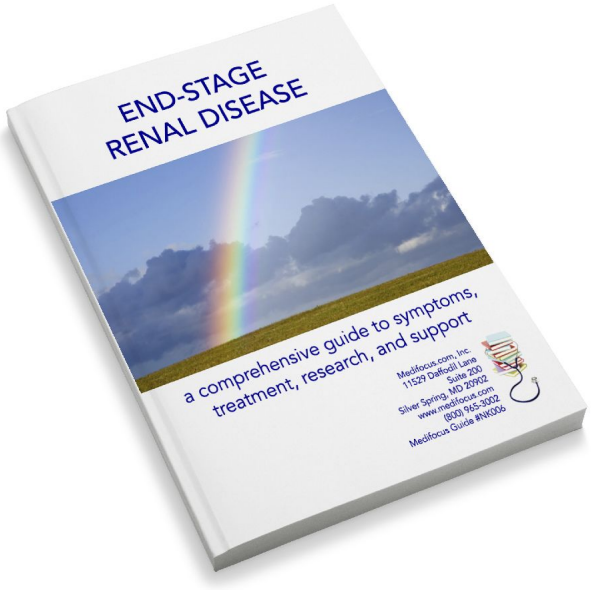
Preview of the Medifocus Guidebook on: End-Stage Renal Disease

Updated November 2, 2009



This document is only a SHORT PREVIEW of the **Medifocus Guidebook on End-Stage Renal Disease**. It is intended primarily to give you a general overview of the **format and structure** of the Guidebook as well as select pages from each major Guidebook section listed in the Table of Contents.

To purchase the **COMPLETE** Medifocus Guidebook on End-Stage Renal Disease (116 pages; Updated November 2, 2009), please:

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Table of Contents

1 - Background Information

Introduction

Chronic or life-threatening illnesses can have a devastating impact on both the patient and the family. In today's new world of medicine, many consumers have come to realize that they are the ones who are primarily responsible for their own health care as well as for the health care of their loved ones.

When facing a chronic or life-threatening illness, you need to become an educated consumer in order to make an informed health care decision. Essentially that means finding out everything about the illness - the treatment options, the doctors, and the hospitals - so that you can become an educated health care consumer and make the tough decisions. In the past, consumers would go to a library and read everything available about a particular illness or medical condition. In today's world, many turn to the Internet for their medical information needs.

The first sites visited are usually the well known health "portals" or disease organizations and support groups which contain a general overview of the condition for the layperson. That's a good start but soon all of the basic information is exhausted and the need for more advanced information still exists. What are the latest "cutting-edge" treatment options? What are the results of the most up-to-date clinical trials? Who are the most notable experts? Where are the top-ranked medical institutions and hospitals?

The best source for authoritative medical information in the United States is the National Library of Medicine's medical database called PubMed®, that indexes citations and abstracts (brief summaries) of over 7 million articles from more than 3,800 medical journals published worldwide. PubMed® was developed for medical professionals and is the primary source utilized by health care providers for keeping up with the latest advances in clinical medicine.

A typical PubMed® search for a specific disease or condition, however, usually retrieves hundreds or even thousands of "hits" of journal article citations. That's an avalanche of information that needs to be evaluated and transformed into truly useful knowledge. What are the most relevant journal articles? Which ones apply to your specific situation? Which articles are considered to be the most authoritative - the ones your physician would rely on in making clinical decisions? This is where *Medifocus.com* provides an effective solution.

Medifocus.com has developed an extensive library of *MediFocus Guidebooks* covering a wide spectrum of chronic and life threatening diseases. Each *MediFocus Guidebook* is a

high quality, up- to-date digest of "professional-level" medical information consisting of the most relevant citations and abstracts of journal articles published in authoritative, trustworthy medical journals. This information represents the latest advances known to modern medicine for the treatment and management of the condition, including published results from clinical trials. Each *Guidebook* also includes a valuable index of leading authors and medical institutions as well as a directory of disease organizations and support groups. *MediFocus Guidebooks* are reviewed, revised and updated every 4-months to ensure that you receive the latest and most up-to-date information about the specific condition.

