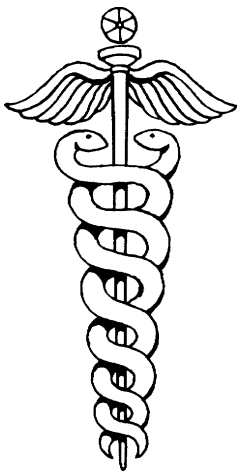
# MEDICAL NOTES VOLUME 2

## A Brief Overview K - Z



CREATIVE FORECASTING, INC.
P.O. Box 7789
Colorado Springs, CO 80933-7789
(719) 633-3174, FAX (719) 632-4721
Editors: Mary Anne Clagett, CTRS, ACC, AC-BC and Pegi Schlis, CTRS, ACC, AC-BC
Contributing Editors: Valerie J. Shereck, MSN, ANP-C, Laurie Parker, CTRS, ACC,
Barb Hartmann, CTRS, ADC, Cathy Tipsord, CTRS, Beth Hall, CTRS

# MEDICAL NOTES VOLUME 2
# A Brief Overview K - Z

CREATIVE FORECASTING, INC.
P.O. Box 7789
Colorado Springs, CO 80933-7789
(719) 633-3174, FAX (719) 632-4721
Editors: Mary Anne Clagett, CTRS, ACC, AC-BC and Pegi Schlis, CTRS, ACC, AC-BC
Contributing Editors: Valerie J. Shereck, MSN, ANP-C, Laurie Parker, CTRS, ACC,
Barb Hartmann, CTRS, ADC, Cathy Tipsord, CTRS, Beth Hall, CTRS

Printed in the U.S.A.

ISBN-13: 978-0-9815956-9-6 (ringbound)
Medical Notes Volume 2, A Brief Overview K - Z, Health, Medical
Printed in the United States of America



**DISCLAIMER:** The intent of "Medical Notes" is to provide a brief overview of various conditions and illnesses. The information in Medical Notes is current as of the date of publishing. The field of medicine is constantly evolving. Nothing in this publication should be construed as a diagnosis, treatment, or definitive. It is the readers' responsibility to consult with qualified medical personnel to verify this data is current.



The intent of "Medical Notes" is to provide a brief overview of various conditions and illnesses. The information in Medical Notes is current as of the date of publishing. The field of medicine is constantly evolving. Nothing in this publication should be construed as a diagnosis, treatment, or definitive. It is the readers' responsibility to consult with qualified medical personnel to verify this data is current.

# Table of Contents

# Table of Contents



**Editors' Note:** The articles in this book originally appeared in issues of *Creative Forecasting* magazine. The initial sections about the diseases and disorders were written by Valerie J. Shereck, a geriatric nurse practitioner. The Activity Implications sections were written by various Recreational Therapists whose names are listed in each article. We thank all of these professionals for their expertise based on years of experience.

# Kidney Disease and Related Disorders

*Valerie J. Shereck, MSN, ANP-C, Barb Hartmann, CTRS, ADC*

In order to understand the nature of kidney disease, also known as renal disease or disorder, we must first understand the function of the kidney, as well as age-related changes in kidney function. The kidney's main function is to remove bodily wastes through the urine. The kidneys are one of the body's most important excretory organs. They also are instrumental in reabsorption to maintain water balance, electrolyte balance, acid base balance, and blood pressure regulation via the rennin-aldosterone system. As we age, kidney function or renal blood flow progressively decreases. This is primarily due to vascular changes in the kidney. The size of the kidneys also decreases. In this article, the most common kidney or renal disorders in the elderly will be discussed.

## ■ NEPHROTIC SYNDROME

Nephrotic syndrome is a condition that is characterized by large amounts of protein in the urine (proteinuria), decreased albumin in the blood (hypoalbuminemia), generalized swelling (edema) of the body, and increased susceptibility to infections. There are many diseases associated with the development of nephrotic syndrome including diabetes mellitus, immune system disorders such as lupus and sarcoidosis, and some cancers such as leukemia, lymphoma, melanoma, multiple myeoloma, and cancer of the lung, breast, colon, stomach, or kidney. Other causes of nephrotic syndrome are drugs that are toxic to the kidney, insect stings, snake venom, poison ivy and poison oak, and bacterial and viral infections.

Early signs and symptoms of nephrotic syndrome include frothy urine, decreased appetite, tiredness and fatigue, puffy eyelids, and muscle wasting. Edema or generalized swelling of the body occurs and may affect the heart, lungs, knees, and ankles. Acute renal failure can develop due to low blood volume and decreased blood flow to the kidneys.

The diagnosis of nephrotic syndrome is made by clinical presentation (signs and symptoms) and laboratory data, particularly large amounts of protein in the urine. Treatment and prognosis is largely determined by the underlying cause. People with diabetic-related kidney disease usually progress to renal failure in three to five years and require dialysis. It is important for individuals who have diabetic-related kidney disease to control both their blood sugar and blood pressure. By keeping blood sugar and blood pressure in normal range, the progression of the disease can be slowed.

