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A new study published by the Journal of American Medical Association notes that chronic kidney disease is on the rise, increasing by 30% in the United States between 1994 and 2004. Based on data collected as part of the National Health and Nutrition Examination Surveys (NHANES), the study indicates that 13% of the American population is living with chronic kidney disease.

These statistics are alarming but express a more urgent message for our Latino communities who are at increased risk for diabetes, high blood pressure and kidney disease. The National Kidney Foundation of Illinois is proud to present this important tool to hopefully address the specific resources within the community or available to Latinos living in Illinois.

The National Kidney Foundation of Illinois knows that access to healthcare and assistance services can be a challenge to those who may not have a solid understanding of English and the current healthcare system, which can be complicated for everyone. We hope that this guide will serve as a beginning tool for patients, families, and healthcare workers to increase their knowledge about kidney disease, diabetes, and high blood pressure and the many healthcare options that are available. Through this increased knowledge, the National Kidney Foundation of Illinois hopes to empower patients and their families, to take a more active role in the management of their health and ultimately, their lives.

This resource guide is for educational purposes only. Please consult your physician before making any changes or additions to your treatment plan or health regimen.

The National Kidney Foundation of Illinois has made extensive efforts to ensure that the information contained in this resource guide is accurate. However, there are constant advances in medical information due to continuing research and clinical studies. Please visit our web site www.nkfi.org for updates and changes. Additionally, telephone numbers, web sites, and other logistical information often change. We apologize in advance for any inconvenience this may cause.

This resource guide was developed with support from the Fresenius Medical Care and Abbott Laboratories, which both continue to be our partner in preventing chronic disease and providing education and services for all to live a longer and healthier life.

If you have additional questions about chronic kidney disease, we hope you will call the National Kidney Foundation of Illinois at (312) 321-1500.

To your health!

Willa Lang
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</table>
Section 1
Kidneys are two bean-shaped organs, each about the size of a fist. The kidneys are positioned near the middle of the back and are protected by the lower part of your rib cage. Most people have two kidneys; however, your body can function perfectly well with only one kidney.

**What Do Kidneys Do?**
Your kidneys play the important role of cleaning the body’s blood and removing waste and excess fluid. They are called your body’s “natural filtering system”. Each day waste (from food and our environment) and end products (from normal muscle activity) build up in the blood. The kidneys filter the blood and get rid of waste and excess fluid in the form of urine.

The kidneys are made up of one million filtering units, called nephrons. Each day the kidneys filter the blood and remove the waste and excess fluid.

**How Do Kidneys Work?**
1. Blood enters the kidneys through an artery from the heart.
2. Blood is cleaned by passing through millions of tiny filters in the kidneys.
3. Waste material passes through the ureter and is stored in the bladder as urine.
4. Newly cleaned blood returns to the bloodstream via veins.
The kidneys also:
- Regulate blood pressure
- Produce a hormone that promotes the formation of red blood cells
- Produce vitamin D to help keep your blood, heart, bones and teeth healthy
- Regulate levels of electrolytes in the body, such as sodium and potassium
- Regulate levels of chemicals in the body, such as calcium, magnesium and phosphate

One functioning kidney can perform all of these functions. However, when both kidneys are not working properly, toxins and extra fluid build up in the body, which can cause an increase in blood pressure, anemia, weak bones and heart problems, among other conditions.
Section 2
Section 2 – Chronic Kidney Disease Definition

Chronic kidney disease (CKD), also called “renal disease” or “renal insufficiency”, is a progressive condition characterized by slow destruction of normal kidney function over a period of months or even years. CKD is most typically caused by undiagnosed or uncontrolled diabetes or high blood pressure.

Kidney damage reduces your kidneys’ ability to keep you healthy. If CKD is not detected nor treated early, waste products and fluid can build to high levels in the blood and make you feel sick. CKD can also cause other problems, such as high blood pressure, heart disease, anemia, weak bones, poor nutritional health and nerve damage. Over time, CKD could lead to permanent kidney failure.

If detected early, treatments are available that may slow or even stop the progression of CKD to kidney failure.

Related Terms

**Renal:** having to do with the kidneys

**Renal Insufficiency:** chronic kidney disease, characterized by decreased kidney function.

**Renal Function:** means “kidney function”.

**End Stage Renal Disease (ESRD):** Stage 5 of chronic kidney disease
Section 2 – 2: Causes of Kidney Disease

The two primary causes of chronic kidney disease are diabetes and hypertension (high blood pressure). Diabetes accounts for about 45% of all new cases of kidney disease each year. Certain inherited and congenital conditions, such as polycystic kidney disease, and autoimmune diseases, such as lupus, can also lead to kidney disease. Congenital means an individual is born with an abnormality that affects the kidneys.

The following is a list of many common causes of kidney disease.

- **Diabetes** – can cause damage to the blood vessels of the kidneys’ filtering units. Over time, the damaged filters of the kidneys can stop working all together.

- **High Blood Pressure (also called hypertension)** – can damage the kidneys’ small arteries. A vicious cycle begins – damage to kidneys causes more serious high blood pressure, which damages the kidneys.

- **Obesity** – can cause diabetes, hypertension and kidney disease, as well as many other health problems.

- **Glomerulonephritis** – a “glomerular disease” that causes damage to the kidneys’ filtering units.

- **Polycystic Kidney Disease (PKD)** – an inherited disease characterized by cysts on the kidneys.

- **Congenital Diseases** – such as malformations that occur as a baby develops in its mother’s womb (including reflux disorders in children). For example, a narrowing may occur that prevents normal outflow of urine and causes urine to back up to the kidney. This causes infections and may damage the kidneys.

- **Obstructions** – such as kidney stones, cysts, tumors and enlarged prostate gland in men. Blockages stop the normal flow of urine out of the kidney, making it difficult for the body to get rid of wastes and extra fluids.
**Section 2 – Chronic Kidney Disease Up Close**

- **Infections** – such as untreated strep throat, repeated urinary tract infections (UTIs) or a condition called chronic pyelonephritis. If treated promptly, UTIs usually do not lead to kidney damage. However, UTIs caused by problems such as a kidney stone or an enlarged prostate gland in men can lead to kidney damage.

- **Autoimmune Diseases** – such as lupus, which is a disease where the body’s own disease-fighting cells attack the body itself.

- **Drugs, Toxins** – including certain prescription medications, heavy use of over-the-counter pain medications (such as Ibuprofen, Aspirin and Tylenol), heavy use of alcohol or “street” drugs, and exposure to heavy metals (such as lead and mercury) or toxic chemicals.

- **Trauma** – which is rare, but can occur in high-contact sports, such as football and boxing.

- **Kidney Cancer** – can cause damage to the kidneys by damaging the kidneys’ filtering units.

- **Preeclampsia** – a complication of pregnancy affecting approximately 8% of pregnant women. Preeclampsia has been linked to an increased risk of kidney disease for the mother later in life.
Section 2 – 3: CKD: Who Is At Risk?

Chronic kidney disease (CKD) can affect people of all ages and backgrounds. However, there are some factors that increase an individual’s risk of developing kidney disease. These factors include:

- Having diabetes, which is the leading cause of kidney disease
- Having high blood pressure (hypertension), which is the second leading cause of kidney disease
- Having a family history of diabetes, high blood pressure and/or kidney disease
- Obesity
- Substance abuse
- Older age
- Certain genetic and autoimmune conditions, such as glomerulonephritis or lupus
- Repeated urinary tract infections and certain chronic obstructions, such as kidney stones

Chronic kidney disease is also more common in Latinos, African Americans, Asian Americans, Pacific Islanders, individuals of American Indian or Native American descent and Alaska natives.

Kidney Disease and Latinos: The Facts

The rate of kidney disease is rising throughout the entire adult U.S. population. However, it is expanding even faster in the Latino population. **Latinos are twice as likely to develop kidney failure as non-Latino whites.**

There are many reasons Latinos are at increased risk for kidney disease:

**Diabetes**

Diabetes is two to five times higher in Latinos than in non-Latino whites. Of 30 million Hispanic Americans living in the United States, about 2.5 million (9.5%) have been diagnosed with diabetes. Additionally, 25-30% of Latinos 50 years of age and older have diabetes.
Many Latinos are also more likely to suffer more severe complications of diabetes than the general U.S. population. The San Antonio Heart Study showed that Mexican Americans with diabetes are six times more likely to develop kidney failure requiring dialysis than non-Latino whites with diabetes.

**Hypertension (high blood pressure)**
The rates of high blood pressure among Latinos are not significantly higher than they are among the general U.S. population; however, high blood pressure is still common among all Latino groups. Latinos are also less likely than non-Latino whites to have their blood pressure checked, thereby delaying treatment and increasing the likelihood of irreversible kidney damage.

**Obesity**
Obesity, which is closely linked to both diabetes and kidney disease, is a growing problem among all people in the United States, particularly the Latino community.

**Other**
Latinos may have a genetic disposition to kidney disease. Mexican Americans, who are most at risk for kidney disease, share a common genetic background with Native-American Indians, themselves a high-risk group for diabetes and kidney disease. Latinos may also have a higher risk for certain genetic conditions causing kidney damage, such as glomerulonephritis.

Finally, certain disparities in health care provisions might contribute to the reason Latinos in the United States are at increased risk for complications associated with kidney disease. For example, Latinos are less likely to be screened for the risk factors for kidney disease, including diabetes and hypertension, and often receive delayed referral to a hospital and/or nephrologist (kidney doctor).

Adapted from National Kidney Foundation “Ten Facts About Diabetes and Kidney Disease in Hispanic Americans” and Kidney Disease in the Hispanic Population: Facing the Growing Challenge” (Julio E. Benabe, MD and Elena V. Rios, MD, MSPH, San Juan Puerto Rico and Washington, DC).
The Solution: Get Screened.
The facts might be alarming. However, many steps can be taken to avoid the consequences. More than anything, if you are “at risk” for kidney disease, you can take action to prevent problems. The first step is to talk with your doctor and ask to be screened for diabetes, high blood pressure and kidney disease. If you already have diabetes, high blood pressure or kidney disease, you can talk to your doctor about how to manage your condition.

On the other hand, if you do not have a doctor, you can call the National Kidney Foundation of Illinois (NKFI). The NKFI offers free kidney disease screenings, educational programs, and can provide you with a list of medical centers in your area. You don’t have to be a victim of kidney disease. You can take charge of your health and stop kidney disease in its tracks!

Section 2 – 4: Chronic Kidney Disease & Its Symptoms
Chronic kidney disease (CKD) is often called a “silent killer” because many people do not show any symptoms of having CKD until their kidney disease is already very advanced.

If you are “at risk” for kidney disease, do not wait to see a doctor until experiencing these symptoms. If you are “at risk” for kidney disease, you should be checked at least once a year by your doctor for kidney disease.

“At risk” for kidney disease means you have a greater chance of developing kidney disease. For example, if you have diabetes or high blood pressure, you are at risk for developing kidney disease. See Section Who Is At Risk? for more information.
Symptoms and Warning Signs of Kidney Disease

- High blood pressure
- Blood in the urine (may appear bloody or tea-colored)
- Protein in urine (called proteinuria)
- Frequent need to urinate, particularly at night
- Difficult, painful or burning urination
- Puffiness around the eyes, especially in the morning
- Swelling of hands, feet or ankles, especially in children (called “edema”)
- Feeling tired
- Have less energy
- Have trouble thinking clearly
- Have trouble sleeping
- Poor appetite
- Dry, itchy skin
- Muscle cramps at night
- A creatinine blood test result greater than 1.4 for men and greater than 1.2 for women*
- A blood urea nitrogen (BUN) blood test outside the normal range*
- A glomerular filtration rate (GFR) less than 60*
- Uremia, the accumulation of urea and other wastes in the blood *

* See Section 2 – 5: Do you have Kidney Disease/Know Your Numbers for more information.
Early detection is the key to preventing serious problems. Chronic kidney disease can often be successfully detected and treated in the early stages.

If you are at risk for chronic kidney disease or if you have any of the symptoms of having chronic kidney disease, you should ask your primary care physician to perform tests to assess your kidney function.

**Kidney Function Tests: Determining Your Kidney Function**

**Serum Creatinine**
Creatinine is a waste product in your blood that comes from muscle activity. Kidneys normally remove the creatinine from your blood, but when kidney function declines, creatinine levels rise. The creatinine level enables the doctor to evaluate your kidney function. The results of your serum creatinine test will allow for the calculation of your eGFR, kidney function test (See below for more information about the eGFR).

Understanding your serum creatinine results:

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6 – 1.4 mg/dl</td>
<td>Normal</td>
</tr>
<tr>
<td>1.4 mg/dl or higher</td>
<td>High</td>
</tr>
<tr>
<td>0.4 – 1.4 mg/dl</td>
<td>Normal</td>
</tr>
<tr>
<td>1.4 mg/dl or higher</td>
<td>High</td>
</tr>
</tbody>
</table>

**eGFR (Estimated Glomerular Filtration Rate)**
Your eGFR is a calculation that tells how much kidney function you have. **Note:** if your eGFR is between 60 and 90, please speak with your doctor. A normal GFR is defined as “greater than 90”; however, an eGFR between 60 and 90 may be normal for some people.
Understanding your eGFR result:
Greater than or equal to 90 ml/min/1.73 m² = Normal
Less than or equal to 60 ml/min/1.73 m² = Abnormal

Kidney Disease Outcomes Quality Initiative (K/DOQI): The National Kidney Foundation, Inc. developed clinical practice guidelines in the year 2000 with an educational grant from Amgen, Inc. The K/DOQI Clinical Practice Guidelines for Chronic Kidney Disease Evaluation, Classification, and Stratification is a manual developed for healthcare professionals. It provides direction for early identification and appropriate treatment that can result in improved patient outcomes.

CKD Guidelines:
Includes 15 recommendations related to the assessment and classification of chronic kidney disease, association of level of kidney function with complications and a stratification of risk for progression and development of cardiovascular disease in CKD.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>GFR (mL/min/1.73 m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kidney damage with normal or ↑ GFR</td>
<td>≥ 90</td>
</tr>
<tr>
<td>2</td>
<td>Kidney damage with mild ↓ GFR</td>
<td>60 - 89</td>
</tr>
<tr>
<td>3</td>
<td>Moderate ↓ GFR</td>
<td>30 - 59</td>
</tr>
<tr>
<td>4</td>
<td>Severe ↓ GFR</td>
<td>15 - 29</td>
</tr>
<tr>
<td>5</td>
<td>Kidney Failure</td>
<td>&lt; 15 (or dialysis)</td>
</tr>
</tbody>
</table>
Why eGFR?

Researchers now agree that estimated glomerular filtration rate (eGFR), not serum creatinine concentration, is the best method for accurately determining whether a patient has kidney damage. Serum creatinine levels do not always rise to a level “above normal” until after significant kidney damage is present. As a result, the test fails to identify kidney damage in its early stages (more than 1/3 of those with advanced kidney disease have creatinine levels within the normal range).

eGFR is a mathematical estimate of the true glomerular filtration rate of the kidneys. eGFR mathematically adjusts serum creatinine measurements for a patient’s age and sex and may therefore overcome the problem of late detection. EGFR helps determine the stage of kidney disease, so that the proper treatment is selected.

Online eGFR Calculators

The MDRD GFR Calculator (with SI Units), available at http://mdrd.com/ (enter plasma creatinine, age, race and gender).

Blood Urea Nitrogen (BUN)

Urea nitrogen is a normal waste product in your blood that comes from the breakdown of protein from the foods you eat and from your body metabolism. It is normally removed from your blood by your kidneys, but when kidney function slows down, the BUN level rises. BUN can also rise if you eat more protein, and it can fall if you eat less protein.

Your doctor can tell you your target BUN range. Normal is between 7 and 18 mg/dL; however, BUN levels can be higher in people over 60 and in dialysis patients.

Other Tests: Your doctor may also recommend other blood tests including but not limited to Hematocrit, Parathyroid Hormone, Serum Calcium, Serum Phosphorus, and/or Potassium. Please discuss your need for these tests with your primary care physician or nephrologist.
Know Your Numbers: Tests for At-Risk Patients

The following is a description of the most common lab tests performed on patients at risk for kidney disease (particularly diabetic and hypertensive patients), as well as patients already living with kidney disease. These are important tests that help your healthcare team monitor your health and make important decisions about your care.

The “normal values” listed below are the general guidelines for each test. However, “normal” can vary. If you have kidney disease, talk to your doctor about which tests you will have, how often they will be completed, and what is normal for you. If your results are not in the normal range, ask how to improve them. Be an active participant in your health! The more you know, the better you are able to work with your healthcare team and improve your overall wellbeing.

Body Mass Index (BMI)\(^1\)

BMI is considered a more accurate way to determine if you are at a healthy weight. To determine your BMI, visit [http://nhlbisupport.com/bmi/bmicalc.htm](http://nhlbisupport.com/bmi/bmicalc.htm) or ask your primary care physician.

<table>
<thead>
<tr>
<th>Below 18.5</th>
<th>= Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 18.5-24.9</td>
<td>= Normal</td>
</tr>
<tr>
<td>Between 25-30</td>
<td>= Overweight</td>
</tr>
<tr>
<td>Greater than 30</td>
<td>= Obese</td>
</tr>
<tr>
<td>Greater than 40</td>
<td>= Extremely Obese</td>
</tr>
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</table>

\(^1\) For more information on the relation between obesity and chronic kidney disease, see Section 3:3 Obesity & Kidney Disease.
Waist Circumference
Waist circumference is a strong indication of whether you are overweight and at increased risk for disease. A “high” waist circumference is strongly associated with increased risk for Type 2 diabetes, high blood pressure, high cholesterol and heart disease, among other diseases. A waist circumference test can also help chronic kidney disease patients assess whether they are at a healthy dry weight or whether they need to lose or gain weight.

Greater than 40 inches for men (102 cm) = High
Greater than 35 inches for women (89 cm) = High

Blood Pressure
Blood pressure is one of the most important tests used to assess health in chronic kidney disease patients. High blood pressure can signify the kidneys are not functioning properly, but it is also a major cause of blood vessel damage, kidney damage, heart disease and stroke.