About Your MediFocus Guidebook

Introduction

Your *MediFocus Guidebook* is a valuable resource that represents a comprehensive synthesis of the most up-to-date, advanced medical information published about the condition in well-respected, trustworthy medical journals. It is the same type of professional-level information used by physicians and other health-care professionals to keep abreast of the latest developments in biomedical research and clinical medicine. The *Guidebook* is intended for patients who have a need for more advanced, in-depth medical information than is generally available to consumers from a variety of other resources. The primary goal of a *MediFocus Guidebook* is to educate patients and their families about their treatment options so that they can make informed health-care decisions and become active participants in the medical decision making process.

The *Guidebook* production process involves a team of professionals with expertise in diverse areas including experienced medical database researchers and practicing physicians who serve as members of the *Medifocus.com* Medical Advisory Board (MAB). This team approach to the development and production of the *MediFocus Guidebooks* is designed to ensure the accuracy, completeness, and clinical relevance of the information. The *Guidebook* is intended to serve as a basis for more meaningful discussions between patients and their health-care providers in a joint effort to seek the most appropriate course of treatment for the disease.

Guidebook Organization and Content

Section 1 - Background Information

This section provides detailed information about the organization and content of the *Guidebook* including tips and suggestions for conducting additional research about the condition.

Section 2 - The Intelligent Patient Overview

This section of your *MediFocus Guidebook* represents a detailed overview of the disease or condition specifically written from the patient's perspective. It is designed to satisfy the basic informational needs of consumers and their families who are confronted with the illness and are facing difficult choices. Important aspects which are addressed in "The Intelligent Patient" section include:

- The etiology or cause of the disease
- Signs and symptoms
- How the condition is diagnosed
- The current standard of care for the disease

- Treatment options
- New developments
- Important questions to ask your health care provider

Section 3 - Guide to the Medical Literature

This is a roadmap to important and up-to-date medical literature published about the condition from authoritative, trustworthy medical journals. This is the same information that is used by physicians and researchers to keep up with the latest developments and breakthroughs in clinical medicine and biomedical research. A broad spectrum of articles is included in each *MediFocus Guidebook* to provide information about standard treatments, treatment options, new clinical developments, and advances in research. To facilitate your review and analysis of this information, the articles are grouped by specific categories. A typical *MediFocus Guidebook* usually contains one or more of the following article groupings:

- *Review Articles:* Articles included in this category are broad in scope and are intended to provide the reader with a detailed overview of the condition including such important aspects as its cause, diagnosis, treatment, and new advances.

- *General Interest Articles:* These articles are broad in scope and contain supplementary information about the condition that may be of interest to select groups of patients.

- *Drug Therapy:* Articles that provide information about the effectiveness of specific drugs or other biological agents for the treatment of the condition.

- *Surgical Therapy:* Articles that provide information about specific surgical treatments for the condition.

- *Clinical Trials:* Articles in this category summarize studies which compare the safety and efficacy of a new, experimental treatment modality to currently available standard treatments for the condition. In many cases, clinical trials represent the latest advances in the field and may be considered as being on the "cutting edge" of medicine. Some of these experimental treatments may have already been incorporated into clinical practice.

The following information is provided for each of the articles referenced in this section of your *MediFocus Guidebook:*

- Article title
- Author Name(s)
- Institution where the study was done

- Journal reference (Volume, page numbers, year of publication)
- Link to Abstract (brief summary of the actual article)

Linking to Abstracts: Most of the medical journal articles referenced in this section of your *MediFocus Guidebook* include an abstract (brief summary of the actual article) that can be accessed online via the National Library of Medicine's PubMed® database. You can easily access the individual abstracts online via PubMed® from the "electronic" format of your *MediFocus Guidebook* by clicking on the corresponding URL address that is provided for each cited article. If you purchased a printed copy of a *MediFocus Guidebook*, you can still access the article abstracts online by entering the individual URL address for a particular article into your web browser.

Section 4 - Centers of Research

We've compiled a unique directory of doctors, researchers, medical centers, and research institutions with specialized research interest, and in many cases, clinical expertise in the management of the specific medical condition. The "Centers of Research" directory is a valuable resource for quickly identifying and locating leading medical authorities and medical institutions within the United States and other countries that are considered to be at the forefront in clinical research and treatment of the condition.

Inclusion of the names of specific doctors, researchers, hospitals, medical centers, or research institutions in this *Guidebook* does not imply endorsement by Medifocus.com, Inc. or any of its affiliates. Consumers are encouraged to conduct additional research to identify health-care professionals, hospitals, and medical institutions with expertise in providing specific medical advice, guidance, and treatment for this condition.