## ■ GLOMERULONEPHRITIS

Glomerulonephritis is a syndrome characterized by inflammatory changes in the glomeruli of the kidneys. The glomeruli is the part of the kidney where the urine is filtered. Glomerulonephritis is characterized clinically by blood in the urine and mild protein in the urine. Individuals may have elevated blood pressure and edema or swelling. There are two types of glomerulonephritis: 1) acute (post-infection) glomerulonephritis and 2) glomerulonephritis associated with systemic disease or unknown cause. Acute post-infection glomerulonephritis can be caused by streptococcus or staphylococcus organisms. Symptoms vary but are characteristically nonspecific in the elderly. They include nausea, fatigue and aching of the bones. Approximately 75% of the elderly individuals with this disorder have renal failure and 20% require dialysis. The second type of glomerulonephritis is most often a reaction to a specific disease such as lupus. Symptoms are similar to those with acute post-infection glomerulonephritis. Treatment for both disorders includes steroids and immunosupressants; however, these may be of limited value.

## ■ RENAL ARTERY STENOSIS

Renal artery stenosis is defined as a partial or total blockage of the vasculature of the kidney. It is very common with the elderly and is usually caused by atherosclerosis. Usually it is asymptomatic; however, people who usually have normal blood pressure readings may present with elevated blood pressure. They may also have renal insufficiency as characterized by an increase in their serum creatitine levels. Diagnosis is made by performing a renal ultrasound. Treatment is surgical and involves placing a stent in the involved artery (revascularization).

## ■ ACUTE RENAL FAILURE

Acute renal failure (ARF) is the sudden interruption of kidney function due to obstruction, reduced circulation or renal disease. It usually occurs in approximately 5% of hospitalized patients. ARF is usually reversible with treatment; otherwise, it may progress to end-stage renal disease or death.

The causes of ARF can be the result of loss of blood flow to the kidneys (i.e., shock, bleeding, or heart failure), damage to the kidney from other disease processes, and obstruction of urinary flow (i.e., kidney stones, blood clots, or prostate enlargement). ARF is a critical illness. Early signs may include decreased urine output and evidence of fluid retention. Symptoms vary according to the causative factor. Prompt treatment and intervention are necessary. Risk factors for developing ARF include chronic renal insufficiency, chronic renal failure, liver disease, diabetes mellitus, and advanced age.

Treatment consists of hospitalization and referral to a nephrologist, intravenous fluids, careful monitoring of electrolytes, and a low-protein, low-sodium, low-potassium diet. If these measures fail, patients often require hemodialysis (via blood) or peritoneal dialysis (via abdomen). ☞

## ■ CHRONIC RENAL FAILURE

Chronic Renal Failure (CRF) or chronic kidney disease is usually the end result of a gradual loss of kidney function. It rarely occurs as a result of a rapidly progressive disease with a sudden onset. The most common causes of CRF are diabetes mellitus and hypertension (high blood pressure), accounting for up to 70% of all cases.

CRF produces major changes in all systems of the body. It can cause low levels of salt in the blood which causes symptoms such as low blood pressure, dry mouth, fatigue, nausea, and sometimes confusion and sleepiness. It can also cause high levels of potassium in the blood which can lead to muscle irritability and then muscle weakness, and irregular rhythm of the heart. People with CRF typically exhibit anemia and sometimes bleeding and clotting disorders. They also bruise easily. Typically, the skin of patients with CRF is pale, dry, and scaly, with a yellow-bronze appearance.

Diagnosis of CRF is made on clinical presentation and also a history of progressive deterioration of renal function as determined by laboratory data. Treatment goals are to maintain and conserve present kidney function. Patients are recommended to follow a low-protein, high-calorie diet. Dialysis (either hemodialysis or peritoneal dialysis) is the mainstay of treatment. Careful monitoring of electrolytes, blood counts, and renal function are important. Individuals with CRF should always be followed by a qualified nephrologist. They should be diligent about avoiding infections and meticulous in keeping their dialysis site clean.

Declining function of the kidneys occurs naturally with age. Kidney function affects every other organ in the body. Individuals should be aware of what their individual risk factors are for developing chronic kidney disease. These factors include high blood pressure, diabetes, advancing age, and other disease processes previously listed.

## ■ ACTIVITY IMPLICATIONS

It is important to understand the ways to provide for the needs of people living with kidney disease. March is National Kidney Month, so provide education to residents and staff through a variety of programs.

The two most common causes of kidney disease are diabetes and high blood pressure. However, it is often not until the kidney disease has advanced that a person begins to notice symptoms such as low energy, trouble concentrating, swollen feet and ankles, muscle cramping, poor appetite, nausea, vomiting, trouble sleeping, and the need to use the bathroom more frequently. Kidney disease is not curable; however, if a person is in the early stages of the disease, there are steps that may be taken to help the kidneys last longer.