Blood pressure is the force your blood puts on the walls of your blood vessels as your heart works. When your blood pressure is high, your heart has to work harder to pump blood to your organs. Uncontrolled high blood pressure therefore causes damage to the blood vessels and organs of the body.

Understanding Your Blood Pressure Reading
Blood pressure has two numbers. The top number is the pressure as the heart beats and pushes blood into the blood vessels, and the bottom number is the pressure when the heart rests between beats and the vessels relax.

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2 For more information on the relation between obesity and chronic kidney disease, see Section 3:3 Obesity & Kidney Disease.
3 For more information on the relation between obesity and chronic kidney disease, see Section 3:2 High Blood Pressure & Latinos.
Normal blood pressure is defined as below 120/80 mm Hg.

Upper number (systolic) is less than 120 mm Hg = Normal
Upper number (systolic) is 120-139 mm Hg = Pre-Hypertension
Upper number (systolic) is 140-159 mm Hg = Hypertension (Stage 1)
Upper number (systolic) is 160 or greater mm Hg = Hypertension (Stage 2)

Lower number (diastolic) is less than 80 mm Hg = Normal
Lower number (diastolic) is 80-89 mm Hg = Pre-Hypertension
Lower number (diastolic) is 90-99 mm Hg = Hypertension (Stage 1)
Lower number (diastolic) is 100 or greater = Hypertension (Stage 2)

Note: target blood pressure for people with diabetes and kidney disease is below 130/80 mmHg

Blood Glucose/Blood Sugar
Glucose is a type of sugar and a major source of energy. Blood glucose is the concentration of sugar in the blood. When there are high levels of glucose in the blood, this buildup of sugar not only causes kidney damage, but also can increase your chance for other complications, such as heart disease, blindness and amputations.

\footnote{For more information on the relation between obesity and chronic kidney disease, see Section 3:1 Diabetes & Latinos.}
Normal blood glucose for most patients is less than 100 mg/dL when fasting and less than 140 mg/dL when non-fasting.

**If NO Known Diabetes**

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Fasting</th>
<th>Non-Fasting (after eating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 100 mg/dL</td>
<td>Normal</td>
<td>Less than 140 mg/dL</td>
</tr>
<tr>
<td>100-125 mg/dL</td>
<td>Impaired fasting glucose</td>
<td>140 mg/dL or greater</td>
</tr>
<tr>
<td>Greater than 125</td>
<td>Indicates diabetes</td>
<td></td>
</tr>
</tbody>
</table>

**If Known Diabetes**

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Fasting</th>
<th>Non-Fasting (after eating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 80 mg/dL</td>
<td>Below target range</td>
<td>Less than 180 mg/dL</td>
</tr>
<tr>
<td>80-120 mg/dL</td>
<td>Within target range</td>
<td>180 mg/dL or greater</td>
</tr>
<tr>
<td>Greater than 120</td>
<td>Above target range</td>
<td></td>
</tr>
</tbody>
</table>

Note: greater than 200 mg/dL indicates diabetes

**HbA1C**

HbA1C gives you a picture of your average blood sugar control over a three-month period. It is an important test used to assess blood sugar control in diabetics and should be performed every 3-6 months. Studies have shown that people with diabetes who keep their HbA1c levels below 7% have an increased chance of preventing or delaying problems such as eye damage and kidney failure.

**Normal HbA1c for most patients = between 4.0% and 5.9%**

**If NO Known Diabetes**

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0%-5.9%</td>
<td>Normal</td>
</tr>
</tbody>
</table>

**If Known Diabetes**

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Normal, well controlled diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 6.0%-7.0%</td>
<td>Normal, well controlled diabetes</td>
</tr>
<tr>
<td>Greater than 8.0%</td>
<td>High, poorly controlled diabetes</td>
</tr>
</tbody>
</table>
Urine Tests

Urine Protein
When your kidneys are damaged, protein leaks into your urine. Persistent protein in the urine is an early sign of chronic kidney disease. In patients at risk for or living with kidney disease, two types of urine-protein tests are done to assess kidney function: microalbuminuria and Albumin to Creatinine ratio.

Microalbuminuria
Microalbuminuria is a sensitive test that detects microscopic amounts of protein in the urine.

Normal for microalbuminuria = less than 30 mg/L
Less than 30 mg/L = Normal
30-80 mg/L = High
150 mg/L = Very High

Albumin to creatinine ratio (A:C ratio)
This test estimates the amount of protein you excrete in your urine in a day and avoids the need to collect a 24-hour urine specimen. This test also helps to more accurately measure for protein in the urine, since it corrects for differences in urine concentration.

Normal for A:C ratio = less than 30 mg/gm
Less than 30 mg/gm = Normal
30-300 mg/gm = High
>300 mg/gm = Very High

Pyuria
The pyuria test checks for high levels of white blood cells in the urine. If white blood cells are found in the urine, you may have or be at risk for infection, inflammation or other abnormalities in the urinary tract.
Normal for pyuria = “negative”
Negative  =  Normal
Positive  =  Abnormal

Note: it is not uncommon to find a “trace” or “small” amount of white blood cells in your urine. Please speak with your doctor if your result is anything but “normal”.

Hematuria
This test checks for red blood cells (blood) in the urine. It is not normal to find even a small amount of blood in the urine (except during a menstrual cycle). The presence of even a small amount of blood in the urine could indicate you have or are at risk for kidney disease, other abnormalities in the urinary tract or another problem.

Normal for hematuria = “negative”
Negative  =  Normal
Positive  =  Abnormal

Anemia-Related Tests
Anemia tests are important for kidney disease patients, as anemia is one of the side effects of having kidney disease. Anemia is characterized by low levels of red blood cells in the body.

Hemoglobin (Hb)
Hemoglobin is the part of red blood cells that carries oxygen from your lungs to all the parts of your body. Low levels of hemoglobin can mean you have anemia, which can cause you to feel tired and have little energy. If you have anemia, you may need treatment with iron supplements and a hormone called erythropoietin (EPO).
### Parathyroid Hormone-Related Tests

Parathyroid hormone (PTH) tests are important for kidney disease patients, as secondary hyperparathyroidism (SHPT) is one side effect of having kidney disease. SHPT is high levels of PTH in the body.

Parathyroid hormone (PTH) helps monitor vitamin D, makes sure bones are healthy and monitors the minerals calcium and phosphorus. If your PTH level is high, you may need to be treated with an active form of vitamin D.

<table>
<thead>
<tr>
<th>Range</th>
<th>Interpretation</th>
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<tr>
<td>10-65pg/mL</td>
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</tr>
<tr>
<td>35-70pg/mL</td>
<td>CKD stage 3</td>
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<tr>
<td>70-110pg/mL</td>
<td>CKD stage 4</td>
</tr>
<tr>
<td>150-300pg/mL</td>
<td>CKD stage 5</td>
</tr>
</tbody>
</table>

### Cholesterol-Related Tests

**Total Cholesterol**

Cholesterol is a waxy, fat-like substance made in the liver and found in certain foods, such as eggs, dairy products (like whole milk), meat, butter and creams. High levels of cholesterol may increase your chance of having heart and circulation problems.
Target Range for Total Cholesterol

Less than 200 mg/dL = Normal
200-239 mg/dL = Borderline High
240 or higher mg/dL = High

**HDL Cholesterol (High Density Lipoproteins):** HDL cholesterol is known as your “good” cholesterol. HDL cholesterol helps rid the body of bad cholesterol in the blood and keeps your blood vessels from becoming blocked. If your HDL levels are low, your risk of health problems increases.

**Target range for HDL Cholesterol**

60 and above mg/dL = Optimal
Less than 40 in men mg/dL = Low, At Risk for Heart Disease
Less than 50 in women mg/dL = Low, At Risk for Heart Disease

**LDL Cholesterol (Low Density lipoproteins):** LDL cholesterol is a type of “bad” cholesterol. High levels of LDL cholesterol can cause narrowing of the blood vessels or plaque buildup on the walls of the arteries, which may increase your chance of having heart and circulation problems.

**Target Range for LDL Cholesterol**

Less than 100 = Optimal
100-129 = Near Optimal
130-159 = Borderline High
160-189 = High
190 or higher = Very High
Section 2 – Chronic Kidney Disease Up Close

Nutrition-Related Tests

Serum Albumin
Albumin is a water-soluble protein found in blood and made from the protein you eat each day. Albumin allows hormones, minerals and other important things your body needs to travel through your bloodstream and helps maintain blood volume and blood pressure. A low level of albumin in your blood may be caused by not getting enough protein or calories from your diet, and could lead to health problems such as difficulty fighting off infections. Ask your dietitian how to get the right amount of protein and calories from your diet.
Goal: greater than 4.0 g/dL

Additional Tests for Patients on Dialysis

Kt/V and URR
Kt/V and URR are two important measures that tell how well your dialysis treatments are working. In order to keep your Kt/V and URR levels as high as possible, it is very important that you go to all of your treatments and stay for the full treatment time. In some patients, a better access or longer treatments will help improve KT/V and URR.
Target goal for most dialysis patients is 1.3
Deliver dose of dialysis is 1.2
Goal URR for patients on hemodialysis: at least 65%

KidneyMobile® Program
The National Kidney Foundation of Illinois offers the KidneyMobile® program that travels across Illinois to educate communities most at risk for diabetes, high blood pressure, and chronic kidney disease. The mobile exhibit makes the connection between these diseases and early chronic kidney disease risk factors in order to prevent disease progression, complications, and kidney failure. The KidneyMobile’s® first priority is to provide services to underserved communities, who have limited or insufficient access to healthcare and also to communities most at risk for these diseases, specifically Latino and African American communities. Please call the NKFI at 312.321.1500 or visit www.kidnemobile.org for more information. The KidneyMobile® could be in your neighborhood soon!
Section 2 – Preventing Kidney Disease

The first step in preventing kidney disease is to get checked for kidney disease by your doctor regularly. It is equally important for you to get checked for the “risk factors” for kidney disease. See Section 2 – 3 for more information.

You can be an active participant in preventing kidney disease by also taking the following steps:
- Drink plenty of fluid (at least 8-10 glasses of water a day).
- Maintain a healthy weight by following a healthy, balanced diet and regular exercise program.
- Maintain a healthy blood pressure (remember: normal blood pressure is defined as less than 120/80) – high blood pressure damages the kidneys’ blood vessels and over time, may cause kidney failure.
- Avoid excessive use of over-the-counter pain relieving medications, such as ibuprofen.
- Do not smoke. Smoking is especially dangerous for people with diabetes, and is considered a major risk factor for kidney disease because smoking causes the blood vessels to constrict and causes damage to the lining of blood vessels.
- Limit your intake of alcohol.
- Limit your exposure to heavy metals and toxic chemicals.
- Avoid unnecessary drug use.
- Follow your treatment plan for diabetes and/or high blood pressure as prescribed by your doctor.

If you have diabetes, follow the steps outlined above AND:
  o Control your blood sugar. Talk with your doctor about your target range and check your blood sugar regularly to make sure you are staying within your target range.
  o Check your HBA1c. HbA1c is a test that measures the concentration of sugar found in your blood over a 3-month period. If it is high, this means your blood sugars are consistently higher than normal.
  o Have your urine checked for protein, an early sign of kidney damage. The American Diabetes Association recommends that patients with Type 2 diabetes be screened for protein at least once a year.
Promptly treat wounds and infections.
- Take your medications as prescribed by your doctor.

If you have high blood pressure follow the steps outlined above AND:
- Take your medications as prescribed by your doctor.
- Maintain a healthy weight. Many people who lose weight show significant reduction in blood pressure, and never have to take medication.
- Limit intake of salt. Too much salt can lead to high blood pressure and fluid retention, which causes swelling. Read food labels and try to become aware of hidden sodium in foods, especially processed, canned and frozen food.
- Be Active! Consistent physical activity such as walking will help to control weight and improve cardiovascular function. Do something active at least 30 minutes each day. Ask your doctor first before starting an exercise program.

**HOW MUCH SALT?**
Sodium (salt) is an important mineral necessary to maintain proper fluid balance in the body. However, the maximum amount of sodium recommended a day is only 1 teaspoon, and the average American consumes 2 teaspoons from a combination of processed foods (77%), salt shakers (11%), and the sodium that occurs naturally in food (12%).

**Five Ways To Reduce Salt and Calorie Intake**
1. Don’t add salt while preparing meals
2. Use less salt at the table
3. Choose meats, veggies and fruits
4. Use spices, herbs and lemon juice to flavor food
5. Grill or broil, instead of fry
Section 3
Diabetes is a SERIOUS HEALTH CHALLENGE

Diabetes is often called a “silent killer” because many people who have diabetes do not even know it. It is estimated that 23.6 million Americans have diabetes, but that 5.7 million are unaware of their condition.

Diabetes is a particularly serious issue among Latinos. Ten percent of all Hispanic Americans have diabetes. According to one study, 42% of Mexican Americans and 40% of Puerto Rican Americans did not even know that they had diabetes.

Diabetes is the leading cause of kidney disease, blindness, heart disease and stroke, and it is a major cause of nerve disease, possible lower limb amputation and impotence.

What is Diabetes?

Diabetes is a disease in which the body does not produce insulin or does not properly use the insulin that it does produce. Insulin is a hormone that is needed to convert sugar, starches and other food into the energy our bodies need for daily life.

There Are Two Types of Diabetes:

**Type 1 Diabetes** means that the pancreas does not produce insulin. A person with Type 1 diabetes must take insulin injections to assist the body in processing glucose (sugar). Once referred to as “Juvenile Diabetes”, Type 1 diabetes is usually detected at an early age with a blood test.

**Type 2 Diabetes** means that the body does not produce enough insulin or the insulin it does produce is not sufficient to process the body’s glucose. Once referred to as “Adult Onset Diabetes”, Type 2 diabetes is now being detected in children.

Almost 95% of Latinos with diabetes have Type 2 diabetes. Type 2 diabetes can often be prevented by maintaining a healthy weight, following a healthy diet and exercising.
Risk Factors for Diabetes:
High blood pressure, family history of diabetes, being overweight, unhealthy diet, sedentary lifestyle, being over 45 years old and/or being of Hispanic, African American, Asian American or Native American descent.

Latinos are twice as likely to develop diabetes as non-Latinos.

Symptoms of Having Diabetes:
Excessive hunger and/or thirst, chronic fatigue, frequent urination (especially at night), weight loss, dry itchy skin, blurred vision, wounds on the hands or feet that do not heal.

Ways to Prevent Diabetes:
- See your doctor if you have any of the symptoms listed above
- Have your blood sugar checked regularly
- Maintain a healthy weight; even if you are overweight, losing 5% of your body weight may decrease your risk for diabetes
- Follow a healthy diet low in fat and high in fiber
- Be active everyday

Diabetes can be prevented and controlled through diet, exercise, and medication.
3-2: High Blood Pressure and Latinos

What is blood pressure?
Blood pressure is the measure of the force of blood in an artery. This pressure moves the blood from the heart to other parts of the body. The blood pressure is greatest when your heart contracts and is pumping blood. This is systolic blood pressure. When your heart rests between beats, this is called diastolic blood pressure. Blood pressure is always given as these two numbers: the systolic and diastolic pressures. The numbers are usually written one above the other, with systolic first, for example, 120/80. Normal blood pressure is less than 120/80. If you have diabetes, your blood pressure should be less than 130/80.

Is high blood pressure serious?
Yes! When your blood pressure is high, your heart has to work harder than it should to pump blood to all parts of the body. High blood pressure is called the “silent killer” because most people feel healthy and do not know they have it. About 20% of Hispanic Americans under 65 have high blood pressure. Almost 50% of Hispanic Americans over the age of 65 have it. High blood pressure is not a normal part of aging.

Lower your high blood pressure.
If you have high blood pressure, you may be able to lower it by:
  o Maintaining a healthy weight.
  o Quitting smoking.
  o Being more active.
  o Reducing alcoholic beverage consumption.
  o Taking your medicine the way you doctor tells you.
  o Tell the doctor right away if the medicine makes you feel strange or sick.
  o Make sure that you do not skip any doses. Refill your prescription before your medicine runs out.
  o Have your blood pressure checked often to make sure that it is working in the way that you and your doctor planned.
  o Do not stop taking your medication. If your blood pressure is normal that means it is working.
  o Keep a record of your blood pressure.
Prevent high blood pressure.

If your blood pressure is not high now, take steps to prevent it from becoming high. Here is how:

- Choose foods lower in fats and calories.
- Eat smaller portions.
- Try not to gain extra weight or if you are overweight, lose weight until you reach a healthy weight.
- Be physically active every day.
- Eat less salt.
- Read food labels. Choose foods with the least amount of salt or sodium.
- Prepare lower sodium meals from scratch instead of using processed foods.
- Use spices, herbs and salt free seasonings instead of salt.
- Do not cook with salt and do not use salt substitutes.
- Eat more fresh fruits and vegetables.

High blood pressure can be controlled through diet, exercise and medication. Take care of your health.
Section 3 – 3: Obesity and Kidney Disease

Being overweight or “obese” has been linked to various diseases. Obesity contributes significantly to the growing epidemic of Type 2 diabetes, and being overweight or obese can increase the risk of developing high blood pressure, among other conditions such as heart disease and cancer. Obesity is also linked to the growing number of cases of Type 2 diabetes seen in children.

There’s More Than One Reason to Lose Weight

Maintaining a healthy weight has become a priority beyond aesthetic reasons these days. The benefits of losing weight include:
- Prevention of diabetes, high blood pressure, kidney disease, cancer, as well as other diseases.
- Normal blood pressure
- Healthy joints (people who are just slightly overweight have a much higher likelihood of needing hip replacement therapy as early as their 30s or 40s)
- Less health care costs
- Healthier skin

If you are overweight, please speak with your doctor about a diet and exercise plan for losing weight.

Obesity Related Glomerulopathy (ORG)

There is now some evidence to suggest that obesity alone may also cause kidney disease. Obesity is now being associated as the primary cause of a certain type of chronic kidney disease, Obesity Related Glomerulopathy (ORG). Patients with a high proportion of fat in their abdominal area or a high waist-to-hip ratio appear to have the greatest risk for ORG. In several studies, obese patients had increased proteinuria (large amounts of protein in the urine) and/or a decreased GFR, two signs of decreased kidney function.
Glomerular diseases affect the kidney in the same way as diabetes and high blood pressure: they cause inflammation and damage the kidneys’ filtering units. Glomerular diseases can be the direct result of an infection or a drug toxic to the kidneys, or the result from a disease that affects the entire body, like diabetes or lupus.