Section 5 - Tips on Finding and Choosing a Doctor

One of the most important decisions confronting patients who have been diagnosed with a serious medical condition is finding and choosing a qualified physician who will deliver high-level, quality medical care in accordance with curently accepted guidelines and standards of care. Finding the "best" doctor to manage your condition, however, can be a frustrating and time-consuming experience unless you know what you are looking for and how to go about finding it. This section of your Guidebook offers important tips for how to find physicians as well as suggestions for how to make informed choices about choosing a doctor who is right for you.

Section 6 - Directory of Organizations

This section of your *Guidebook* is a directory of select disease organizations and support groups that are in the business of helping patients and their families by providing access to information, resources, and services. Many of these organizations can answer your questions, enable you to network with other patients, and help you find a doctor in your geographical area who specializes in managing your condition.

2 - The Intelligent Patient Overview

END-STAGE RENAL DISEASE

Introduction to End Stage Renal Disease

Anatomy of the Kidney

The kidneys are located just under the rib cage in the back, one on each side. Each adult kidney is about the size of a fist. Each has an outer layer called the *cortex*, which contains filtering units. The center part of the kidney (*medulla*) has 10 to 15 fan-shaped structures called *pyramids*. These drain urine into cup-shaped tubes called *calyxes*.

Blood travels to each kidney through the renal artery, which enters the kidney at the *hilus*, the indentation in the kidney that gives it its bean shape. As it enters the cortex, the artery branches to envelope the nephrons - 1 million tiny filtering units in each kidney that remove the harmful substances from the blood. Each of the nephrons contains a filter called the *glomerulus*, which contain a network of capillaries. As blood travels through the kidneys, water and some of the other blood components (such as acids, glucose, and other nutrients) are reabsorbed back into the bloodstream. What remains is *urine*, which is a concentrated solution of waste material containing water, urea (a waste product that forms when proteins are broken down), salts, amino acids, by-products of bile from the liver, ammonia, and any substances that cannot be reabsorbed into the blood. Filtered blood leaves the kidney through the renal vein and flows back to the heart.

The *renal pelvis*, located near the hilus, collects the urine flowing from the calyxes. From the renal pelvis, urine is transported out of the kidneys through the ureters to be stored, and eventually excreted, from the urinary bladder. The bladder expands as it fills and can hold about half a liter (2 cups) of urine at any given time. An average adult produces about 1.5 liters, or 6 cups, of urine per day. An adult needs to produce and excrete at least one third of this amount of urine in order to adequately clear waste products from the body. Producing too much or not enough urine may indicate illness.

Functions of the Kidney

The kidneys are responsible for many vital functions:

- Production of urine which contains the by-products of metabolism (salts, toxins, and water). The kidneys and urinary tract (which includes the kidneys, ureters, bladder, and urethra) filter and eliminate these waste substances from the blood.

*Monitoring and maintenance of the body's balance of water and electrolytes (sodium, potassium,

phosphorus and calcium)

- Regulation of blood pressure and the level of vital salts in the blood. By regulating salt levels through production of an enzyme called *renin* (as well as other substances), the kidneys ensure that blood pressure is adequately regulated.

- Production of a hormone called *erythropoietin*, which stimulates and controls the body's red blood cell production (red blood cells carry oxygen throughout the body).

- Regulation the *acid-base balance* (or the pH) of the blood and body fluids, which is necessary for the body to function normally.

- Production of *dihydroxyvitamin D3* which is required for calcium metabolism and healthy bones.

- Metabolism of drugs and removal of toxins.

Measures of Kidney Function

A variety of tests may be performed to evaluate how well your kidneys are working. These kidney function tests include:

- Glomerular Filtration Rate (GFR) - This test is the best overall index of kidney function in health and disease. Normal GFR varies according to age, sex, and body size; in young adults it is approximately 120-130 mL/min and declines with age. A GFR of 75mL/min or below is generally considered indicative of renal impairment, and dialysis is started when the GFR falls between 10 and 15 mL/min. GFR can be estimated from the blood level of *creatinine*. Once the GFR falls below 30, a kidney disease specialist (nephrologist) is generally consulted to determine an appropriate treatment plan which may include dialysis or kidney transplant.

- Serum Creatinine - Creatinine is a waste product in your blood that comes from muscle activity. It is normally removed from the blood by your kidneys, but when kidney function declines, the creatinine level rises.

