622-9010. Also available is the Life Options Educational Booklet entitled *Exercise for the Dialysis Patient: A Comprehensive Program,* which is available at **www.lifeoptions.org**.

Answers to Are You Heart Smart on page 6

1.	True	6.	b	11.	False - oxygen is picked up in the lungs	16.	True
2.	a	7.	a	12.	False - they are called the coronary arteries	17.	a
3.	b	8.	a	13.	d	18.	True
4.	b	9.	c	14.	c	19.	True
5.	a	10.	b	15.	b	20.	d

MEDICARE PRESCRIPTION DRUG COVERAGE (PART D)

ON JANUARY 1, 2006, MEDICARE STARTS HELPING YOU PAY FOR THE DRUGS you need. Anyone with Medicare can get this benefit. It is not free. You must join a plan to get it. You can join as soon as November 15, 2005. Most must join by May 15, 2006 to pay the lowest premium.

Private companies sell Medicare-approved prescription drug plans. Each plan has a list of covered drugs and where you can get them. Go to **www.medicare.gov** to compare plans. Medicare Part D will replace Medicaid for drugs starting on January 1, 2006. Everyone needs to choose a plan by December 31, 2005 or Medicare will assign you to one.

If you have low income and assets, you may be able to get extra help. You could pay as little as $1 to $3 for each drug. To find out more about the *low-income subsidy,* call 800-772-1213 or visit **www.socialsecurity.gov**.

PHASE 1: AWARENESS

Kidney Medicare Drugs Awareness and Education Initiative

Unless you have limited income and assets and get "extra help," if you join a standard Medicare Part D plan in 2006 YOU WILL PAY:

- A monthly premium that averages $32.20 ($386.40) nationally but may be more or less in your area
- The first $250 of the cost of your covered drugs
- From $251 to $2,250 you pay 25 percent of the cost of your covered drugs and the plan pays 75 percent
- From $2,251 to $5,100 you pay 100 percent. That is called a "coverage gap."

To this point, you would have paid $3,600 and the plan would have paid $1,500.

- 5 percent or $2 for generic or $5 for brand name drugs, whichever is more, if your drugs cost more than $5,100.

Standard plans sold by different companies may vary from this design as long as the benefit they pay is the same as this overall. You may save more if you pay more to join an "enhanced plan" that covers more of your drugs or pays a larger share of your drug costs.

Visit www.kidneydrugcoverage.org to find out more.

01-65-1404