Glomerular diseases fall into two major categories: glomerulonephritis and glomerulosclerosis.

**Glomerulonephritis**

Glomerulonephritis (also called nephritis or nephrotic syndrome) is the term used to describe a group of diseases that cause inflammation and damage to the kidney’s filtering units (called glomeruli). Glomerulonephritis is the third leading cause of kidney failure.

There are two types of glomerulonephritis – acute glomerulonephritis, which develops suddenly, and chronic glomerulonephritis, which develops silently over several years. Acute glomerulonephritis is often temporary and usually does not cause serious kidney damage. However, if undetected and untreated for many years, it may cause kidney failure.

Glomerulonephritis has many causes. Acute glomerulonephritis can be caused by an infection, such as strep throat or a skin infection. It can also be caused by bacterial or viral infections due to unprotected sex or IV drug use. In a small number of cases, glomerulonephritis is hereditary, meaning it runs in the family and the cause is unknown.
Signs and Symptoms of Glomerulonephritis

The early symptoms of having acute glomerulonephritis might include:
- Puffiness of your face in the morning
- Brown urine (caused by blood in the urine, called hematuria)
- Urinating less than usual.

Possible signs of having chronic glomerulonephritis may include:
- Feeling ill or short of breath
- High blood pressure
- Brown urine (caused by blood in the urine, called hematuria)
- Very bubbly or foamy urine (caused by having excess amount of protein in the urine)
- Swollen face, eyelids, hands or ankles (called edema)
- Reduced levels of protein in the blood (called hypoproteinuria)
- Wastes in the blood
- Reduced glomerular filtration rate (GFR)

If you have any of the symptoms of having glomerulonephritis, please see your doctor.

How is Glomerulonephritis Diagnosed?

Urine and blood tests are used to diagnose glomerulonephritis. If these lab tests indicate kidney damage, your doctor may recommend renal imaging tests (an ultrasound or x-ray) to see whether the shape or size of the kidneys is abnormal. But since glomerular disease causes problems at the cellular level, the doctor will probably also recommend a kidney biopsy—a procedure in which a needle is used to extract small pieces of tissue for examination with different types of microscopes, each of which shows a different aspect of the tissue. A biopsy may be helpful in confirming glomerular disease and identifying the cause.
Section 3 – 5: Polycystic Kidney Disease (PKD)

PKD is a genetic disorder, which causes fluid-filled cysts or pouches to form in the kidneys and surrounding tissue. These cysts range in size and can grow to the size of a grapefruit or larger. PKD causes pain and kidney damage.

The most common form of the disease, Autosomal Dominant Polycystic Kidney Disease (ADPKD), is passed from one generation to the next by an affected parent. Each child of an ADPKD parent has a 50% chance of inheriting the disease.

PKD affects more than 600,000 Americans and 12.5 million people worldwide. It is found in all races and occurs equally in men and women.

Symptoms of Having PKD

Adult PKD does not often present itself until after 30 or 40 years of age. The symptoms at this point may include:

- High blood pressure
- An increase in the size of the abdomen
- Frequent bladder, kidney or urinary tract infections
- Heart problems or strokes
- Back, side or stomach pain
- Blood in the urine
- Kidney stones

If you have any of these symptoms persistently, it is important that you speak with your doctor.

How Is PKD Diagnosed?

An ultrasound is the most reliable, inexpensive and non-invasive way to diagnose PKD. A CT (computed tomography) scan or MRI (magnetic resonance imaging) may detect smaller cysts that cannot be found by an ultrasound. Genetic testing is also possible.

Approximately 60% of individuals with PKD develop kidney failure and, currently, there is no cure for PKD. However, a lot of research is being done that could lead to new therapies to prevent and treat PKD.

Related Terms

Cysts: fluid-filled sacs that in PKD can grow and cause damage to the kidneys.
Section 3 – Causes and Types of Kidney Disease

Section 3 – 6: Autoimmune Diseases Affecting the Kidneys

When the body’s immune system functions properly, it creates protein-like substances called antibodies and immunoglobulins to protect the body against invading organisms. In an autoimmune disease, the immune system creates autoantibodies that attack the body itself. Autoimmune diseases may be systemic and affect many parts of the body, or they may affect specific organs or regions.

Lupus Nephritis

Lupus is a chronic, inflammatory disease that can affect various parts of the body, including the kidney. It is classified as an autoimmune disorder because the immune system, which usually protects the body from disease, turns against the body and loses its ability to distinguish between foreign substances and its own tissues and cells.

There are two types of lupus: “systemic” lupus erythematosus (SLE), which harms the skin, joints, blood, tissues and organs and may be fatal if left untreated. When SLE affects the kidneys, it is called “lupus nephritis”. The other type, called “discoid” lupus erythematosus, only affects the skin.

The causes of lupus are unknown; however, there may be a genetic disposition to the disease. Women are more likely than men to develop lupus.

Treatments for lupus depend on the specific needs and symptoms of each individual and may include a combination of immunosuppressants and a corticosteroid used to reduce inflammation.
The kidneys normally clean the blood and get rid of wastes through the urine. Urine is then drained from the kidneys through the ureters.

When there is an obstruction in the ureters, the urine cannot be drained. This is called “obstructive uropathy”. It occurs when blockages in the kidneys or urinary tract stop the normal flow of urine out of the kidney, making it difficult for the body to get rid of wastes and extra fluids.

The most common obstructions are:

- Kidney stones
- Tumors
- An enlarged prostate gland in men
- A birth defect of the urinary tract

These conditions can be “acute” or “chronic”. Acute means the condition happens suddenly and can cure itself; chronic means a constant condition.

If you have any of the following symptoms, please speak with your doctor. Symptoms of having obstructive uropathy can include:

- an urgent need to urinate
- difficult, painful or burning urination
- pain in the abdomen or lower back
- discolored urine

Kidney Stones

Kidney stones are hard deposits. They occur when certain chemicals in the urine form crystals that stick to surfaces inside the kidney. When kidney stones remain small, they can pass out of your body without causing any symptoms. However, when they enlarge, they may block the flow of urine, causing infections, severe pain and in some cases, irreparable kidney damage. Kidney stones can be as small as a grain of salt and as large as a golf ball.
Section 3 – 8: Infections Causing Kidney Disease: Urinary Tract Infections

The urinary tract is made up of the bladder, urethra and the two ureters and kidneys. A urinary tract infection (UTI) occurs when bacteria (germs) get into the urinary tract and multiplies. These germs usually enter the urinary tract through the urethra, the tube that carries urine out of the body and travel up to the bladder. The result is redness, swelling and pain in the urinary tract. If a UTI is not treated promptly, the bacteria can move up to the kidneys and cause a more serious type of infection, called pyelonephritis.

Causes of Urinary Tract Infections

About 80-90% of urinary tract infections are caused by one type of bacteria, called E. coli. These bacteria normally live in your intestines, but they sometimes get into your urinary tract.

Symptoms of Having a Urinary Tract Infection

Some people do not have any symptoms, but most have at least one of the following symptoms:

- White blood cells in the urine
- Blood in the urine
- Protein in the urine
- An urgent need to urinate
- Cloudy or blood-tinged urine
- A strong odor in urine
- Pain in the lower back
- Difficult, painful or burning urination
- An aching feeling, pressure or pain in the lower abdomen

See your doctor right away if you have any of these symptoms.
Treatments for UTIs
The most common treatment for UTIs is to take an antibiotic for one to two weeks. Most UTIs clear up within 1-2 days of treatment. If the infection has spread to the kidneys, you may need several weeks of treatment. Your doctor may also suggest that you take a pain reliever and use a heating pad for the pain and that you drink plenty of liquids.

Prevention of UTIs
- Drink plenty of fluids.
- Urinate when you feel the urge. Do not postpone going to the bathroom.
- Wipe from front to back to prevent bacteria from the intestines from getting into the urinary tract.
- Cleanse the genital area every day and before and after having sex.

Children and UTIs
UTIs are more common in adults than in children. However, children, especially girls between 4 and 8, do sometimes get UTIs. Symptoms include: low fever, irritability, urinating often, pain, burning or crying when urinating, pain around the belly button, strong odor from the urine and cloudy or bloody-tinged urine, unusual day or night wetting, high fever, pain in the back or vomiting.

If your child has any of these symptoms, please see your doctor. The doctor may want to do some special tests, such as an ultrasound exam to check for any problems in the child’s urinary tract.

UTIs and Kidney Damage
In most cases, UTIs do not lead to kidney damage. However, UTIs caused by problems such as a kidney stone or an enlarged prostate gland in men can lead to kidney damage if the problem is not corrected and the infection continues untreated. UTIs in children may also lead to kidney damage if not treated promptly.
Section 3 – 9: Kidney Cancer

Each year, about 28,000 Americans are diagnosed with kidney cancer. Cancer occurs when the body’s normal cell process malfunctions. New cells form when the body does not need them and old cells do not die when they should. These extra cells can form a mass of tissue called a growth or tumor.

Kidney tumors can be “benign” or “malignant”. The most common type of kidney cancer in adults is “renal cell cancer”, which is a malignant type of cancer that can spread to other parts of the body. A less common type is called “transitional cell cancer”.

What Causes Kidney Cancer?

It is not yet known what causes kidney cancer. It is more common in older adults, between 50 and 70. It is also more common in men.

Symptoms of Kidney Cancer

In the early stages, kidney cancer usually causes no obvious signs or symptoms. However, as the tumor grows, symptoms may include:

- Blood in the urine
- A mass in the kidney area
- A pain in the side that does not go away
- High blood pressure

If you have any of these symptoms, check with your doctor. Imaging tests are used to determine the presence and type of a tumor and to decide on a treatment plan. In many cases, kidney cancer can be treated when detected early. Treatment depends on many factors including the stage of the disease and the patient’s general health. Treatment options include surgery, radiation therapy, biological therapy, chemotherapy, hormone therapy or a combination of methods.
Many types of drugs, toxins and medications can cause kidney disease. These include both over-the-counter and prescription pain medications, as well as a variety of “street” drugs. Many of these medications and drugs are excreted through the kidneys and can take their toll on the kidneys and cause kidney damage over time.

**Analgesic Nephropathy (Painkillers and the Kidneys)**

Use of analgesics (pain medications) can cause sudden-onset acute kidney failure, which means use of a medication has temporarily caused the kidneys to stop working. Acute kidney failure requires emergency dialysis to clean the blood and normal kidney function usually returns after the emergency is over and use of the medication is stopped.

The most common type of kidney disease caused by drugs or toxins is analgesic nephropathy, which can have a more lasting effect. In this type of kidney disease, damage to the kidneys has occurred gradually over time due to excessive or long-term use of analgesics.

**Common painkillers that can cause kidney damage include** (information provided by the Kidney & Urology Foundation of America, Inc.):

- Aspirin (Anacin, Ascriptin, Bufferin, Ecotrin, Empirin) - Acetaminophen (Tylenol)
- Ibuprofen (Advil, Motrin, Nuprin) - Naproxen (Aleve)

When taken on occasion, these medications do not usually harm the kidneys. However, when taken regularly over long periods of time, when used excessively in large doses, or when used in combination with other medications, analgesics can increase your risk of kidney problems. Some medications also contain caffeine or codeine, which has been shown to increase the chance of causing kidney damage.

If you take pain medications on a regular basis, it is important that you speak with your doctor about your medication use and whether the kind and amount you are taking is safe in general and for your kidneys.

Treatment for analgesic nephropathy will depend on your age, overall health, medical history and extent of the disease. If you have kidney failure, the most common therapies are dialysis or a kidney transplant.
Membranous nephropathy, also called membranous glomerulopathy, is the second most common cause of nephrotic syndrome in U.S. adults after diabetic nephropathy. Diagnosis of membranous nephropathy requires a kidney biopsy, which will reveal unusual deposits of immunoglobulin G and complement C3, substances created by the body’s immune system.

The majority of cases are idiopathic, which means that the cause of the disease is unknown. Most patients experience either complete remission or continued symptoms without progressive kidney failure, but 20 to 40 percent of patients progress to total kidney failure (usually over decades).

Doctors disagree about how aggressively to treat this condition, since about 20 percent of patients recover without treatment. High blood pressure medications, such as ACE inhibitors and Angiotension Receptor Blockers, are generally used to reduce proteinuria. Some patients benefit from steroids, additional high blood pressure medications, edema medications, and/or immunosuppressive medications.

Other Conditions That Involve Childhood Nephrotic Syndrome

In about 20 percent of children with nephrotic syndrome, the kidney biopsy reveals scarring or deposits in the glomeruli. The two most common diseases that damage these tiny filtering units are focal segmental glomerulosclerosis (FSGS) and membranoproliferative glomerulonephritis (MPGN).

Doctors may prescribe prednisone along with additional therapies, including cytotoxic agents. Recent experience with a class of drugs called ACE inhibitors, a type of blood pressure drug, indicates that these drugs can help to prevent protein from leaking into the urine and keep the kidneys from being damaged in children with nephrotic syndrome.
Focal segmental glomerulosclerosis (FSGS) describes scarring in scattered regions of the kidney. FSGS may result from a systemic disorder or it may develop as an idiopathic kidney disease without a known cause. Proteinuria is the most common symptom of FSGS, but since proteinuria is associated with several other kidney conditions, the doctor cannot diagnose FSGS on the basis of proteinuria alone. Biopsy may confirm the presence of glomerular scarring.

Since idiopathic FSGS is by definition of unknown cause, it is difficult to treat. No universal remedy has been found, and most patients with FSGS progress to total kidney failure over 5 to 20 years. Some patients with an aggressive form of FSGS reach kidney failure in 2 to 3 years. Treatments involving steroids or other immunosuppressive drugs appear to help some patients by decreasing proteinuria and improving kidney function. But unfortunately, these treatments are beneficial to only a minority of patients, and some patients experience an even greater decrease in kidney function as a result. Treatment should focus on controlling blood pressure and cholesterol levels.

Hereditary Nephritis—Alport Syndrome
The primary indicator of Alport syndrome is a family history of chronic glomerular disease, although it may also involve hearing or vision impairment. This syndrome affects both men and women, but men are more likely to experience chronic kidney disease and sensory loss. Men with Alport syndrome usually first show evidence of decreased kidney function in their twenties and reach total kidney failure by age 40. Women rarely have significant renal impairment, and hearing loss may be so slight that it can be detected only through testing with special equipment. Usually men can pass the disease only to their daughters. Women can transmit the disease to either their sons or their daughters. Treatment focuses on controlling blood pressure to maintain kidney function.
Section 4
Introduction

This section is for people who have been told they have chronic kidney disease (CKD). There are five stages of kidney disease. Stages 1-3 are defined as chronic kidney disease (CKD), stage 4 is defined as severe reduction in kidney function; and stage 5 is defined as chronic kidney failure.

Early detection and treatment can often keep chronic kidney disease from progressing. This is particularly true for people whose kidney disease was caused by diabetes or high blood pressure. On the other hand, when kidney disease is not treated early, it may eventually lead to kidney failure, a more serious condition, which requires dialysis or a kidney transplant to sustain life.

If you have been told that you have chronic kidney disease, it is important that you work closely with your doctor and health care team. If you have diabetes or high blood pressure, it is particularly important that you work with your health care team to keep your blood sugar and blood pressure at normal levels.

There are many steps you can take to prevent complications from diabetes, high blood pressure and kidney disease. The terms and definitions in this section are meant to help you understand these conditions and what you need to do in order to stay healthy.

Section 4-1: Working with Your Health Care Team

The first step in controlling kidney disease is to work with your health care team. Your health care team may include:

- **A primary care physician (PCP)**, internist or family doctor, who will watch your overall condition and coordinate your medical care with other specialists on the team.

- **A nephrologist** is a medical doctor who specializes in kidney disease.

- **An urologist** is a medical doctor specializing in treating conditions of the urinary tract and bladder.

- **An endocrinologist** is a medical doctor who specializes in diabetes care.

- **A cardiologist** is a medical doctor who specializes in heart disease.
- An oncologist is a medical doctor who specializes in treating cancer.
- A nurse who may answer questions about your symptoms, treatment and other health problems.
- A nephrology nurse is a licensed registered nurse who specializes in the care of kidney patients. Your nephrology nurse will help coordinate your care with the other members of your health care team.
- A nephrology social worker is a social worker who specializes in topics related to kidney disease. Nephrology social workers help plan treatment to fit your lifestyle and can identify sources of financial and emotional support. He/she can also provide counseling for you and your family to help cope with kidney disease and kidney failure.
- A renal dietitian is a dietitian who specializes in the renal diet. Renal dietitians are qualified to provide comprehensive nutritional assessments and education to help address special nutritional issues associated with certain diseases, specifically CKD, diabetes, and hypertension.

It is recommended that all patients in stages 4 and 5 of kidney disease see a nephrologist (a kidney specialist). Patients in stages 1-3 of kidney disease may continue to work with their primary care physician, internist or family doctor; however, it is recommended that all patients in stages 1-3 also have a consultation with a nephrologist. Many patients with CKD see a primary health provider for regular health checkups and a nephrologist for the management of their kidney disease. A patient with diabetes and kidney disease will see a primary care doctor, an endocrinologist and a nephrologist.
Section 4 – Living with CKD

Section 4 – 2: Be Active In Your Own Care

Whatever the stage of your kidney disease, highly skilled medical professionals are available to help you. However, it is important to realize that you too are a vital member of your treatment team. Your cooperation with your treatment plan is the key to staying as healthy as you can.

In order to remain an active member in your own care, here are some helpful tips:

- Learn all you can about your condition and its treatment options. This will give you more control over your illness and will enable you to make the best treatment choices for yourself.
- Become acquainted with all the members of your health care team. Learn what each of them can do to help you stay well and feel your best.
- Never hesitate to ask questions about any aspect of your care.
- Never hesitate to ask questions about something that you do not understand.
- Be sure to follow your treatment plan carefully. This includes taking all your prescribed medications, following any special dietary recommendations, keeping all your appointments with your doctor and following an exercise program approved by your doctor.
- Check with the National Kidney Foundation of Illinois about the availability of programs, services, and support groups in your community. You may pick up some useful tips from other people with kidney disease.