- Blood Urea Nitrogen (BUN): Urea nitrogen is a normal waste product in the blood that comes from the breakdown of protein from food and from metabolism. It is normally removed from the blood by your kidneys, however, when kidney function declines, the BUN level rises. BUN can also rise if you eat more protein, and it can fall if you eat less protein.

Urine Protein - When your kidneys are damaged, protein leaks into your urine. Persistent protein in the urine (proteinuria) is an early sign of chronic kidney disease and is the strongest predictor of progression to end stage renal disease.

- Microalbuminuria - This is a sensitive test that can detect a small amount of protein in the urine.

Kidney Failure

There are several terms used when discussing decreasing renal (kidney) function.

- *Renal insufficiency* refers to the declining function of the kidneys - typically about 25% of normal function or a glomerular filtration rate (GFR) of 25-30mL/min. Serum creatinine and blood urea nitrogen (BUN) levels are mildly elevated at this time.

- *End-stage renal disease* (ESRD), also known as *end-stage renal failure* (ESRF), is defined as an irreversible decline in kidney function, which is severe enough to be fatal in the absence of dialysis or transplantation. Generally, ESRD occurs when there is less than 10% of renal function remaining.

- *Uremia* is the accumulation of toxins in the blood as a result of renal failure. Uremic syndrome refers to the consequences of renal failure including retention of toxic wastes, deficiency states, and electrolyte disorders. It is accompanied by elevations in BUN and creatinine levels and symptoms include fatigue, nausea, loss of appetite, vomiting, itching, and neurological changes.

Kidney failure can be acute or chronic. In either form, the kidneys slow down or stop filtering blood effectively, causing waste products and toxic substances to accumulate in the blood. Acute renal failure has a rapid onset and is potentially reversible. Acute kidney failure may be due to many things, including a bacterial infection, injury, shock, heart failure, poisoning, or drug overdose. Treatment includes correcting the problem that led to the failure and sometimes requires surgery or dialysis.

Chronic renal failure progresses slowly over a few months and can lead to permanent renal failure. In children, chronic kidney failure can result from acute kidney failure that fails to improve, birth defects of the kidney, chronic kidney diseases, repeated kidney infections, or chronic severe high blood pressure. In adults, chronic renal failure can result from high blood pressure, diabetes, or several other medical issues. The causes, symptoms, treatments, and outcomes of acute and chronic renal failure are different.

Kidney Failure Statistics

- The Third National Health and Nutrition Examination Survey (NHANES III) estimated the prevalence of chronic kidney disease in U.S. adults to be 10.8% or approximately 19.2 million people.

- In 2000, end-stage renal disease affected more than 375,000 Americans and is expected to increase to 651,000 by 2010.

- Of the 375,000 persons with end-stage renal disease, 275,000 are on dialysis and more than 100,000 have a functioning kidney transplant.

- The typical end stage renal disease patient is male (55%), Caucasian (60%), and is between the ages of 45-64 (41%).

- Within the United States, 67,000 deaths occur annually as a result of kidney failure.

- In the United States alone, $19 billion was spent on end-stage renal disease in 2000, and costs are projected to exceed $28 billion by 2010.

Causes of Acute Renal Failure

The causes of acute renal failure include:

- Myocardial Infarction - a heart attack may lead to temporary kidney function.

- Rhabdomyolysis - muscle breakdown due to severe dehydration, infection, certain medications or other causes.

- Decrease blood flow to the kidneys due to blood loss or shock An obstruction or blockage along the urinary tract (such as kidney stones).

- Vesicoureteral reflux (VUR) - a condition in children in which urine abnormally flows backward from the bladder into the ureters. It may even reach the kidneys where infection and scarring can occur over time. VUR occurs in 1% of children and tends to run in families. Most children outgrow mild forms of VUR, but some children with VUR can develop permanent kidney damage and kidney failure later in life.

- Hemolytic uremic syndrome - usually caused by a bacterial (E. coli) infection due to obstruction of the small structures and vessels of the kidney.

- Ingestion of certain medications that may cause toxicity to the kidneys.

- Glomerulonephritis - Glomerulonephritis (inflammation of the kidney glomeruli) may be a temporary and reversible condition or it may be progressive resulting in destruction of the kidney glomeruli. Damage to the glomeruli with subsequent impaired filtering causes blood and protein to be lost in the urine. Often times, the precise cause is unknown. Because symptoms develop gradually, the disorder may be discovered when there is an abnormal urinalysis during a routine physical or evaluation of other medical issues, such as hypertension. Medications that have been associated with glomerulonephritis include: allopurinol, phenytoin, and varioius antibiotics. A common form of this condition occurs in young children following a case of strep throat.

Causes of End Stage Renal Disease

The causes of end-stage renal disease (ESRD), also known as chronic renal failure, include:

- Diabetes - Diabetic nephropathy is the most common cause of ESRD and is estimated to be the cause in about 35% of cases.

- Hypertension - High blood pressure is the second leading cause of ESRD and is estimated to be the cause in about 23% of cases.

- Glomerulonephritis - Glomerulonephritis (inflammation of the kidney glomeruli) may be a temporary and reversible condition, or it may be progressive resulting in destruction of the kidney glomeruli. Damage to the glomeruli with subsequent impaired filtering causes blood and protein to be lost in the urine. Often times, the precise cause is unknown. Because symptoms develop gradually, the disorder may be discovered when there is an abnormal urinalysis during a routine physical or evaluation of other medical issues, such as hypertension. Glomerulonephritis is estimated to be the cause of ESRD in about 16% of cases.

- Polycystic kidney disease - refers to a group of inherited disorders characterized by the growth of numerous fluid-filled cysts in the kidneys. Autosomal dominant polycystic kidney disease (ADPKD) typically affects adults while autosomal recessive polycystic kidney disease (ARPKD) mainly affects infants. Polycystic kidney disease has been estimated to be the cause of ESRD in about 4.3% of cases.

- Systemic lupus erythematosis (SLE) - a chronic inflammatory/autoimmune disease that can injure the skin, joints, kidneys and nervous system.

- A prolonged urinary tract obstruction or blockage.

- Alport syndrome - an inherited disorder that causes deafness, progressive kidney damage, and eye defects.

- Nephrotic syndrome - This is a type of kidney disease which leads to loss of protein in the urine and swelling of the face (often the eyes) or body. It is most common in children younger than 6 years old and is more prevalent in boys than in girls.

- Cystinosis - an inherited disorder of the renal tubules of the kidney that results in the accumulation of the amino acid *cystine*. The excessive build-up of cystine results in the formation of crystals that can damage the kidneys, eyes, and other organ systems.

- Interstitial nephritis - a hypersensitivity reaction causing inflammation of the small internal structures of the kidney. Medications that have been known to cause interstitial nephritis include: penicillins, cephalosporins, allopurinol, and azathioprine.

- Unknown causes account for approximately 20% of chronic renal disease

Risk Factors for Kidney Failure

A *risk factor* is anything that increases a person's chance of developing a disease or condition. Risk factors for renal failure include:

- Age - Persons over 65 years of age have a four to five-fold increased risk
- History of chronic renal insufficiency
- Diabetes
- Hypertension
- Coronary artery disease, especially a history of heart attack (acute myocardial infarction)
- Heroin abuse
- Tobacco use
- African American race
- Lower socioeconomic status
- Obesity
- Elevated levels of uric acid in the blood
- Family history of kidney disease

Complications of Kidney Failure

- Cardiovascular Issues - Patients with kidney failure are 3.5 times more likely to die from cardiovascular disease then persons with normal kidney function. Premature *atherosclerosis* ("hardening of the arteries") is a major cause of morbidity and mortality in persons with end-stage renal disease. The risk of ischemic heart disease is increased 20-fold, while the risk of stroke is increased 10-fold when compared with persons with normal kidney function. Other complications include *left ventricular hypertrophy*, and a syndrome called *uremic serositis* which may consist of pericarditis, pleural effusion, and/or ascites. Hypertension not only causes kidney disease but kidney disease also causes hypertension.

- Fluid and Electrolyte Imbalance - *Hyperkalemia* (elevated potassium level), *hypocalcemia* (decreased calcium level), *hyperphosphatemia* (elevated phosphorous level), *hypomagnesemia* (decreased magnesium level), and *acidosis* (a disturbance in the body's acid-base balance which causes excessive acidity of the blood) are manifestations of uremic syndrome and end-stage renal disease. Disorders of mineral metabolism (calcium, phosphorus, parathyroid hormone, and vitamin D) are thought to play an important role in the accelerated atherosclerosis unique to the dialysis population.