Adapted from National Kidney Foundation (NKF) Getting The Most From Your Treatment series, “What You Need to Know When You Have Chronic Kidney Disease”.

Section 4 – 3: Treatments, Slowing the Progression

Many individuals with diabetes or high blood pressure develop kidney disease because they stop following their treatment plan, which may include not following the recommended diet or not taking the prescribed medications. Closely following your treatment plan can delay or even prevent dialysis all together.

Scientists have made great progress in developing methods that slow the progression of kidney disease (and in some cases, repair kidney damage) in people who are at risk for or in the early stages of CKD. The following is a list of some of the common treatments for chronic kidney disease. Your individual treatment plan will depend on both the cause and stage of your CKD.

Remember: kidney disease is progressive. There are no signs and symptoms in its early stages. The earlier you start your treatment and the more closely you follow your treatment plan, the better you are likely to do.

Treatment for Chronic Kidney Disease

Intensive Management of Blood Sugar Levels
If you have diabetes, it is particularly important that you monitor and control the levels of sugar in your blood. Too much sugar in the blood can “coat” the blood vessels and organs of the body and cause more damage to the kidneys.

Intensive management of blood sugar levels might include:
- Strictly monitoring your blood sugar, as prescribed by your doctor. If you have diabetes and do not have a blood sugar monitor, ask your doctor or social worker to recommend one you can use at home.
- The HBA1C blood test which reads your blood sugar over a period of three months.
- The Diabetic Diet which is especially important for people with diabetes because it will help control blood sugar levels and prevent further kidney damage.
- Exercise. Be Active! Consistent physical activity such as walking will help to control weight and improve cardiovascular function. Do something active at least 30 minutes each day but check with your doctor before starting an exercise program.
- Taking your medications as prescribed by your doctor.
Blood Pressure Control
Blood pressure control is important for preventing the progression of CKD. High blood pressure can cause more damage to declining kidneys.

Blood pressure control might include losing weight, a diet low in fat and processed foods, eating less salt, exercise, drinking less alcohol, lifestyle changes and meditation. Medication might also be prescribed.

Remember: your goal is to keep your blood pressure below 120/80. If you have diabetes and/or kidney disease, the target is to keep your blood pressure below 130/80.

A Low Sodium Diet
A low salt diet is especially important for people with high blood pressure because it will help control your blood pressure and prevent further kidney damage. You should limit the use of table salt as well as processed foods and canned soups and vegetables.

Blood Pressure Medication
Two types of blood pressure medication have been shown to slow kidney disease progression in people with and without high blood pressure. These medications work by slowing the action of angiotensin, a substance that may contribute to kidney disease progression. They may help protect kidney function by lowering the risk of cardiovascular events in all kidney disease patients. The two types of medications are:
- ACE inhibitors “Angiotensin converting enzyme inhibitors” Generic names: captopril, enalapril, lisinopril
- ARBs “angiotensin receptor blockers”. Generic names: candesartan, losartan, valsartan.

There are other types of blood pressure medications: Diuretics (water pills), calcium-channel blockers, and centrally acting anti-hypertensives (beta blockers) that your doctor may also want to add, as needed, to your treatment plan.
Quitting Smoking
Smoking is a risk factor for CKD and may contribute to faster progression of kidney disease. Smoking directly damages blood vessels. Quitting smoking is not only important for overall health, but it can also help slow the progression of kidney disease.

Other
In some cases, kidney disease is caused by an obstruction and can be treated with surgery to remove the obstruction. When kidney disease is caused by an infection, in some cases, the infection can be treated with an antibiotic.

If kidney damage is due to the effects of prescription or non-prescription medications, your doctor may be able to suggest a different medication that is less harmful to your kidneys. If you have CKD and are prescribed antibiotics, talk to your doctor about the effect it may have on your kidneys. Painkillers (even over-the-counter pain medications) can damage your kidneys. Talk to your doctor about all the medications you take. Sometimes diagnostic studies are ordered with contrast dye. It may be necessary for you to have the study, but first find out if there are alternative methods.

Some diseases, such as IgA Nephropathy, Glomerulonephritis, and Lupus can cause kidney damage when your immune system overreacts and inflammation occurs. It is sometimes possible to slow the disease process by controlling the immune system with steroids and/or other medications.
Section 4 – 4: Nutrition

If you have chronic kidney disease (CKD), nutrition is an important part of your treatment. A renal diet can help control the buildup of wastes and fluids in your body caused by kidney disease.

A specialized renal diet might also help control some of the side effects of kidney disease and in some cases, prevent rapid decline in kidney function. Since your diet depends on your stage of kidney disease, it is important to create a nutrition plan that works best for you. Your dietitian can help plan meals for the right balance of protein, calories, vitamins and minerals. You may find a food diary where you record what you eat helpful.

In the early stages of kidney disease, if you have diabetes or high blood pressure, follow a diabetic or low sodium diet to prevent the kidney disease from progressing.

If you need to be on dialysis because your kidneys have failed, you will have to eat more protein in your diet. You need to choose high biological value protein or protein that comes from animal sources, such as beef, pork, chicken, fish, and eggs. Talk to your doctor or dietitian about how much protein you should be eating. Depending on your blood values you may need to restrict phosphorous or potassium. You should also work with your dietitian for overall adequate nutrition. Keep in mind that some things that are healthy for you without kidney disease may not be healthy for you if your kidneys fail.

There are special blood tests that check your nutritional health to make sure you are eating what you should be to stay healthy. Albumin, a type of protein that is measured by the amount of meat that you eat every day, indicates if you are eating enough protein. If you do not eat enough, you will be unable to fight infections.

Heart Disease and Nutrition
This is the number one killer of dialysis patients. Try to follow a heart healthy diet low in both cholesterol and salt.
Secondary Hyperparathyroidism (SHPT)
It is important to talk about increases in Parathyroid Hormone (PTH) levels early. Often times lab values show normal levels of the minerals that build bone (phosphorous and calcium) while PTH is on the rise. Keep in mind that an increase in these minerals is very common in kidney failure. Typically, phosphorous and calcium do not need to be restricted until late CKD stage 4.

Once kidneys fail, your body is not able to release phosphorous in the urine like your kidneys did when they were healthy. Too much phosphorous is not good because it starts to break down bones and can lead to heart problems. Studies have shown that the bone disease known as Secondary Hyperparathyroidism (SHPT) starts before kidneys fail.

Anemia & Iron
As kidneys decline, the amount of red blood cells also starts to decline. It is important that you eat enough meat to be able to get the iron you need to move these red blood cells through the body.

Speak to your doctor if you notice any of the following...
- A decreased appetite or problems eating your usual foods
- A loss of weight without trying
- Feeling sick to your stomach especially in the morning before breakfast
- A change in your strength or ability to take care of yourself
- Itching or skin irritation

If your kidney disease leads to kidney failure, you will need dialysis or a transplant. At that time, more changes will need to be made in your diet, depending on which treatment you choose. Typically, the diet for hemodialysis has more restrictions than the diet for peritoneal dialysis. The diet followed by kidney transplant patients is the most flexible. A dietitian will be available at your treatment center to help develop a meal plan that will meet your individual needs.
When the kidneys are damaged:
- You may produce less or stop producing red blood cells, which can affect the amount of oxygen in your body
- You may produce less or stop producing vitamin D, which can affect your bones
- Your body may have trouble maintaining blood pressure, which can affect all of your organs

As a result, people with kidney disease are at increased risk for heart disease, bone disease and anemia, among some other problems. These are called “complications” or “secondary diseases”.

The good news is you can take steps to help prevent or control some of the complications associated with kidney disease. This section will talk about some of these complications and what they mean, as well as some other terms and concepts relating to kidney disease. By learning as much as you can about kidney disease and its “secondary diseases”, you can work with your doctor and health care team to find out how you are doing and what you can do to prevent problems. Knowledge is the key!

Kidney Disease and Heart Disease
Heart disease is also called “cardiovascular disease” or “CVD”. Heart disease includes a number of conditions that affect the structure or function of the heart, including coronary artery disease, abnormal heart rhythms, heart failure, heart valve disease, heart muscle disease, stroke and angina (chest pain). Heart disease is very common in kidney patients for many reasons. Kidney patients have one or more of the risk factors for heart disease. These include: high blood pressure, diabetes, being overweight or obese, high cholesterol and high levels of blood lipids (fatty substances like cholesterol). Secondary Hyperparathyroidism (SHPT) and anemia are also common among kidney patients, and add an additional risk factor for heart disease.

Although treatment for heart disease can be different for each patient, maintaining a healthy diet, exercise and not smoking are important factors in helping to prevent heart disease. Some patients may also need to take medication.

For more information on healthy diet, exercise and smoking, please see Section 2 – 6 and Section 4.
Related Terms

**Blood lipids:** fatty substances found in your blood and body tissues. There are three types of blood lipids: HDL cholesterol, LDL cholesterol and triglycerides. Cholesterol is made in the liver and found in certain foods, such as eggs, dairy products (like whole milk), meat, butter and creams.

**Angina:** chest pain.

**Reasons for Having High Cholesterol**

- Too much saturated fat in your diet
- Being overweight or obese
- Lack of regular exercise
- Drinking too much alcohol (beer, wine, liquor)
- Smoking
- Having a family history of high cholesterol
- Having certain medical conditions, such as diabetes or an under active thyroid gland
- Certain medications

**Tips on Lowering Cholesterol**

Pre-dialysis patients should have a diet rich in whole grains, fruits and vegetables as well as an active lifestyle that includes exercise (please discuss with your doctor). Losing weight, following a low-fat diet and exercise will all help keep your cholesterol at normal levels.
Secondary Hyperparathyroidism (SHPT) and Bone Disease

SHPT is a common side effect of kidney disease. Normally, the kidneys activate Vitamin D to regulate phosphorus and calcium in the body, two minerals that build bones. When the kidneys become damaged, levels of phosphorus and calcium in the body become unbalanced. In kidney failure, the kidneys are not able to perform the three necessary functions to stop PTH production. Healthy kidneys activate vitamin D, remove extra phosphorous in the urine and reabsorb calcium in the intestine. In kidney disease, calcium cannot be reabsorbed in the blood, like it can when the kidneys are working properly. Thus, it cannot stop the parathyroid glands (four aspirin size glands in your neck) from over producing PTH. The parathyroid glands release parathyroid hormone (PTH) into the blood causing calcium to also be released from the bones into the blood. In kidney failure, parathyroid glands produce too much PTH and over time, your bones can become weak, causing them to hurt and break more easily. SHPT is seen in kidney failure patients, but, the disease can occur as early as stage 2 - 4 of chronic kidney disease. As kidney function worsens, the amount of vitamin D produced decreases while PTH increases, leading to SHPT.

Luckily, bone disease can be prevented, if detected early, and treated with medications and diet. SHPT can be detected with PTH and phosphorus blood tests. Blood and bone density tests are some methods to determine if you are developing these kinds of bone changes. If you have early signs of bone disease take the activated form of Vitamin D (Zemplar, Calcijex, Hectorol), limit high phosphorus foods (milk, cheese, nuts, chocolate, dried beans and peas, cola) and take phosphate binders with all meals and snacks (Fosrenol, Renegel, Renvela, Phoslo, Tums).

Remember: if you have kidney disease, it is important for your health to learn about PTH and how it helps to keep your calcium and phosphorus levels balanced. However speak to your doctor first!
Anemia is a condition in which your body does not have enough red blood cells. Normally, your kidneys produce a hormone called erythropoietin (EPO), which signals your bone marrow to make red blood cells. Red blood cells are important because they are needed to carry oxygen to all parts of the body. However, when your kidneys are damaged, they stop making enough of the hormone EPO. As a result, your body does not produce enough red blood cells on its own, your body does not always get enough oxygen, and you become anemic.

Side Effects of Having Anemia

- Look pale
- Bruise easily
- Feel cold
- Have poor appetite
- Have trouble sleeping
- Have trouble concentrating or remembering
- Have shortness of breath
- Dizzy or faint
- Feel tired, have low energy, or become fatigued easily
- A rapid pulse or palpitations of your heart

Anemia causes lightheadedness. Without enough red blood cells, your brain gets less oxygen. This makes it harder to think, read, write or plan your day. Anemia increases your risk of heart problems because without enough oxygen from red blood cells, your heart has to work harder to get oxygen where it is needed. This added strain could potentially damage your heart.
Anemia can also cause:
- Heart disease
- Erectile dysfunction
- Erratic menstruation

Treatments for Anemia
Fortunately, there are two effective treatments for anemia that can help your body produce red blood cells.

If you have kidney disease, your doctor might prescribe:
- Epoetin alfa (EPO or Epoetin beta), a synthetic form of the natural hormone that tells your bone marrow to make more red blood cells. Common names for EPO include Aranesp and PROCRIT (for patients with chronic kidney disease) and Epogen (for patients on dialysis).
- Iron supplements (pills or iron injections). Iron supplements are used because if your body's iron level is too low, EPO cannot work effectively to treat your anemia.

Depression
Depression can be a serious condition that can render a person disabled in their work, with their family and in their social life. Depression can be mild, defined by “feeling discouraged” to severe with “feelings of hopelessness”. Other symptoms of depression range from changes in appetite to a lack of concentration and shorter attention span. Many kidney disease patients might feel depressed because treatment can be upsetting, especially in the early weeks and months.

If you have feelings of depression, talk to your health care team and social worker. There are various resources available to people who have feelings of depression, as well as support networks that can help you.
Section 5
What Is Kidney Failure?

There are five stages of kidney disease. Stages 1-4 are called chronic kidney disease (CKD). Stage 5 is defined as kidney failure. This means your kidneys have 15% kidney function or less.

Healthy kidneys clean your blood and remove waste and excess fluid. In kidney failure, the kidneys are no longer able to perform these functions, and harmful wastes can build up in the body, your blood pressure can rise, you may retain excess fluid, and you may experience other side effects such as heart problems, anemia and bone disease. This can make you feel tired or weak, and not well all together.

There are two types of kidney failure: acute and chronic.

- **Acute** typically happens quickly and may be caused by environmental factors. Acute means temporary, and acute kidney failure can improve or reverse itself.
- **Chronic** means you have a condition that is permanent and in many cases, progressive.

Chronic kidney failure (CRF) is the most common type of kidney failure. It typically occurs as a result of a slow destruction of normal kidney function. In other words, over time, chronic kidney disease causes damage to the small filtering units of the kidneys, ultimately resulting in kidney failure, or “stage 5 kidney disease”.

A diagnosis of kidney failure can be worrisome. Symptoms of having kidney failure include: high blood pressure, loss of appetite, nausea or vomiting, a bad taste in your mouth, edema or swelling of the hands or feet, face and other areas, headaches, the inability to concentrate, fatigue and/or feeling weak. If you have any of these symptoms, please speak with your doctor.
Kidney disease has five stages. Kidney failure is “stage 5”, meaning the kidneys have become damaged to the point where they are no longer able to rid the body of wastes and excess fluid.

### Related Terms

**GFR:** Test used to determine kidney function. Normal is typically above 90. When your GFR falls below 30, you should speak with your doctor about kidney failure treatment options. When it is below 15, you will need to speak with your doctor about beginning treatment for kidney failure.

**Acute kidney failure (ARF):** the sudden loss of the ability of the kidneys to remove waste and fluid.

**CRF:** acronym for “chronic kidney failure”.

**End Stage Renal Disease (ESRD):** term sometimes used to describe kidney failure, stage 5 of chronic kidney disease

**Renal failure:** another name for kidney failure.

**Dialysis:** a common treatment option for kidney failure

### Section 5 -1: Dialysis

**Kidney Failure: Know Your Options**

If your doctor has told you that you may need dialysis or a kidney transplant, this is because your kidney function is significantly reduced and you may have kidney failure. When your kidneys fail, they are no longer able to perform the functions of filtering out waste products and excess water on their own.

In most cases, kidney failure is not curable. However, several treatment options exist for kidney failure patients: hemodialysis, peritoneal dialysis and transplantation.

Remember: when you are diagnosed with kidney failure, it is important for you to consider each treatment option equally. **No single treatment option is best for everyone.** Your doctor and your family can help you decide on an appropriate treatment, which will be based on your medical condition, your kidney function, your nutritional health, your lifestyle and your personal preferences. Your doctor will also help you decide on the right time to start your treatment.
Dialysis

Dialysis (also called renal replacement therapy) is a medical treatment that works by replacing some of the kidneys’ functions for people who have been diagnosed with kidney failure. Dialysis cleanses the body of waste and excess fluids by filtering the blood through a machine or through your own peritoneal membrane. There are two types of dialysis: hemodialysis and peritoneal dialysis.

Hemodialysis

Hemodialysis is a medical procedure designed to remove wastes, toxins and fluids from the blood when the kidneys have failed. Hemodialysis is the most common method for treating kidney failure. It is usually done three times a week at a dialysis unit, referred to as ‘in-center’ dialysis, which may be located in a hospital or may be in a separate facility. Each session lasts about three to five hours, although treatment time varies by patient. When you are on hemodialysis, an “access” (a connection) must be made to the blood inside your blood vessels. This access allows your blood to travel through soft tubes to the dialysis machine where it is cleaned as it passes through a special filter, called a dialyzer.

Hemodialysis treatments can also be done daily at home and may provide patients greater flexibility in their schedule. Others choose hemodialysis daily in a center.

Home Hemodialysis

Home hemodialysis often provides patients more freedom to better fit their treatments into their daily personal and job schedule. Patients and their families or caretakers are trained on how to do dialysis safely at home and how to handle any problems that may arise. This training is extremely important and can take from several weeks to a few months.

There are two types of home hemodialysis: conventional home hemodialysis and short daily home hemodialysis.
Conventional Home Hemodialysis

In conventional home dialysis, each treatment is done three to four times a week for approximately three to four hours or longer each time. Conventional home hemo requires a helper to be involved in the treatment.