- Musculoskeletal Issues - *Uremic syndrome* can result in muscle weakness, gout, bone pain and spontaneous bone fractures. This is due to three important changes: an imbalance between two minerals (calcium and phosphorus) leading to loss of calcium from the bones; over-activity of the parathyroid glands (hyperparathyroidism), which help to regulate calcium in your body; and insufficient conversion of vitamin D to the active form that can be used by the body.

- Endocrine Issues - Hyperparathyroidism and increased insulin resistance may occur with uremic syndrome.

- Neurological Issues - *Uremic encephalopathy* begins when the GFR falls below 10-15mL/min. Symptoms include difficulty concentrating, lethargy, confusion and can progress to coma if untreated. Neuropathy is present in 65% of patients on or nearing dialysis - symptoms include change in sensation, pain and restless legs.

- Hematologic Issues - Anemia (low red blood cell count) is caused by the insufficient production of erythropoietin by the kidneys, but can also be due to deficiencies in vitamin B12 and iron, destruction of red blood cells (hemolysis), and suppressed bone marrow function. Anemia is a risk factor for the development of heart failure and mortality in renal failure. Decreased platelets can lead to increased bleeding and easy bruising.

- Immunologic Issues - People with uremia tend to have a compromised immune system and are at increased risk of bacterial, fungal and viral infections.

- Gastrointestinal Issues - Symptoms are often caused by the breakdown and retention of urea, metabolic acids, release of ammonia and other metabolic waste products. Symptoms include a metallic taste in the mouth, loss of appetite, nausea, vomiting, decreased appetite and weight loss.

- Skin Issues - Uremia can cause itching and a yellowish discoloration of the skin.

- Reproductive Issues - Women may experience decreased libido, sexual dysfunction, lack of menstruation (amenorrhea), heavy menstrual bleeding (menorrhagia), and infertility. Men may experience decreased libido, impotence, and infertility.

Screening for Kidney Failure

Identification of kidney disease in the early stages is essential to preserving function for as long as possible. Evaluation of renal function can be done by simple blood and urine tests. Screening is especially important for those with hypertension, diabetes, and other medical illnesses that increase the risk for kidney damage.

The American Heart Association has published a scientific statement to emphasize the importance of recognizing kidney disease as one of the major risk factors for cardiovascular disease and recommends that measurement of urinary albumin excretion and estimation of the glomerular filtration rate (GFR) be included in the evaluation of patients with or at high risk for cardiovascular disease.

Staging of Kidney Failure

The National Kidney Foundation has adopted a stratification of patients with renal failure into the following 5 stages based on the glomerular filtration rate (GFR):

- Stage 1: Kidney damage with normal or elevated GFR (> or = 90 mL/min)
- Stage 2: Kidney damage with mild decrease in GFR (60-89 mL/min)

- Stage 3: Moderate decrease in GFR (30-59 mL/min)
- Stage 4: Severe decrease in GFR (15-29 mL/min)
- Stage 5: Kidney Failure (GFR < 15 mL/min or those on dialysis)

3 - Guide to the Medical Literature

Introduction

This section of your *MediFocus Guidebook* is a comprehensive bibliography of important recent medical literature published about the condition from authoritative, trustworthy medical journals. This is the same information that is used by physicians and researchers to keep up with the latest advances in clinical medicine and biomedical research. A broad spectrum of articles is included in each *MediFocus Guidebook* to provide information about standard treatments, treatment options, new developments, and advances in research.

To facilitate your review and analysis of this information, the articles in this *MediFocus Guidebook* are grouped in the following categories:

- Review Articles - 50 Articles
- General Interest Articles - 41 Articles
- Clinical Trials Articles - 17 Articles
- Kidney Transplantation Articles - 12 Articles
- Dialysis Therapy Articles - 22 Articles

The following information is provided for each of the articles referenced in this section of your *MediFocus Guidebook:*

- Title of the article
- Name of the authors
- Institution where the study was done
- Journal reference (Volume, page numbers, year of publication)
- Link to Abstract (brief summary of the actual article)

Linking to Abstracts: Most of the medical journal articles referenced in this section of your *MediFocus Guidebook* include an abstract (brief summary of the actual article) that can be accessed online via the National Library of Medicine's PubMed® database. You can easily access the individual abstracts online via PubMed® from the "electronic" format of your *MediFocus Guidebook* by clicking on the URI that is provided for each cited article. If you purchased a printed copy of the *MediFocus Guidebook*, you can still access the abstracts online by entering the individual URI for a particular abstract into your computer's web browser.