In short daily home hemodialysis, treatments are done five to seven times a week for shorter periods of time (usually about two hours for each treatment) using new machines designed for short daily home treatment. Because you are doing dialysis more often, less fluid generally needs to be removed each time. This reduces symptoms such as headaches, nausea, cramping and feeling “washed out” after your treatment.

Daily Hemodialysis

Two types of daily hemodialysis can be done. One involves more treatments each week for shorter periods. For example, patients might do six treatments weekly compared with the usual three. Each treatment would last about one and a half to two hours, compared with three to five hours on dialysis three times a week.

The second type, called **nocturnal (nighttime) dialysis** involves long, slow blood flow treatments, which are done during the sleep hours. Nocturnal hemodialysis is usually done at home for 6-8 hours; however, there are also in-center dialysis units that offer nocturnal programs.

Studies show that daily hemodialysis has benefits such as:
- improved phosphorus levels
- better control of conditions like anemia and high blood pressure using less medication
- fewer problems during hemodialysis such as dizziness, headaches, nausea and vomiting
Hemofiltration — This process has already been used in U.S. hospitals for treating acute kidney failure and in Europe for treating patients with chronic kidney failure. Hemofiltration is similar to hemodialysis in some ways. For example, you need to have an access to your bloodstream. In addition, your blood travels through soft tubes to a machine where it goes through a special filter before the cleansed blood is returned to your body. Hemofiltration uses a gentler process (filtration or convection) that is considered to be closer to the way healthy kidneys purify the blood. Standard hemodialysis uses diffusion as the cleansing process with little convection. The advantages of hemofiltration include more stable blood pressure during and after treatment, resulting in greater comfort and fewer adverse effects for patients. In addition, hemofiltration is better at removing large wastes than hemodialysis and peritoneal dialysis. These wastes can accumulate in the body and cause bone problems and joint pain.

Hemofiltration is often done daily for two to three hours depending on your size and access blood flow rate. Hemofiltration also removes larger amounts of fluid and chemicals, which must then be replaced by prepared sterile solutions. Recently, compact hemofiltration machines have been developed that use prepared fluid in bags like those used for peritoneal dialysis but specifically for hemofiltration. Patients can use these at home or in a dialysis center. When done at home, you and an assistant are trained to do all the steps of the procedure and you can schedule your treatments to fit your needs.

Related Terms

Renal: having to do with the kidneys
Dialysis: one of the two types of treatment options for kidney failure.
Renal Replacement Therapy: another name for dialysis, a treatment option for kidney failure patients that involves removing waste and excess fluid from the body
Renal Diet: special diet for dialysis patients to help you stay healthy and feel your best
Peritoneal Dialysis (PD)

Do You Know About Peritoneal Dialysis?

Peritoneal dialysis (PD) can be done at home, at work, at school or even during travel. For some patients, PD is a better option, as it provides more freedom. For other patients, PD is not the best option, as it can be difficult to administer at home and can cause additional side effects. Receiving the right amount of dialysis, taking your medications and eating well are important to staying healthy and feeling your very best on peritoneal dialysis.

This type of dialysis uses the inside lining of your own abdomen (belly or peritoneal cavity) as a natural filter to clean your blood. Your blood is not filtered through a machine as in hemodialysis, but rather cleansed inside your body using a cleansing solution. Wastes and extra fluid pass into this dialysate solution from your blood. The dialysis solution remains (dwell time) in the peritoneum, then after several hours, is removed from your abdomen through the same tube. The removal of the used solution and the addition of the fresh solution takes about thirty minutes and is called an “exchange”.

Continuous Ambulatory Peritoneal Dialysis (CAPD)

CAPD is the most common method of peritoneal dialysis. With CAPD, you do the exchanges yourself four to six times a day. This must be done in a location that is clean and well lit. CAPD does not require any mechanical equipment. You can be trained to perform this exchange by yourself, by connecting the tube that is attached to a new bag of fluid to your catheter. The fluid enters your abdomen and stays there until you empty it approximately 4-6 hours later.

Continuous Cycling Peritoneal Dialysis (CCPD)

With CCPD (sometimes called Automated Peritoneal Dialysis (APD)), you use a machine called a cycler, which does the exchanges automatically while you sleep. Some patients who use CCPD, may also need to do one or two exchanges during the day to make sure enough wastes and excess fluid is cleared from the blood.

The catheter is connected to the cycler machine. For eight to ten hours each night, the machine fills and drains the dialysate to and from the peritoneum cavity. The machine keeps repeating this process throughout the night.
If You Choose Not to Start or Discontinue Dialysis

For many people with kidney failure, dialysis and transplantation greatly improve quality of life. For some patients, dialysis and transplantation may not work as effectively or be an option. It is important to know that patients have the right to decide not to start dialysis or refuse treatments. Before considering this option, patients should discuss it carefully with their doctors and loved ones. When patients decide not to start treatment, or discontinue dialysis, the patient or the person designated to make medical decisions may want to make sure the following items are in order: a will and a signed advance directive (living will, durable health care power of attorney or health care proxy) that complies with state law.

Points to Remember

- People live long, fulfilling lives on dialysis. Being on dialysis does not mean the end of life. Hundreds of thousands of people today are living well on dialysis. You can live a long, fulfilling life on dialysis.
- No matter what treatment option you choose, you need to make a commitment to follow your treatment plan. This includes following your treatment schedule, your special diet, and taking your medications.
- You do not have to stay with the same treatment. If you choose to start hemodialysis, you may be able to switch treatment options. At any time, you can talk with your doctor about the possibility of changing treatment options.
- You will need to change your diet depending upon the type of treatment you choose. If you begin dialysis, you will follow what is called the renal diet. You may also need to follow a special diet if you have a kidney transplant, which is typically not as restrictive as the renal diet.
- You will feel better once you begin your dialysis treatment or have a transplant. In dialysis, your body will be cleaned of toxins and you will be treated for anemia, which will give you more energy. Many patients feel even better after a kidney transplant, particularly when you take your medications, follow your diet and take care of yourself.
Peritoneum: the membrane that lines the abdominal cavity
Peritoneal membrane: the lining of your abdomen; in PD, dialysis occurs inside the body using the peritoneal membrane to filter your blood.
PET (peritoneal equilibration test): a test used to measure how your body moves wastes and fluid across your peritoneal membrane. It is usually done once in order to help your doctor determine if the peritoneal membrane is filtering adequately.
Catheter: a soft tube used in PD
Dwell phase: time in which the dialysis solution remains in the abdomen to clean your blood.
Dialysate: fluid used in PD to clean your blood.

Section 5-2: Fistula Options
Hemodialysis: Know Your Access Options
In hemodialysis, there are three different types of access: a fistula, a graft, and a catheter. An access means “the entrance” into your blood vessels. An access is used in dialysis to carry your blood to the dialyzer, where it is cleaned and returned to you. Please speak with your doctor about which type of access is best for you. Each has its pros and cons; however, most professionals recommend a fistula because it has fewer complications and lasts longer.

Fistula
A fistula is made by joining an artery to a nearby vein under your skin to make a bigger blood vessel. The procedure causes the vein size to increase so that it can support dialysis blood flow.

It requires minor surgery. The thought of surgery can sound intimidating to some patients. However, it is important to know that experienced surgeons are trained to perform this surgery.
Most nephrologists (kidney doctors) recommend fistulas over other forms of vascular access. Studies show that fistulas tend to last longer, are associated with fewer complications, and can provide better dialysis.

If you have been told that you have kidney failure and have decided with your doctor that you will begin dialysis, your doctor will refer you to a vascular surgeon. It is ideal to have the fistula surgery at least four to six months before beginning dialysis because it usually takes several months for your fistula to enlarge and become ready for dialysis.

**Graft**

A graft is a soft synthetic material that joins an artery and a nearby vein under your skin. Grafts are typically surgically placed in the arm or sometimes the leg by a vascular surgeon. A graft is often used by doctors if your blood vessels are not suitable for a fistula. When you have dialysis treatment, two needles will be placed in your fistula or graft. These are connected to the soft tubes that go to the dialysis machine. Your blood flows out through one of these tubes and returns through the other.

**Catheter**

A catheter is a special device that is inserted into a large vein in your neck or upper chest. This type of access is generally used for a short period of time, usually because of an emergency; however, it is sometimes used as a permanent access, but it is not recommended to do so.
One treatment option for kidney failure to discuss with your doctor is transplantation. A kidney transplant is a surgical operation in which a person whose own kidneys have failed receives a new kidney to take over the work of cleaning the blood. Many patients feel a successful kidney transplant provides a better quality of life because it allows for greater freedom, is often associated with increased energy levels, and has a less restrictive diet.

**Types of Kidney Transplants**

A transplanted kidney may come from a living donor or from an individual who has died (non-living donors).

**Non-living Donors:** Technical advances have resulted in very good success rates for kidney transplants from non-living donors. However, due to the shortage in the supply of donated kidneys, you must remain on a waiting list until a suitably matched kidney becomes available. The wait list time frame differs depending on several criteria including compatible blood type, HLA antigens, and antibodies. In addition, the longer you have been on the waiting list, the better your chance of receiving a suitable kidney. To be added to the waiting list, talk to your doctor and Transplant Center. Each person can only be on one transplant waiting list in your state, however, they can list in different states.

**Living Donors:** Most people have two kidneys and only need one to survive. Thus, a living person can donate his/her kidney to you. A living donor may be someone in your immediate or extended family or your spouse or a close friend. In some cases, a living donor may even be a stranger who wishes to donate a kidney to anyone in need of a transplant. An interested living donor will be tested for compatibility with the intended recipient at a Transplant Center.

One advantage of receiving a kidney transplant from a living donor is that the average long-term success rate tends to be somewhat higher than transplants from non-living donors. Another advantage is that the operation can be scheduled to suit your needs and those of the donor. The disadvantage is that a healthy donor must undergoing surgery to remove a kidney to give to you.
Paired Kidney Exchange

One additional living donor alternative is called Paired Kidney Exchange. In many cases, people who are on the waiting list would like a relative or friend to donate a kidney; however, they are not compatible. This incompatible donor can donate to another person on the wait list who also has an incompatible donor willing to donate and a match for the first person. The kidney swap program (paired kidney exchange) makes more kidneys available to patients earlier than they would normally have them.

Organ Swap - an example

www.organswap.org helps to find the match between pair A and pair B
Starting the Process of Getting a Kidney Transplant

Your doctor can discuss the transplant process with you. He or she can also refer you to a transplant center for further evaluation, or you can call a transplant program at a hospital near you.

The Kidney Transplant Centers in Illinois include:

- Advocate Christ Medical Center ................................................................................................................ 708-684-7100
- Children’s Memorial Hospital, Chicago, Illinois (pediatric only) ................................................................. 773-880-4325
- Loyola University Medical Center, Maywood Illinois ......................................................................................708-216-4044
- Northwestern Memorial Hospital, Chicago, Illinois ....................................................................................... 312-695-8900
- OSF St. Francis Medical Center, Peoria, Illinois ............................................................................................. 309-655-4101
- Rush University Transplant Program, Chicago, Illinois ................................................................................... 312-942-4252
- University of Chicago Hospitals, Chicago, Illinois ......................................................................................... 773-702-6141
- University of Illinois at Chicago Medical Center, Chicago, Illinois .............................................................. 312-996-6771

After Transplantation

A kidney transplant surgery usually takes about three hours. You may be out of bed within a day or two and most patients leave the hospital within 3 to 7 days.

After transplant, you will need to take a number of medications for the rest of your life. They are called “anti-rejection” or “immunosuppressive” drugs. You will also need to have follow-up laboratory tests done so that the transplant team can monitor the health of your new kidney and make certain your medications are working properly.
Paying for a Kidney Transplant

Most private health insurance policies cover many expenses associated with kidney transplants, including medications. In addition, most kidney transplant candidates are eligible for Medicare, which covers 80 percent of the cost of the transplant surgery. After transplantation, you will need to take medications to prevent rejection of your new kidney. Medicare Part B will cover 80 percent of the cost of the anti-rejection medications. For most patients, this Medicare coverage will stop after 36 months. Your transplant center’s social worker or financial advisor should be available to answer questions about your insurance coverage options.

Other Considerations

Diabetes - Sometimes it is possible for patients with Type I Diabetes to receive a pancreas transplant along with their kidney transplant. Your transplant center can advise you about this possibility.

Sex Life – People who have not had satisfactory sexual function may notice steady improvement in sexual function as they begin to feel better after a transplant.

Diet and Exercise – A kidney transplant will allow for a much less restrictive diet but diet will still play a large role in the longevity of your transplanted kidney. A low-fat, low sodium diet will help to lower fluid retention and avoid unwanted weight gain that may be a side effect of your transplant medications. An exercise plan is also important. Controlling your weight will help keep you from developing problems such as heart disease, diabetes and high blood pressure. Talk to your doctor or a registered dietitian for the right plan for you.
Section 5-4: Travel & Dialysis

If you are on dialysis, you can still travel. Travel will require some pre-planning, but is definitely possible.

Ask your Social Worker for help as soon as you know you will be traveling.

Set up a meeting with your social worker 6-8 weeks before your scheduled trip to plan where and how you will receive your dialysis treatments. Your social worker will help you set up dialysis treatments in the city that you are visiting.

If you must travel on short notice, do not worry. You should be able to make your trip and receive dialysis, but may have to travel a further distance for dialysis or not get your desired treatment time. Do your best to contact a dialysis unit located in the area where you will be traveling as soon as you know your travel plans.

Peritoneal Dialysis or Hemodialysis patients may continue with their normal treatment procedures. Bring enough supplies for dialysis for the trip plus a few days extra in case you are delayed. Vendors are often able to ship the necessary medical equipment for Peritoneal Dialysis to your destination area. Also, make sure to have the contact information for a dialysis clinic or hospital where you are traveling in case of an emergency.

Make sure to bring your medications, insurance information, lab results, medical equipment and emergency numbers with you.

Illinois Medicaid does not pay for dialysis out of the state. Patient may be responsible to pay the full amount of the dialysis cost. Patients with private insurance and Medicare may have to pay co-pays. Ask your social worker to explore this information while you are planning your trip.
Section 5 – Kidney Failure

Section 5-5: Latino Renal Diet

It is very hard to follow a renal diet especially if you are Latino. The staples of a typical Latino diet are high in both phosphorous and potassium. Remember that foods high in phosphorous are usually high in calcium too. The reason to avoid foods high in phosphorus is that it is unable to be passed through the urine. Once there is too much in the body, it starts to act like a poison. This causes the hardening of soft areas in your body, like your heart, lungs or skin. Potassium affects muscles, so the reason to avoid foods high in potassium is that it can affect the most important muscle – the heart. If high potassium goes untreated, you could have a heart attack.

Higher Phosphorus Foods to AVOID

- Milk
- Yogurt
- Chocolate (in mole sauce)
- Brown Rice, Wild Rice
- Pancakes, Waffles, Biscuits
- Avocado
- Dried Beans & Peas (like pinto beans)
- Hot Dogs, Sausage, Turkey Sausage, Bologna
- Sardines
- Beer, Cola, Milk-based Coffee and Chocolate Drinks (like Malta, champurrado, atoles)
- Cheese
- Ice Cream (milk based paleta)
- Bran
- Whole Grain Breads, Cereals & Crackers
- Pizza
- Nuts, Seeds, Nut butters
- Corn & Peas
- Organ Meats
- Corn Tortillas, corn chips, masa (tamalas)
Lower Phosphorus Foods

- **Instead of milk**, try non-dairy creamers, rice milk (not enriched) or horchata or soy milk. (check the brand first, some are higher than others in phosphorous)
- **Instead of cheese**, try cream cheese or sour cream
- **Instead of cola or Dr. Pepper®** try cream soda, lemon-lime soda, grape soda, homemade lemonade, homemade iced tea or root beer.
- **Instead of ice cream** have gelatin, Popsicles®, sherbet, sorbet or water based paletta (Remember these are also fluids)
- **Instead of chocolate or nuts** try jellybeans, fondant, gumdrops, hard candy, unsalted popcorn or unsalted pretzels
- **Instead of chocolate cookies or cake** try sugar cookies, shortbread cookies, vanilla wafers or vanilla, lemon or angel food cake
- **Instead of hot chocolate or cocoa** try hot apple cider or hot spiced cranberry juice
- **Instead of bran, oat or whole wheat cereals** try cereals made from corn, refined wheat or rice
- **Instead of whole grain breads** try French, Italian or white bread
- **Instead of peanut butter** try jam, jelly, honey, cream cheese, margarine or butter
- **Instead of dried beans or peas** try green beans or wax beans
- **Instead of brown rice or wild rice** try white rice, pasta, macaroni, grits or couscous seasoned with margarine and herbs
- **Instead of processed meats, fish and poultry** try fresh or fresh frozen items
Higher Potassium foods to AVOID

- Avocado
- Papaya
- Oranges
- Honeydew
- Tomato or tomatillo (salsa)

- Mango
- Bananas
- Cantaloupe
- Prunes
- Potato (can be leached by soaking for a minimum of 4 hours before cooking to reduce potassium)

Lower Potassium foods

- Instead of bananas or oranges try apples, grapes or berries (strawberries, blueberries)
- Instead of cantaloupe or honeydew try watermelon (remember watermelon counts as fluid)
- Instead of mango or papaya try pineapple, peach, or plum
- Instead of baked or fried potatoes try leached potatoes to make mashed or hash browns
- Instead of tomatoes or tomatillos try onions, garlic, carrots, cauliflower or peppers

Fluids

As kidney and urine function decrease, fluid isn’t removed from your body. Dialysis will help remove this excess fluid. However, our body can only handle removing so much fluid during one dialysis session. If you drink too much, more fluid has to be removed. Your body is not used to having lots of fluid removed at one time. Sometimes people get muscle cramps if they gain too much fluid weight between dialysis treatments. Taking off fluid can also cause your blood pressure to drop, which can make you feel nauseous, dizzy and weak after the treatment. Sometimes another dialysis treatment may be needed to remove all the extra fluid.
What can happen to me if I drink too much fluid?