Recent Literature: What Your Doctor Reads

Database: PubMed <January 2008 to November 2009>

Review Articles

1.

Management of diabetes in patients with chronic kidney disease.

Authors: Ahmed Z; Simon B; Choudhury D
Institution: Drexel University College of Medicine, Philadelphia, PA 19102, USA.
Journal: Postgrad Med. 2009 May;121(3):52-60.
Abstract Link: http://www.medifocus.com/abstracts.php?gid=NK006&ID=19491540

2.

Statins and cardiovascular events in patients with end-stage renal disease on hemodialysis. The AURORA results suggest the need for earlier intervention.

Authors: Athyros VG; Tziomalos K; Karagiannis A; Mikhailidis DP
Journal: Curr Vasc Pharmacol. 2009 Jul;7(3):264-6.
Abstract Link: http://www.medifocus.com/abstracts.php?gid=NK006&ID=19601850

3.

What is so bad about a hemoglobin level of 12 to 13 g/dL for chronic kidney disease patients anyway?

Authors: Besarab A; Frinak S; Yee J
Institution: Division of Nephrology and Hypertension, Henry Ford Hospital, Detroit, MI 48202-2699, USA. abesara1@hfhs.org
Journal: Adv Chronic Kidney Dis. 2009 Mar;16(2):131-42.
Abstract Link: http://www.medifocus.com/abstracts.php?gid=NK006&ID=19233072

The **Guide to the Medical Literature** in the complete **Medifocus Guidebook on End-Stage Renal Disease** includes the following sections:

- Review Articles - 50 Articles
- General Interest Articles - 41 Articles
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- Dialysis Therapy Articles - 22 Articles

To Order the Complete **Guidebook on End-Stage Renal Disease** Click Here
Or Call 800-965-3002 (USA) or 301-649-9300 (Outside USA)

4 - Centers of Research

This section of your *MediFocus Guidebook* is a unique directory of doctors, researchers, medical centers, and research institutions with specialized research interest, and in many cases, clinical expertise in the management of this specific medical condition. The *Centers of Research* directory is a valuable resource for quickly identifying and locating leading medical authorities and medical institutions within the United States and other countries that are considered to be at the forefront in clinical research and treatment of this disorder.

Use the *Centers of Research* directory to contact, consult, or network with leading experts in the field and to locate a hospital or medical center that can help you.

The following information is provided in the *Centers of Research* directory:

- **Geographic Location**
    - United States: the information is divided by individual states listed in alphabetical order. Not all states may be included.
    - Other Countries: information is presented for select countries worldwide listed in alphabetical order. Not all countries may be included.
- **Names of Authors**
    - Select names of individual authors (doctors, researchers, or other health-care professionals) with specialized research interest, and in many cases, clinical expertise in the management of this specific medical condition, who have recently published articles in leading medical journals about the condition.
    - E-mail addresses for individual authors, if listed on their specific publications, is also provided.
- **Institutional Affiliations**
    - Next to each individual author's name is their **institutional affiliation** (hospital, medical center, or research institution) where the study was conducted as listed in their publication(s).
    - In many cases, information about the specific **department** within the medical institution where the individual author was located at the time the study was conducted is also provided.

Centers of Research

United States

AL - Alabama

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The **Centers of Research** in the complete **Medifocus Guidebook on End-Stage Renal Disease** includes the following sections:

- Centers of Research for relevant states in the United States
- Centers of Research listed for relevant countries outside the United States

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5 - Tips on Finding and Choosing a Doctor

Introduction

One of the most important decisions confronting patients who have been diagnosed with a serious medical condition is finding and choosing a qualified physician who will deliver a high level and quality of medical care in accordance with currently accepted guidelines and standards of care. Finding the "best" doctor to manage your condition, however, can be a frustrating and time-consuming experience unless you know what you are looking for and how to go about finding it.