- High blood pressure
- A sudden drop to low blood pressure
- Shortness of breath (because there is fluid in the lungs)
- Weakened heart muscles or an enlarged heart

Tips to manage your thirst:

- AVOID salty foods – they make you thirsty.
- AVOID fluid foods like: gelatin, watermelon, soup, syrup, gravy and frozen treats like Popsicles® and ice cream.
- Stay cool - it will help decrease your thirst, especially in the summer. Drink cold liquids instead of hot beverages. Try snacks like low potassium vegetables and fruits that are ice cold.
- ALWAYS sip your drink, it lasts longer. NEVER gulp or use big cups for your drinks.
- Try crushing ice. You can freeze water or low potassium fruit juices in ice trays for a special treat. Remember ice counts as a fluid!
- Try taking pills with applesauce instead of liquids.
- If you have dry mouth - try using mouthwash or brush your teeth instead of drinking more.
- Suck on hard or sour candy or a lemon or lime wedge.
- If you have diabetes, make sure your blood glucose levels are controlled. High blood glucose levels will make you thirsty.

Restricting fluids is not easy, but if you get tips from your dietitian and ask other patients what they do, you may find it easier than you thought.
Section 6
Section 6-1: Immigration and Health Care in Illinois

If you are not a United States citizen and require health care but cannot afford it, please speak with your social worker, or contact one of the organizations listed in this section to learn more about what you can do. There are many places where low-income individuals living in the United States can receive care. For example:

1. Any low-income child or adult can get emergency care and free or low-cost vaccinations.

2. Any individual may go to one of many community clinics, federally qualified health centers (FQHCs) or other federally funded health centers, as most will see you and your children without asking any questions about your immigration status. As well, most offer reduced or free services to those who cannot afford medical care. Many offer what is called a “sliding scale” program, which means the amount you pay for a medical visit is typically dependent on the amount of money you earn.

3. If you are not U.S. a citizen and require health care, you may also qualify for any of the following programs:
   - **All Kids**: Illinois program that provides health insurance for the lowest income children and helps working poor parents pay the cost of private health insurance. All children living in Illinois are eligible for All Kids.
   - Any pregnant woman, no matter what her immigration status, can receive prenatal and postpartum care and WIC (Women, Infants and Children Food Supplements) for herself and her baby, if she has an income below 200% of the poverty level.
   - **Medicaid**: Adults can receive Medicaid if they:
     a) Are Qualified Immigrants*; AND
     b) Are low-income; AND
     c) Have dependent children, OR are disabled, elderly (over 65) or pregnant
     d) Lawful permanent residents who entered the U.S. AFTER Aug. 22, 1996 are not eligible until five years after they become Qualified Immigrants*
*You are a Qualified Immigrant in Illinois if you are a lawful permanent resident; refugee, asylee, Amerasian, Haitian/Cuban entrant, trafficking victim, Hmong/Highland Laotian, certain Native American, or granted withholding or removal/deportation; a battered spouse or child in certain circumstances; paroled for at least one year or granted conditional entry prior to 4/1/80.

**Note:** Enrolling in any of these health programs, if you qualify, **WILL NOT** affect your application for permanent residency or citizenship. In addition, receiving public assistance of any kind should not endanger your application for citizenship, as long as you are truthful in filling out your application for public assistance. However, Medicaid for long-term nursing home care and cash benefits such as Temporary Aid for Need Families (TANF) or Supplemental Security Income (SSI) **MAY** endanger:
- Your application for residency, if you are depending on a family member’s benefits to survive; OR
- Your immigration status, if you depend on the benefits to survive within your first five years as a lawful permanent resident, but ONLY in certain circumstances.

If you have not committed fraud, the immigration service cannot require that you pay back public assistance in order to become a lawful permanent resident.

The above information was adapted from the Illinois Coalition for Immigrant & Refugee Rights (ICIRR) “Immigration and Health Care in Illinois” fact sheet. The ICIRR promotes the rights of immigrants and refugees, educates and organizes immigrant and refugee communities, promotes citizenship and civic participation, monitors, analyzes, and advocates on immigrant-related issues; and, informs the general public about the contributions of immigrants and refugees.

The ICIRR provides fact sheets and offers low- or no-cost consultations in English and Spanish on a variety of topics related to immigration, including another helpful fact sheet about immigration and health care called “Immigrant Eligibility for Public Assistance Programs in Illinois”. Call the ICIRR at 312-629-4500 or 312-332-7360, email: info@icirr.org, or www.icirr.org (includes “Español link”).
Section 6-2: Transplant Benefits for Non-Citizens

For people who are not citizens of the United States, the financial issues related to transplantation are complicated.

1) **Employer Health Insurance:** If you are covered by insurance through an employer, your coverage is the same as any other employee. Every insurance plan offers different coverage. Talk with your human resources office to understand your benefits or call your insurance company directly. You can usually find the number on the back of your insurance card.

2) **Medicare:** Medicare benefits are based on work history. Generally, you have to have worked and paid into Social Security for 10 years to qualify for coverage. Medicare will cover transplants, although there are some significant gaps in the benefits, specifically for medications.

   If the patient only has Medicare, there are significant co-payments with doctor’s visits, lab work, outpatient tests, and medicines when first transplanted in addition to what is covered by your Medicare Prescription Drug Plan.

   If you have Medicare at the time of your transplant, your anti-rejections medicines will be covered by Part B at 80%. Medicare Prescription Drug Plans (Part D) cannot help with the co-pays.

   If the only reason you have Medicare is your kidney disease, Medicare coverage will end 3 years after a successful kidney transplant. If you are over 65 years old or have another disability (and are a Permanent U.S. Resident), your coverage will continue.

3) **Medicare Prescription Drug Plans:** Medicare Prescription Drugs Plans started offering coverage January 2006. The plans are open to anyone with Medicare coverage, regardless of immigration status.
4) **Medicaid/Public Aid:** The Illinois Department of Public Aid is very complicated in regards to immigrants’ benefits. In 1996, Congress limited eligibility for full Medicaid benefits to U.S. citizens, pregnant women, certain groups of children, and limited groups of non-citizens with specific immigration status. Illinois has decided to offer emergency care services for non-citizens regardless of status. This includes chronic dialysis, but kidney transplantation is not included for non-citizens. Kidney transplant is not considered an emergency service.

- If you are in the United States with proper documentation (legal permanent resident), and have been here in that status for over 5 years, you are entitled to Medicaid, assuming you meet the income guidelines. Transplant will be covered.

- If you are in the United States with proper documentation, but have been here less than 5 years, you are only eligible for dialysis services through Public Aid. Transplant and Medications will not be covered.

- If you are in the United States without proper documentation, you are only eligible for emergency services through Public Aid. Transplant will not be covered.

**Note:** Once you are transplanted and no longer need dialysis, you officially no longer qualify for emergency benefits through Public Aid. Transplant maintenance does not qualify as a life saving treatment. You would have no insurance for hospitalizations, doctors’ visits, labs, or medicines.

1) **Illinois Cares/Circuit Breaker:** Illinois Cares is the new name for Circuit Breaker. This Illinois program helps low-income elderly and disabled people pay for medicines. If you are eligible for a Medicare Prescription Drug Plan, Illinois Cares helps with co-pays and deductibles. The Circuit Breaker application does not ask about immigration status. Transplant medicines are generally not covered by this plan.
2) **Indigent Programs:** The makers of medicines have programs where you can get medicine for free. Some of the applications ask about immigration status, some do not. All of the applications for the anti-rejection medicines ask immigration status. Talk to your Social Worker, Human Resources Department, Social Security caseworker, or Public Aid caseworker to understand better your benefits.

**Undocumented Persons**

The financial issues related to transplant are especially difficult for people without proper legal documentation. The only way to receive a transplant in the United States is to pay cash for the procedure and to receive a kidney from a living donor. Contact the Transplant Center closest to you for more information.
Section 7
## Section 7 – Resources: Where to get more information

### Resources

<table>
<thead>
<tr>
<th>General Resources: CKD &amp; At-Risk Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>National Kidney Foundation of Illinois/La Fundación Nacional del Riñón de Illinois</strong></td>
</tr>
<tr>
<td>215 West Illinois, Suite 1C</td>
</tr>
<tr>
<td>Chicago, Illinois 60610</td>
</tr>
<tr>
<td>Tel: 1.312.321.1500</td>
</tr>
<tr>
<td>Fax: 1.312.321.1505</td>
</tr>
<tr>
<td><a href="http://www.nkfi.org">www.nkfi.org</a></td>
</tr>
<tr>
<td><a href="http://www.kidneymobile.org">www.kidneymobile.org</a></td>
</tr>
</tbody>
</table>

The National Kidney Foundation of Illinois (NKFI), a major voluntary health organization, seeks to prevent kidney and urinary tract diseases, improve the health and well-being of individuals and families affected by these diseases, and increase the availability of all organs for transplantation. The NKFI offers educational materials, patient support (including telephone support), patient education programs, transplant education for pre-and post-transplant patients and living donors, and professional education, among other services, including a Spanish video on kidney disease. NKFI website includes comprehensive information for patients and professionals, including information on prevention, preventive health screenings, kidney disease treatment options, organ donation, transplantation, as well as The Comprehensive Resource Guide on Chronic Kidney Disease with links to numerous organizations and additional information.

<table>
<thead>
<tr>
<th>KidneyMobile® Program</th>
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<tbody>
<tr>
<td>215 West Illinois, Suite 1C</td>
</tr>
<tr>
<td>Chicago, Illinois 60610</td>
</tr>
<tr>
<td>Tel: 1.312.321.1500</td>
</tr>
<tr>
<td>Fax: 1.312.321.1505</td>
</tr>
<tr>
<td><a href="http://www.nkfi.org">www.nkfi.org</a></td>
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<tr>
<td><a href="http://www.kidneymobile.org">www.kidneymobile.org</a></td>
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</table>

The KidneyMobile®, a program of the National Kidney Foundation of Illinois, travels throughout Illinois providing kidney disease prevention screenings and education to thousands of people annually. The KidneyMobile® program includes free diabetes, blood pressure, and urinalysis screenings, as well as education and a consultation with a medical professional. When possible, a blood draw to test for hemoglobin and creatinine is also offered. Participants with abnormal results are provided with follow up attention and referred to local medical provider if needed.
### Resources

<table>
<thead>
<tr>
<th><strong>National Kidney Foundation, Inc. (NKF) / La Fundación Nacional del Riñón</strong></th>
</tr>
</thead>
</table>
| 30 East 33rd Street, Suite 1100  
New York, NY 10016  
Toll free: 1.800.622.9010 |
| www.kidney.org  
info@kidney.org  
http://www.kidney.org/atoz/atozTopic_sp.cfm (link to Spanish resources) |
| **Description** |
| The National Kidney Foundation (NKF) offers extensive information to patients in English and Spanish on kidney disease, organ and tissue donation and transplantation; educates the public; provides clinical practice guidelines and continuing education for professionals; expands patient services; shapes health policy; updates on legislative issues; supports research; and conducts fund raising events. |

<table>
<thead>
<tr>
<th><strong>National Institute of Diabetes &amp; Digestive &amp; Kidney Diseases (NIDDK)</strong></th>
</tr>
</thead>
</table>
| 31 Center Drive, MSC 2560  
Bethesda, MD 20892-2560 |
| http://catalog.niddk.nih.gov/  
http://www.niddk.nih.gov/health/health.htm  
www.niddk.nih.gov |
<p>| <strong>Description</strong> |
| The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) is part of the National Institutes of Health (NIH), an agency of the U.S. Department of Health and Human Services. The NIDDK offers free health education and supports health research and the NIDDK website offers extensive information on diabetes, digestive diseases (including liver diseases), kidney and urologic diseases, weight control, endocrine and metabolic diseases, hematologic diseases, and nutrition. |</p>
<table>
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<tr>
<th>Resources</th>
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<tbody>
<tr>
<td><strong>CKD PATIENT SERVICES</strong></td>
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<tr>
<td><strong>American Kidney Fund (AKF)</strong></td>
<td>American Kidney Fund (AKF) offers a variety of services including: financial assistance for needy kidney patients; assistance with transportation to dialysis, medications, special diet, and kidney donor expenses; other specialty programs that help patients afford treatment during emergency travel and recover from natural disasters.</td>
</tr>
<tr>
<td>6110 Executive Boulevard, Suite 1010&lt;br&gt;Rockville, MD 20852&lt;br&gt;Tel: 301.881.3052&lt;br&gt;Toll free: 1.800.638.8299&lt;br&gt;Fax: 301.881.0898&lt;br&gt;<a href="mailto:helpline@akfinc.org">helpline@akfinc.org</a>&lt;br&gt;www.kidneyfund.org&lt;br&gt;<a href="http://www.kidneyfund.org/fpa_spanish.asp">http://www.kidneyfund.org/fpa_spanish.asp</a> (Spanish link)</td>
<td></td>
</tr>
<tr>
<td><strong>American Association of Kidney Patients (AAKP)</strong></td>
<td>Formed by a group of patients and their families and friends to provide support to other patients with kidney disease, the American Association of Kidney Patients (AAKP) offers a variety of services including educational materials, patient support, seminars with guest speakers on various topics, advocacy, social events and activities such as picnics and banquets, linkage to other support networks, and information on new trends in kidney disease treatment, patients services, diet, lab values, among other topics. AAKP offers an extensive list of different food items and their nutritional content. AAKP also offers a 24-page, pocket size brochure with information on the nutritional content (calorie, sodium, protein, phosphorus, potassium content) of more than 300 commonly used foods; as well as menu items from 11 fast food restaurants to help the dialysis patient eat right. Available in English and Spanish.</td>
</tr>
<tr>
<td>3505 E. Frontage Road, Suite 315&lt;br&gt;Tampa, FL 33607&lt;br&gt;Tel: 1.800.749.2257</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:info@aakp.org">info@aakp.org</a>.&lt;br&gt;www.aakp.org&lt;br&gt;<a href="http://www.aakp.org/espanol/">http://www.aakp.org/espanol/</a></td>
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### Resources

<table>
<thead>
<tr>
<th>Resources</th>
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<tbody>
<tr>
<td><strong>Life Options Rehabilitation Program and Kidney School program</strong></td>
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<tr>
<td>Life Options</td>
<td>Life Options is a program of research, research-based education, and outreach to help people live long and live well with kidney disease. Life Options offers a variety of educational materials, including brochures, posters and videos; a variety of programs for patients and professionals, a quarterly newsletter; and a toll-free helpline for patients and professionals with questions about kidney function, dialysis, working with kidney disease, Medicare, exercise and more. Life Options also offers “Kidney School”, web-based learning programs in 20-minute modules, that was designed to help people understand kidney disease and its treatments, adjust to kidney disease, make good medical choices, and live as fully as possible.</td>
</tr>
<tr>
<td>c/o Medical Education Institute, Inc.</td>
<td></td>
</tr>
<tr>
<td>414 D’Onofrio Drive Suite 200</td>
<td></td>
</tr>
<tr>
<td>Madison, Wisconsin 53719</td>
<td></td>
</tr>
<tr>
<td>Toll free: 1.800.468.7777</td>
<td></td>
</tr>
<tr>
<td>Fax: 608.833.8366</td>
<td></td>
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<tr>
<td>Kidney School: 1.800.833.8033</td>
<td></td>
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<tr>
<td><a href="http://www.kidneyschool.org">www.kidneyschool.org</a></td>
<td></td>
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<tr>
<td><a href="http://www.lifeoptions.org">www.lifeoptions.org</a></td>
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<tr>
<td><strong>Renal Support Network</strong></td>
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<tr>
<td>1311 N. Maryland Ave.</td>
<td>The Renal Support Network (RSN) is a nonprofit, patient-focused, patient-run organization that provides non-medical services to those affected by chronic kidney disease (CKD). RSN strives to help patients develop their personal coping skills, special talents, and employability by educating and empowering them (and their family members) to take control of the course and management of the disease. A vital role of RSN is to provide lawmakers and policymakers with the patients’ perspective on the needs and capabilities of people with CKD.</td>
</tr>
<tr>
<td>Glendale, CA 91207</td>
<td></td>
</tr>
<tr>
<td>Tel: 818.543.0896</td>
<td></td>
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<tr>
<td>Fax: 818.244.9540</td>
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<tr>
<td><a href="http://www.rsnhope.org">www.rsnhope.org</a></td>
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</tbody>
</table>
## Resources Description

### PREVENTING CHRONIC KIDNEY DISEASE

#### Cardiovascular complications

<table>
<thead>
<tr>
<th>Resources</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>American Heart Association (AHA)</strong></td>
<td>A national voluntary health agency whose mission is to reduce disability and death from cardiovascular disease and stroke through education and research. The AHA offers educational materials and programs in both English and Spanish on topics ranging from stroke, hypertension, diabetes, heart disease, general health, smoking and many more. The AHA holds health education seminars, luncheons, and other activities throughout the year for both the general public and medical professionals. AHA services also include public advocacy and minority initiatives. Brochures also available are: “Que es la presion arterial alta” and “Prevenga la presion arterial alta!”</td>
</tr>
</tbody>
</table>

### Diabetes

| American Diabetes Association / Asociacion Americana de la Diabetes (ADA) | A nonprofit health organization whose mission is to prevent and cure diabetes and to improve the lives of all people affected by diabetes. Services offered: education and support to patients and their families; advocacy; research; outreach and support programs serving African Americans, Latinos, Native Americans and youths; diabetes training programs, including trainings for lay health educators and professionals. |

**Regional Office**
30 N. Michigan Ave., Ste. 2015
Chicago, Illinois 60602
Tel: 312.346.1805
Toll free: 1.800.DIABETES (1.800.342.2383)
Fax: 312.346.5342
preguntas@diabetes.org
www.diabetes.org
www.diabetes.org/espanol
### Resources Description

<table>
<thead>
<tr>
<th>Resources</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Diet &amp; Exercise</strong></td>
<td></td>
</tr>
<tr>
<td><strong>American Diabetes Association (ADA) / Asociacion Americana de la Diabetes (ADA)</strong></td>
<td>A nonprofit health organization; mission is to prevent and cure diabetes and to improve the lives of all people affected by diabetes. Services offered: education and support to patients and their families, advocacy, research; outreach and support programs serving African Americans, Latinos, Native Americans and youths; diabetes training programs, including trainings lay health educators (“promotores de salud”) and professionals.</td>
</tr>
<tr>
<td><strong>Culinary Kidney Cooks</strong></td>
<td>A nationally-recognized dialysis diet cookbook, plus great cooking, food and renal diet nutrition information for people on a dialysis diet, updated weekly. Website with diet and nutrition tips for the kidney patient on dialysis. Includes the Culinary Kidney Cooks “Food Pyramid for Healthy Eating with Kidney Disease” in Spanish and English.</td>
</tr>
<tr>
<td><strong>Diabetes Exercise &amp; Sports Association / Diabetes Ejercicio &amp; El Asociacion de Deportes</strong></td>
<td>Diabetes Exercise &amp; Sports Association (DESA) exists to enhance the quality of life for people with diabetes through exercise and physical fitness. Information on diabetes, diet, staying fit with diabetes, links to other resource and links to local chapters in Chicago.</td>
</tr>
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</table>
### Latino Health Organizations

<table>
<thead>
<tr>
<th>Resources</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Hispanocare, Inc.</strong></td>
<td>Hispanicare provides assistance to Latinos via access to health services, as well as scholarships for students of Latino descent whose studies are in the healthcare field. Scholarships are unrestricted for education, housing, books, food, clothing.</td>
</tr>
<tr>
<td>836 W. Wellington Ave.</td>
<td></td>
</tr>
<tr>
<td>Chicago, Illinois 60657</td>
<td></td>
</tr>
<tr>
<td>Tel: 773.296.7157</td>
<td></td>
</tr>
<tr>
<td>Fax: 773.327.8208</td>
<td></td>
</tr>
<tr>
<td><strong>National Alliance for Hispanic Health</strong></td>
<td>Mission is to improve the health and well being of Hispanics. Specific programs include: diabetes education and outreach, family health help lines, capacity development of community based organizations, prenatal help lines, cultural proficiency, teen theatre as a tool for prevention, and consumer outreach in the areas of depression, ADHD, immunization, HIV/AIDS, women’s health, osteoporosis, tobacco control, and environmental health. The Alliance also offers Health Fact Sheets and publications on health (in English and Spanish); helplines with assistance in English and Spanish, links to other health resources organizations that provide health and financial support in English and Spanish; and links to community events.</td>
</tr>
<tr>
<td>1501 Sixteenth Street NW</td>
<td></td>
</tr>
<tr>
<td>Washington, D.C 20036</td>
<td></td>
</tr>
<tr>
<td>Tel: 202.387.5000</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:alliance@hispanichealth.org">alliance@hispanichealth.org</a></td>
<td></td>
</tr>
<tr>
<td>Su Familiar: 1.866.783.2645</td>
<td></td>
</tr>
<tr>
<td>Hispanic Prenatal: 1.800.504.7081</td>
<td></td>
</tr>
<tr>
<td>Cuidando con cariño: 1.877.658.8896</td>
<td></td>
</tr>
<tr>
<td><a href="http://www.hispanichealth.org">http://www.hispanichealth.org</a></td>
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### Section 7 – Resources: Where to get more information

#### Resources

<table>
<thead>
<tr>
<th>PUBLIC HEALTH ORGANIZATIONS</th>
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<tbody>
<tr>
<td><strong>Illinois Department of Public Health</strong></td>
</tr>
<tr>
<td>535 West Jefferson Street</td>
</tr>
<tr>
<td>Springfield, Illinois 62761</td>
</tr>
<tr>
<td>Tel: 217.782.4977</td>
</tr>
<tr>
<td>Fax: 217.782.3987</td>
</tr>
<tr>
<td>TTY: 1.800.547.0466</td>
</tr>
<tr>
<td><a href="http://www.idph.state.il.us/">http://www.idph.state.il.us/</a></td>
</tr>
<tr>
<td><strong>Illinois Department of Public Health: Center for Minority Health Services</strong></td>
</tr>
<tr>
<td>535 West Jefferson Street</td>
</tr>
<tr>
<td>Springfield, Illinois 62761</td>
</tr>
<tr>
<td>Tel: 217.782.4977</td>
</tr>
<tr>
<td>Fax: 217.782.3987</td>
</tr>
<tr>
<td>TTY: 1.800.547.0466</td>
</tr>
<tr>
<td><a href="http://www.idph.state.il.us/about/minority_hlth/default.htm">http://www.idph.state.il.us/about/minority_hlth/default.htm</a></td>
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### Section 7 – Resources: Where to get more information

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<tr>
<th>Resources</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Illinois Department of Human Services (IDHS)</strong>&lt;br&gt;DHS Main Offices&lt;br&gt;100 S Grand Ave E&lt;br&gt;Springfield, IL 62762&lt;br&gt;&lt;br&gt;Chicago office&lt;br&gt;401 S Clinton St&lt;br&gt;Chicago, IL 60607&lt;br&gt;1.800.843.6154&lt;br&gt;1.800.447.6404 TTY&lt;br&gt;www.dhs.state.il.us</td>
<td>DHS helps Illinois families achieve good health, self-sufficiency and independence through education and programs focusing on family and youth services, children with developmental disabilities, alcohol and substance abuse, domestic violence, mental health, rehabilitation and other services for people with disabilities, and welfare programs. DHS operates 211 local offices and offers Welfare programs including: Temporary Assistance for Needy Families; Food Stamps; community health and prevention programs; programs for persons with developmental disabilities, mental illness, or substance abuse problems; and financial support, employment/training programs, child care, and other family services for low-income families.</td>
</tr>
<tr>
<td><strong>Illinois Department of Human Services: Hispanic Latino Affairs</strong>&lt;br&gt;401 S. Clinton, 2nd Floor&lt;br&gt;Chicago, Illinois 60607&lt;br&gt;312.793.4306&lt;br&gt;TTY: 312.793.2670&lt;br&gt;Fax: 312.793.7852&lt;br&gt;www.dhs.state.il.us/organization/Secretary/HispanicLatinoAffairs</td>
<td>The Office of Hispanic and Latino Affairs offers translation and interpretation services; Spanish Speaker’s Bureau which provides presentations, workshops, and seminars to community organizations; maintains a statewide database of those community organizations and agencies which serve the Hispanic community; recruitment initiatives to provide employment information for Latino candidates; and assistance to those who have immigrated to the United States.</td>
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### Resources

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<th>Resources</th>
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<tr>
<td><strong>United States Department of Health and Human Services</strong>&lt;br&gt;550 West Jackson Blvd.&lt;br&gt;Chicago, Illinois 60661&lt;br&gt;Tel: 312.353.5863&lt;br&gt;<a href="http://www.hhs.gov/">http://www.hhs.gov/</a>&lt;br&gt;www.nih.gov</td>
<td>Provides financial assistance and services for low-income families. Strives to prevent outbreaks of infectious diseases, promotes food and drug safety and improves maternal and infant health. Provides substance abuse treatment and prevention. Programs for the elderly include home-delivered meals. The Office of Minority Health (OMH) strives to improve and protect the health of racial and ethnic minority populations through the development of health policies and programs that will eliminate health disparities. OMH offers a variety of multi-language materials on topics such as diabetes, heart disease, mental health, nutrition, smoking, and many others.</td>
</tr>
<tr>
<td><strong>United States Department of Health and Human Services:</strong> HealthFinder.Gov&lt;br&gt;<a href="http://healthfinder.gov/">http://healthfinder.gov/</a>&lt;br&gt;<a href="http://healthfinder.gov/espanol/">http://healthfinder.gov/espanol/</a></td>
<td>Healthfinder.gov is an award-winning federal website for consumers, developed by the U.S. Department of Health and Human Services together with other federal agencies. Healthfinder.gov has been recognized as a key resource for finding the best government and nonprofit health and human services information on the Internet. Healthfinder.gov links to carefully selected information and websites from over 1,500 health-related organizations. Website has links to information on various diseases, a directory of organizations and resources, information on prescription drugs, among other information. Follow “en español” link for a listing of publications in Spanish and other organizations providing resources to Latinos.</td>
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## FINANCIAL CONCERNS

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<th>Resources</th>
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<tr>
<td>Medicare</td>
<td>Medicare is a health insurance program for people 65 years and older, people with disabilities under the age of 65 and people with permanent kidney failure requiring dialysis or a transplant. Medicare has 3 parts: Part A helps pay for inpatient hospital care, critical access hospitals, skilled nursing facility, hospice and some home healthcare costs. Part B helps pay for doctor’s services, outpatient hospital care and some other medical services that Part A does not cover. Services and supplies are covered, when medically necessary. Most people do not have to pay for Part A and will receive Part A automatically. Part B requires payment for premiums. The other part is Part D who covers medication with exception of immunosuppressors.</td>
</tr>
<tr>
<td>Tel: 800.772.1213</td>
<td></td>
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<tr>
<td><a href="http://www.medicare.gov">www.medicare.gov</a></td>
<td></td>
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<tr>
<td><a href="http://www.medicare.gov/Spanish/Overview.asp">www.medicare.gov/Spanish/Overview.asp</a></td>
<td></td>
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<tr>
<td>Social Security Administration (SSA)</td>
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<tr>
<td><a href="http://www.ssa.gov">www.ssa.gov</a></td>
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<tr>
<td>Tel: 1.800.772.1213</td>
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<tr>
<td>Medigap</td>
<td>A Medigap policy is a health insurance policy sold by private insurance companies to help pay some of the health care costs that the original Medicare Plan does not cover. Some Medigap policies can also help pay for annual checkups, at-home recovery, and emergency care if you become ill outside of the United States. However, because routine dialysis is not considered an emergency, dialysis outside of the United States will not be covered by Medicare or most Medigap plans. Currently there are ten standardized Medigap plans labeled by the letters “A” through “J”. To qualify, you must have both Medicare Part A and Part B, and in some states, you must be at least 65. However, if you have kidney failure and a Medicare Advantage Plan, you do not need Medigap. Like Medicare Advantage Plans, Medigap policies charge a premium.</td>
</tr>
<tr>
<td>Social Security Administration</td>
<td></td>
</tr>
<tr>
<td>800.772.1213</td>
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<tr>
<td><a href="http://www.ssa.gov">www.ssa.gov</a></td>
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<tr>
<td>Medicare</td>
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<tr>
<td>Tel: 1.800.MEDICARE (1.800.633.4227)</td>
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<tr>
<td><a href="http://www.medicare.gov">www.medicare.gov</a></td>
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### Resources

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<tr>
<td><strong>Medicaid</strong></td>
<td>If you have Medicare Part A, a monthly income below a certain amount, and savings of less than a specific amount, you might be able to qualify for Medicaid to help pay high medical costs (including co-pays, deductibles and other expenses). In Illinois, Medicaid is a state entitlement program that provides health care to eligible individuals and families with low incomes and resources (generally pregnant women, families and elderly nursing-home patients). To qualify for Medicaid, you must be a U.S. citizen or lawfully admitted immigrant, and meet certain income requirements. There are special rules for disabled children living at home and individuals living in nursing homes.</td>
</tr>
<tr>
<td>Toll free: 1.800.633.4227</td>
<td></td>
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<tr>
<td><a href="http://www.cms.hhs.gov/home/medicaid.asp">www.cms.hhs.gov/home/medicaid.asp</a></td>
<td></td>
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<tr>
<td>Illinois Department of Healthcare and Family Services</td>
<td></td>
</tr>
<tr>
<td>201 S. Grand Ave. East</td>
<td></td>
</tr>
<tr>
<td>Springfield, Illinois 62763-0001</td>
<td></td>
</tr>
<tr>
<td>Tel: 217.782.1200</td>
<td></td>
</tr>
<tr>
<td>TTY: 1.800.526.5812</td>
<td></td>
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<tr>
<td><a href="http://www.hfs.illinois.gov">www.hfs.illinois.gov</a></td>
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<tr>
<td><strong>All Kids</strong></td>
<td>All Kids is a state program that offers health care coverage for every child in Illinois under 19, regardless of family income and previous medical condition. If your child is under 19, All Kids can cover regular checkups, immunization shots, hospital stays, prescription drugs, and vision and dental care, and special services like medical equipment, and physical and speech therapy. You must receive a referral for specialized care. As long as the child meets the requirements, he/she can receive All Kids regardless of immigration status; however, he/she must live in Illinois. Children who have health insurance can also qualify as long as the family income meets certain limits.</td>
</tr>
<tr>
<td>866.255.5437</td>
<td></td>
</tr>
<tr>
<td><a href="http://www.allkidscovered.com">www.allkidscovered.com</a></td>
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<td>Resources</td>
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<tr>
<td><strong>FamilyCare</strong></td>
<td>FamilyCare offers health care coverage to parents living with their children 18 years or younger. This program also covers relatives who are caring for children in place of their parents. Parents are eligible for coverage under this program, if they live in Illinois, meet certain income limits, and are US citizens or meet certain immigration requirements.</td>
</tr>
<tr>
<td><a href="http://www.familycareillinois.com">www.familycareillinois.com</a></td>
<td></td>
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<tr>
<td><strong>State Chronic Renal Disease Program</strong></td>
<td>The Illinois State Chronic Renal Disease Program assists Illinois residents with kidney failure requiring dialysis. The program is for patients who DO NOT qualify for Medicaid, or cannot meet the Medicaid spend-down program. If you qualify, you can receive help with medical costs, including dialysis. To qualify, you must be a U.S. citizen, live in Illinois, and have kidney failure. Other factors that affect eligibility include: family size, income, and expenses. Some patients may be required to pay a participant fee, depending on their income.</td>
</tr>
<tr>
<td><a href="http://www.hfs.illinois.gov/renalprogram">Illinois Department of Public Aid</a></td>
<td></td>
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<tr>
<td><strong>Consolidated Omnibus Budget Reconciliation Act (COBRA)</strong></td>
<td>This law allows workers and their dependents to continue group health benefits during times of voluntary or involuntary job loss, reduction in hours worked, and in certain other situations. COBRA generally allows the worker and his/her dependents to keep the group health plan coverage for 18 months (more in some cases).</td>
</tr>
<tr>
<td><a href="http://www.dol.gov/ebsa">US Department of Labor</a></td>
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### Resources

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<th><strong>Resources</strong></th>
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</table>
| **HIPAA (Health Insurance Portability and Accountability Act of 1996)**  
Illinois Department of Insurance  
320 West Washington Street, 4th floor  
Springfield, IL 62767  
Phone: 217.785.0116  
www.hipaa.com | HIPAA includes important new but limited protections for millions of Americans and their families.  
HIPAA may increase your ability to get health coverage for yourself and your dependents if you start a new job; lower your chance of losing existing health care coverage, whether you have that coverage through a job or through individual health insurance; or help you buy health insurance coverage on your own if you lose coverage under an employer’s group health plan and have no other health coverage available. HIPAA helps you maintain continuous health coverage for yourself and your dependents when you change jobs, and also provides protection for denial of coverage based on pre-existing condition exclusions. |
| **Illinois Comprehensive Health Insurance Plan**  
PO Box 19129  
Springfield, IL 62794-9129  
217.782.5565  
www.chip.state.il.us | The Illinois Comprehensive Health Insurance Plan (ICHIP) provides access to health insurance coverage for certain eligible Illinois residents who have been denied major medical coverage because of their health by private insurers. |
## Resources Description

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<th><strong>Resources</strong></th>
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<tr>
<td>“Rx for Illinois”</td>
<td>Rx for Illinois is a free service that helps qualified, low-income individuals access free or low-cost prescription drug assistance programs. Rx for Illinois works with public and private patient assistance programs, including more than 150 programs offered by pharmaceutical companies, and can connect patients to prescription assistance for more than 1,200 medicines. Eligibility for prescription assistance varies per patient program. Rx for Illinois also helps patients learn how to contact government programs for which they may qualify, such as Medicare, Medicaid, or the State Children’s Health Insurance Program. All services are free.</td>
</tr>
<tr>
<td>Toll free: 1.877.793.6745</td>
<td></td>
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<tr>
<td><a href="http://www.rxforillinois.org">www.rxforillinois.org</a></td>
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<tr>
<td><a href="http://www.rx4illinois.org/spanish">www.rx4illinois.org/spanish</a></td>
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</tr>
<tr>
<td><strong>Funeral Expenses Assistance Program</strong></td>
<td>This program can provide financial assistance to low-income families who qualify. The Illinois Department of Human Services provides up to $1,000.00 for funeral expenses and up to $500.00 for cemetery costs for eligible individuals. The Illinois Department of Human Services will review the estates final assets to determine benefits.</td>
</tr>
<tr>
<td>Illinois Funeral Director Association</td>
<td></td>
</tr>
<tr>
<td>215 S. Grand Avenue West</td>
<td></td>
</tr>
<tr>
<td>Tel: 1.800.240.4332</td>
<td></td>
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<tr>
<td><a href="http://www.ifda.org">www.ifda.org</a></td>
<td></td>
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<tr>
<td><strong>Low Income Heating &amp; Energy Assistance Program (LIHEAP)</strong></td>
<td>LIHEAP is a program funded by the state of Illinois that can help individuals who are living at 150% below the poverty level pay their energy bills, including assistance with outstanding bills, reconnecting service and keeping home energy on.</td>
</tr>
<tr>
<td>People’s Gas customer: 312.456.4100 or 1.800.252.8643</td>
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<tr>
<td>North Shore Gas customer: 847.249.4330</td>
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<tr>
<td><strong>WORK INCENTIVE PROGRAMS</strong></td>
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<tr>
<td><strong>Illinois Department of Employment Security</strong>&lt;br&gt; 33 South State Street&lt;br&gt; Chicago, Illinois 60603&lt;br&gt; Tel: 877.513.1987&lt;br&gt; <a href="http://www.ides.state.il.us">www.ides.state.il.us</a></td>
<td>Each IDES/Illinois Employment Training Center (IETC) office offers resources to assists workers with their job search or career change decisions. Workers can serve themselves by accessing videos, books, and available computer software. Individuals can refresh their application or interview skills or learn about labor market information in their area. Workers with special needs who need more personalized services may contact a staff member at the IDES/IETC offices. All offices extend priority services to veterans as prescribed by federal law. Services include: Job search and placement assistance, access to job listings, basic assessment of skills and needs, follow-up services. Other services are based on an individual’s need for assistance and priority of service. To receive youth services, individuals between the ages of 14 and 21 must have a low income and a significant obstacle that prevents them from completing school or obtaining employment without assistance.</td>
</tr>
<tr>
<td><strong>One Stop Career Centers</strong>&lt;br&gt; Phone 877.872.5627&lt;br&gt; TTY 877.889.5627&lt;br&gt; <a href="http://www.careeronestop.org">www.careeronestop.org</a></td>
<td>One Stop Career Centers offer career counseling, labor market information, training referrals, job placement assistance and other employment related services. One Stop Career Centers are increasing physical and programmatic access to persons with disabilities. Many of the One Stop Career Centers have a variety of access options which may include the following assistive technology: large screen monitor, adaptive mouse and keyboard options, closed caption television for enlarging text, assistive listening devices, screen and text reading software, text enlarging software, interpreter/TTY services, sign language interpreters, and TTY access.</td>
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<tr>
<td><strong>Social Security Administration: Protection and Advocacy Program (P&amp;A)</strong>&lt;br&gt;Toll free: 1.866.968.7842&lt;br&gt;TTY: 1.866.833.2967&lt;br&gt;<a href="http://www.ssa.gov/work/ServiceProviders/PADirectory.html">http://www.ssa.gov/work/ServiceProviders/PADirectory.html</a></td>
<td>Protection and Advocacy Programs were developed to serve the Social Security Disability Insurance and Supplemental Security beneficiaries who want to work, despite their disability. These services are free to persons receiving Social Security or Supplemental Security Income based on disability or blindness. Provides information and advice about vocational rehabilitation and employment services; inquiries about complaints against an employer network; legal representation to protect your rights in the effort to secure/regain employment; assistants with problems concerning Ticket to Work Program.</td>
</tr>
<tr>
<td><strong>Social Security &amp; Supplemental Security/Work Incentives Program</strong>&lt;br&gt;Phone 800.772.1213&lt;br&gt;TTY 800.325.0778&lt;br&gt;www.ssa.gov/work</td>
<td>Under the Social Security Administration, there are “Work Incentives” that have been created to make it possible for people with disabilities who are receiving Social Security or Supplemental Security to work and still receive monthly payments and Medicare or Medicaid. Social Service calls these “Work Incentives”. Most people with disabilities who work will continue to receive at least 93 consecutive months of hospital and medical insurance.</td>
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## National Kidney Foundation of Illinois