The process of finding and choosing a physician to manage your specific illness or condition is, in some respects, analogous to the process of making a decision about whether or not to invest in a particular stock or mutual fund. After all, you wouldn't invest your hard eared money in a stock or mutual fund without first doing exhaustive research about the stock or fund's past performance, current financial status, and projected future earnings. More than likely you would spend a considerable amount of time and energy doing your own research and consulting with your stock broker before making an informed decision about investing. The same general principle applies to the process of finding and choosing a physician. Although the process requires a considerable investment in terms of both time and energy, the potential payoff can be well worth it--after all, what can be more important than your health and well-being?

This section of your Guidebook offers important tips for how to find physicians as well as suggestions for how to make informed choices about choosing a doctor who is right for you.

Tips for Finding Physicians

Finding a highly qualified, competent, and compassionate physician to manage your specific illness or condition takes a lot of hard work and energy but is an investment that is well-worth the effort. It is important to keep in mind that you are not looking for just any general physician but rather for a physician who has expertise in the treatment and management of your specific illness or condition. Here are some suggestions for where you can turn to identify and locate physicians who specialize in managing your disorder:

- **Your Doctor -** Your family physician (family medicine or internal medicine specialist) is a good starting point for finding a physician who specializes in your illness. Chances are that your doctor already knows several specialists in your geographic area who specialize in your illness and can recommend several names to you. Your doctor can also provide you with information about their qualifications, training, and hospital affiliations.

The **Tips on Finding and Choosing a Doctor** in the complete **Medifocus Guidebook on End-Stage Renal Disease** includes additional information that will assist you in locating a highly qualified and competent physician to manage your specific illness.

To Order the Complete **Guidebook on End-Stage Renal Disease** Click Here
Or Call 800-965-3002 (USA) or 301-649-9300 (Outside USA)

6 - Directory of Organizations

American Association of Kidney Patients
3505 E. Frontage Road Suite 315 Tampa, FL 33607
800.749.2257
info@aakp.org
www.aakp.org

American Kidney Fund
6110 Executive Boulevard Suite 1010 Rockville, MD 20852
800.638.8299
helpline@kidneyfund.org
www.kidneyfund.org

American Society of Transplant Surgeons
2461 South Clark St., Suite 640 Arlington, VA 22202
703.414.7870
www.asts.org

ARPKD/CHF Alliance
POB 70 Kirkwood, PA 17536
717.529.5555; 800.708.8892
info@arpkdchf.org
www.arpkd.org

Center for Medicare and Medicaid Services; ESRD
7500 Security Blvd. Baltimore, MD 21244
877-267-2323; 410-786-3000; 866-226-1819 (TTY)
www.cms.hhs.gov/center/esrd.asp

Children's Organ Transplant Association
2501 COTA Drive Bloomington, IN 47403
800.366.2682
cota@cota.org
www.cota.org

The **Directory of Organizations** in the complete **Medifocus Guidebook on End-Stage Renal Disease** includes a list of selected disease organizations and support groups that are helping people diagnosed with End-Stage Renal Disease.

To Order the Complete **Guidebook on End-Stage Renal Disease** Click Here
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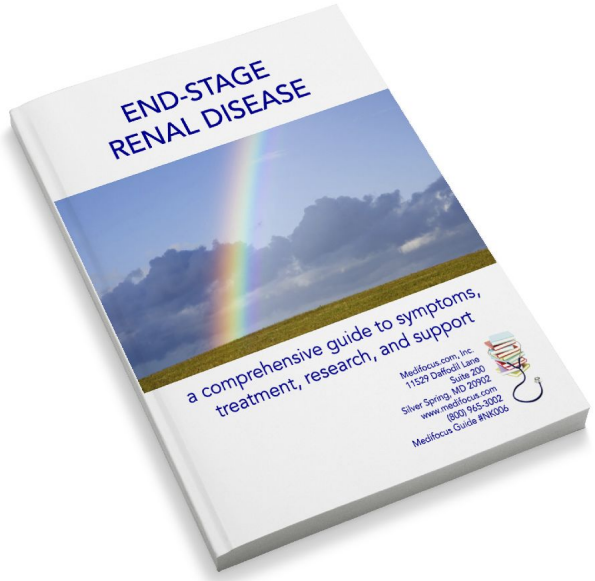

This document is only a SHORT PREVIEW of the **Medifocus Guidebook on End-Stage Renal Disease**. It is intended primarily to give you a general overview of the **format and structure** of the Guidebook as well as select pages from each major Guidebook section listed in the Table of Contents.

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