### Section 7 – Resources: Where to get more information

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| **Social Security Administration: Ticket to Work Program**  
Tel: 1.800.772.1213  
TTY: 1.800.325.0778  
www.ssa.gov/work | Qualified Social Security and Supplemental Security income (SSI) recipients receive a “ticket” in the mail. They may use their ticket to obtain vocational rehabilitation, employment or other support services from an approved provider of their choice to help them go to work and achieve their employment goals. The goals of this program are to remove the barriers that require people with disabilities to choose between health care coverage and work and to assure that more Americans with disabilities have the opportunity to participate in the workforce and lessen their dependence on public benefits. These services are provided by employment networks, private organizations or government agencies that have agreed to work with Social Security by providing employment services to beneficiaries with disabilities. |

### Treatment Options

#### Dialysis

| **Dialysis Facility Compare**  
www.medicare.gov | Provides information about Medicare-certified dialysis facilities and lets you compare facilities in your area, facility characteristics and quality measures. This web site has the ability to narrow the search by state, county, city, zip code or name of a facility. |
| **Home Dialysis Central / Diálisis en casa**  
www.homedialysis.org | Offers a database of clinics in the U.S. currently offering peritoneal dialysis (PD) and home hemodialysis. Patients and professionals may search this database for free. Website also includes educational information for patients and professionals on various topics related to kidney disease. |
## Resources Description

### TRANSPLANTATION & ORGAN DONATION

| Resources                                                      | Description                                                                                                                                                                                                 |
|                                                               | Gift of Hope Organ & Tissue Donor Network serves as the federally designated not-for-profit agency that coordinates organ and tissue donation and supports families of donors in the northern three-quarters of Illinois and northwest Indiana. This organization promotes organ donation with family members of potential donors; evaluates potential donors for medical suitability; coordinates the organ procurement process in Illinois; educates health care professionals about the organ donation process; and offers support to families of organ and tissue donors. |
| Gift of Hope Organ & Tissue Donor Network                    | Gift of Hope Organ & Tissue Donor Network serves as the federally designated not-for-profit agency that coordinates organ and tissue donation and supports families of donors in the northern three-quarters of Illinois and northwest Indiana. This organization promotes organ donation with family members of potential donors; evaluates potential donors for medical suitability; coordinates the organ procurement process in Illinois; educates health care professionals about the organ donation process; and offers support to families of organ and tissue donors. |
| 425 Spring Lake Drive                                         | ATA believes that an informed and educated patient is a better patient and that patients can and must take an active, responsible role in their own care. ATA provides education, support, research and advocacy, including: |
| Itasca, IL 60143                                              | - Educational materials and programs for the public, transplant patients, caregivers and transplant professionals |
| Tel: 630.758.2600                                              | - Support for patients, family and caregivers via regular local support group meetings, formal and informal mentoring programs, peer-to-peer contacts, and sharing experiences |
| Tel: 888.307.DON8 (3668)                                       | Website in English only.                                                                                                                                  |
| www.giftofhope.org                                            |                                                                                                                                                    |
| www.giftofhope.org/espanol/index.htm (espanol)                |                                                                                                                                                    |
| American Transplant Association (ATA) / La Asociacion Americana de Trasplante |                                                                                                                                                    |
| 980 N. Michigan Ave., Suite 1402                              |                                                                                                                                                    |
| Chicago, Illinois 60611                                       |                                                                                                                                                    |
| Tel: 800.494.4527                                             |                                                                                                                                                    |
| http://www.americantransplant.org/                            |                                                                                                                                                    |
### Resources

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<td><strong>Organ Transplant Support (OTS)</strong></td>
<td>OTS provides educational, emotional and financial support to pre- and post-transplant patients and is involved in donor awareness in an effort to eliminate the organ transplant waiting list. Grants are provided for medicine, transportation, lodging, and other needs concerning pre- and post-transplant patients.</td>
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### SUPPORT SERVICES

#### Disability Services

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<tr>
<th><strong>National Center for Latinos with Disabilities, Inc.</strong></th>
<th>NCLD, Illinois Chapter, is the only state-wide not-for-profit organization in Illinois focusing on Latinos with disabilities and their families. NCLD works toward equal participation of Latinos with disabilities in all aspects of society in an independent, productive and meaningful manner. We pursue our goals through unique linguistically and culturally appropriate advocacy, training, information and referral programs.</th>
</tr>
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<tbody>
<tr>
<td>1921 S. Blue Island Ave.</td>
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<tr>
<td>Chicago, IL 60608</td>
<td></td>
</tr>
<tr>
<td>312.666.3393</td>
<td></td>
</tr>
<tr>
<td>312.666.1787 (fax)</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:ncld@ncld.com">ncld@ncld.com</a></td>
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<tr>
<th><strong>Chicago Mayor’s Office for People with Disabilities</strong></th>
<th>The Mayor’s Office for People with Disabilities (MOPD) was created to better meet the needs of the individuals with disabilities who live and work in Chicago. MOPD promotes total access, full participation and equal opportunity for all people with disabilities. This goal is accomplished through a multifaceted approach that includes organizations in working to comply with a variety of laws and regulations relating to disability.</th>
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<tr>
<td>121 North LaSalle Street, Room 1104</td>
<td></td>
</tr>
<tr>
<td>Chicago, IL 60602</td>
<td></td>
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<tr>
<td>312.744.7050</td>
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<tr>
<td><a href="http://www.cityofchicago.org/Disabilities">www.cityofchicago.org/Disabilities</a></td>
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### Resources

<table>
<thead>
<tr>
<th><strong>Special Needs Network</strong></th>
<th><strong>Description</strong></th>
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<tbody>
<tr>
<td>50 Lakeview Parkway, Ste 102 Vernon Hills, IL 60061 800.522.7546 <a href="http://www.tsnn.org">www.tsnn.org</a> <a href="mailto:info@tsnn.org">info@tsnn.org</a></td>
<td>The Special Needs Network is a not-for-profit corporation dedicated to helping families with special needs optimize the care of their loved ones. Its mission is to provide resources, research and education for families of individuals with disabilities, and the elderly.</td>
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### LEGAL RIGHTS & ADVOCACY

<table>
<thead>
<tr>
<th><strong>American Bar Association (ABA)</strong></th>
<th><strong>Description</strong></th>
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<tbody>
<tr>
<td>La Asociación Americana del Bar</td>
<td>The American Bar Association (ABA) is the national representative of the legal profession. The ABA website offers legal assistance information as well as tools to help individuals find local legal assistance programs across the United States.</td>
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<tr>
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<tbody>
<tr>
<td><strong>Illinois Coalition for Immigrant and Refugee Rights (ICIRR)</strong>&lt;br&gt;36 S. Wabash Ave., Ste. 1425&lt;br&gt;Chicago, Illinois 60603&lt;br&gt;Tel: 312.332.7360&lt;br&gt;Fax: 312.332.7044&lt;br&gt;E-MAIL: <a href="mailto:info@icirr.org">info@icirr.org</a>&lt;br&gt;www.icirr.org</td>
<td>The Illinois Coalition for Immigrant and Refugee Rights (ICIRR) promotes the rights of immigrants and refugees, educates and organizes immigrant and refugee communities, promotes citizenship and civic participation, monitors, analyzes, and advocates on immigrant-related issues; and, informs the general public about the contributions of immigrants and refugees. The ICIRR works with a coalition of partners and offers its multi-lingual, multi-cultural services all over the state of Illinois. The ICIRR provides a number of useful services, including:&lt;br&gt;- Fact sheets, trainings and reports in various languages on immigration issues&lt;br&gt;- Extensive Legal Assistance Service Directories (<a href="http://www.icirr.org/resourcesdirectories.htm">http://www.icirr.org/resourcesdirectories.htm</a>)&lt;br&gt;- Various programs, including: New Americans Initiative, New American Democracy Project (NADP), and the Outreach and Interpretation Project (O&amp;I).&lt;br&gt;- The New Americans Initiative offers free citizenship assistance to immigrants</td>
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### Resources

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<td><strong>MENTAL HEALTH</strong></td>
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<tr>
<td><strong>National Alliance on Mental Illness (NAMI)</strong>&lt;br&gt;2107 Wilson Blvd., Suite 300&lt;br&gt;Arlington, VA 22201-3042&lt;br&gt;Main: 703.524.7600&lt;br&gt;Fax: 703.524.9094&lt;br&gt;TDD: 703.516.17227&lt;br&gt;HelpLine: 800.950.NAMI (6264)&lt;br&gt;<a href="mailto:info@nami.org">info@nami.org</a>&lt;br&gt;www.nami.org</td>
<td>The National Alliance on Mental Illness is the nation’s largest grassroots mental health organization dedicated to improving the lives of persons living with serious mental illness and their families. Offers education programs including Family-to-Family, NAMI’s Provider Education Program, and Peer-to-Peer, support groups, and opportunities to raise awareness surrounding mental illness.</td>
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<tr>
<td><strong>SENIOR SERVICES</strong></td>
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<tr>
<td><strong>Chicago Department on Aging</strong>&lt;br&gt;30 N. LaSalle St., Rm. 2320&lt;br&gt;Chicago, Illinois 60602&lt;br&gt;Tel: 312.744.2666&lt;br&gt;TTY: 312.744.2940&lt;br&gt;Information and Assistance&lt;br&gt;121 N. LaSalle St., Suite 100&lt;br&gt;Chicago, Illinois&lt;br&gt;Tel: 312.744.4016&lt;br&gt;TTY: 312.744.6777</td>
<td>Works with senior citizen community to help improve quality of life and independence. Services and programs include: senior services search tool on website; educational services, including quality of life and financial education classes; health &amp; fitness; adult day service: allows seniors to interact with peers in a supervised setting; help in your home services; homemaker services: program assists with chores around the home; heavy duty chore program: cleaning services for clients in need; home delivered meals; housing relocation counseling service; respite care service for caregivers: provides time away for a caregiver; and transportation services information. Services available in English and Spanish.</td>
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### Resources

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<tr>
<th><strong>Illinois Department on Aging</strong></th>
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<tbody>
<tr>
<td><strong>Address:</strong> 421 E. Capitol Avenue, Suite 100</td>
</tr>
<tr>
<td><strong>City:</strong> Springfield, Illinois</td>
</tr>
<tr>
<td><strong>Zip:</strong> 62701-1789</td>
</tr>
<tr>
<td><strong>Phone:</strong> 1.800.252.8966, 1.888.206.1327 (TTY)</td>
</tr>
<tr>
<td><strong>Fax:</strong> 217.524.6968</td>
</tr>
<tr>
<td><strong>Email:</strong> <a href="mailto:ilsenior@aging.state.il.us">ilsenior@aging.state.il.us</a></td>
</tr>
<tr>
<td><strong>Website:</strong> <a href="http://www.state.il.us/aging/">www.state.il.us/aging/</a></td>
</tr>
<tr>
<td><strong>Coalition of Limited English Speaking Elderly:</strong> 312.461.0812</td>
</tr>
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### Description

Helps older adults live independently in their own homes and communities. Teaches families about the realities of aging, and helps individuals and families locate services for seniors.  
Coalition of Limited English Speaking Elderly: Educates, develops programs and advocates on issues affecting limited English speaking elderly people. Senior citizens who are not fluent in English and live in the Chicago area can locate an ethnic provider by contacting the Coalition of Limited-English Speaking Elderly (CLESE), a consortium of ethnic organizations representing 18 different ethnic groups.

Community Care Program: forms and brochures have been translated into 12 languages, and Case Management Service Providers work with CLESE providers. The Ombudsman Program’s mission is to defend, protect and promote the rights and quality of life for people who reside in long-term care facilities. This service can be utilized by residents of any long-term care facility, friends and relatives of persons who live in long-term care facilities, staff members and administration with resident related concerns, as well as individuals and families who are considering long-term placement as an option.
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<tr>
<td><strong>TRAVEL</strong></td>
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<tr>
<td>Global Dialysis</td>
<td>For patients who want to travel abroad. Includes a directory of over 14,000 dialysis centers in 151 countries all over the world. Website also includes a listing of agents that make arrangements for dialysis patients planning vacations, discussion forums and blogs, as well as additional resources for medical professionals.</td>
</tr>
<tr>
<td>Island Dialysis</td>
<td>Helps arrange trips to the Caribbean for dialysis patients. Destinations include Puerto Rico, Barbados and St. Lucia. Island Dialysis provides detailed trip planning and cost information. Commercial website.</td>
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<tr>
<td>Dialysis at Sea</td>
<td>Offers dialysis patients the opportunity to receive dialysis treatments while on a cruise. A variety of destinations are offered.</td>
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### OTHER TYPES OF KIDNEY ILLNESSES

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<thead>
<tr>
<th><strong>Resources</strong></th>
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<tbody>
<tr>
<td><strong>Kidney Cancer Association (KCA)</strong></td>
<td>A nonprofit membership organization of patients, family members, physicians, researchers and other health professionals founded by a small group of patients and doctors. KCA provides the following services: -Toll free phone number to assist patients with information about kidney cancer -Meetings throughout the country for patients, family members and physicians -Newsletter “Kidney Cancer News” and free publications concerning kidney cancer -Web site with online chats and frequently asked questions -Advocacy on behalf of patients with the federal government, insurance companies and employers.</td>
</tr>
<tr>
<td>1234 Sherman Avenue Evanston, IL 60202 Tel: 847.332.1051 Toll free: 800.850.9132 <a href="http://www.kidneycancerassociation.org">www.kidneycancerassociation.org</a></td>
<td></td>
</tr>
<tr>
<td><strong>National Cancer Institute</strong></td>
<td>Interactive information on quitting smoking, cancer, prevention and cancer tests, cancer treatments and medical studies. You may listen to different discussions on cancer-related topics, or speak with a live representative. Website contains link to “información de cáncer en español” as well as numerous brochures in Spanish about cancer and general health.</td>
</tr>
<tr>
<td>U.S. National Institutes of Health / Instituto Nacional de Cáncer Institutos Nacionales de Salud 6116 Executive Blvd., Suite 3036A Bethesda, MD 20892 Tel: 1.800.4.CANCER (1.800.422.6237) <a href="mailto:cancergovstaff@mail.nih.gov">cancergovstaff@mail.nih.gov</a> <a href="http://www.cancer.gov">www.cancer.gov</a> <a href="http://www.cancer.gov/espanol">www.cancer.gov/espanol</a></td>
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<tr>
<td>Lupus Foundation of America, Inc. (LFA)</td>
<td>A nonprofit health agency which educates the public about lupus and supports medical research, and assists local chapters in their efforts to provide supportive services to individuals living with lupus. Also provides professional education and advocacy nationwide.</td>
</tr>
<tr>
<td>2000 L Street N.W., Suite 710</td>
<td></td>
</tr>
<tr>
<td>Washington, D.C. 20036</td>
<td></td>
</tr>
<tr>
<td>Toll free: 1.800.558.0121</td>
<td></td>
</tr>
<tr>
<td>1300 Picard Drive, Suite 200</td>
<td></td>
</tr>
<tr>
<td>Rockville, MD 20850</td>
<td></td>
</tr>
<tr>
<td>Tel: 301.670.9292</td>
<td></td>
</tr>
<tr>
<td>Polycystic Kidney Disease Foundation (PKD)</td>
<td>The PKD Foundation is dedicated to promoting research to find a cure for polycystic kidney disease (PKD) and improving the care and treatment of those it affects. Offers educational information, a forum for patients education, and supports research.</td>
</tr>
<tr>
<td>P.O. Box 2744</td>
<td></td>
</tr>
<tr>
<td>Detroit, MI 48123</td>
<td></td>
</tr>
<tr>
<td>Tel: 312.273.7577</td>
<td></td>
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<tr>
<td><a href="http://www.pkdcure.org/">www.pkdcure.org/</a></td>
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