### PROGRAM IDEAS

- Have a Health Fair. Provide brochures and information on kidney disease, diet tips, and the benefits of exercise. Set up cholesterol, blood glucose, and blood pressure booths.
- Offer foods with low protein, sodium, and potassium and with limited fluid to educate people to the fact that these types of foods are good for individuals with kidney disease.
- Invite a local health care professional to share personal and/or professional knowledge on kidney disease.
- Provide discussion and education groups regarding the various stages and treatments of kidney disease and related disorders.

### BENEFITS OF EXERCISE

Physical activity and exercise are important to people's well-being. The American College of Sports Medicine (ACSM) defines the difference between physical activity and exercise. According to the ACSM, physical activity is activity that causes a person to get up and move around (i.e., housework, walking the dog.) Exercise is defined by the ACSM as a planned and structured physical activity which is done to improve physical fitness (i.e., 20 - 40 minute walk or jog, strength training at a fitness facility).

Research has shown that an individual with renal failure who engages in some type of physical activity on an ongoing basis will continue to maintain or obtain the following benefits: lower sugar levels and blood pressure, increased flexibility, energy, and positive feelings, maintenance of weight control, and improvement of self-esteem and feelings of well-being.

Working together with the health care team and individuals with or who have the potential for kidney disease or a related disorder will assist with maintaining or improving each person's quality of life.

### RESOURCES

- National Kidney Foundation - www.kidney.org
- Life Options - https://lifeoptions.org
- Mayo Clinic - www.mayoclinic.org - search for Kidney
- Healthy People - www.healthypeople.gov - search for Kidney - This site includes information regarding the blueprint for the future of American health care which was developed by the Office of Disease Prevention and Health Promotion in the U.S. Department of Health and Human Services. Healthy People goals are reissued every 10 years and updated at five-year intervals. This program is not new, but the information contains new and important additions.

CF

# Lupus

*Valerie J. Shereck, MSN, ANP-C, Beth Hall, CTRS*

Lupus is also known as systemic lupus erythematosus (SLE). It is defined, according to the *Merck Manual of Geriatrics,* as a chronic (long term) inflammatory connective disorder that occurs mainly in women between the ages of 15 and 40, but can also occur in older adults. The incidence of SLE declines with age. The prevalence is 12% in individuals older than the age of 65. It is 10 times more common in women than in men. It is also more common in African-Americans, Hispanics, and Asians.

SLE is also known as an autoimmune disorder. In this type of disorder, the immune system attacks healthy tissue. Normally, the immune system is the body's defense system. When the immune system is healthy, it protects the body by making blood proteins called antibodies that attack germs, bacteria, and even cancers. In SLE, the immune system produces "autoantibodies" which then attack a person's own healthy cells.

SLE can result from genetics or the environment, but for the most part its cause is unknown or idiopathic. Individuals with inherited (familial) predisposition for SLE develop the disease when they come in contact with something in the environment that can trigger SLE (i.e., exposure to sunlight). SLE can also be caused from taking certain medications (drug-induced). Drug-induced SLE is more common in older adults due to the fact that they generally take more medications. Some of the most common medications that cause SLE are certain blood pressure medications and heart-regulating medications and some types of anti-seizure medications. Usually symptoms of SLE subside after the medication has been discontinued, but can also occur up to two years after the drug has been stopped.

## SIGNS AND SYMPTOMS

Signs and symptoms of SLE depend upon which part of the body is affected. The most classic symptom of SLE is a facial rash that occurs over the cheeks and bridge of the nose which resembles a butterfly's wings. This rash occurs only in approximately 20% of the older population. Other rashes, which often are symptoms of SLE, are a red rash with raised round or oval patches, known as discoid rash. The rashes seem to worsen after exposure to sunlight. Other common signs and symptoms of SLE include fever, fatigue, weight loss, hair loss around the hairline, blood loss, heartburn, stomach pain, chest pain, joint pain, stiffness and swelling, shortness of breath, dry eyes, mouth sores, headache, confusion or memory loss, and fingers and toes that turn white or blue when exposed to cold or during stressful times (Raynaud's phenomenon).

Inflammation caused by SLE can affect all parts of the body. In the kidneys, SLE can cause some serious damage. Some of the symptoms associated with this damage include itching, nausea and vomiting, and leg swelling (edema). Inflammation from lupus in the brain can cause headaches, dizziness, hallucinations, and strokes or seizures. Blood and blood vessel damage caused by inflammation include anemia, increased risk of bleeding, or blood clotting. Inflammation of blood vessels can cause vasculitis. In the lungs, inflammation of the chest cavity from SLE can cause pleurisy. Changes in the heart from inflammation can cause inflammation of the heart muscle, arteries, or heart membrane (pericarditis). It can also increase the risk for heart disease and heart attack.

There is an increased risk of developing infections in individuals with SLE due to a weakened immune system. The most common types of infection include urinary tract infection, respiratory tract infections, yeast infections, salmonella infections, and herpes zoster or shingles infection. There is also an increased risk of developing some types of cancers in individuals with SLE. Bone death (avascular necrosis) due to decreased blood supply to the bone is also common. The hip joint is the most commonly affected joint. Pregnancy complications occur as well in young women with SLE and include increased risk of miscarriage, high blood pressure (preeclampsia), and premature birth.

The diagnosis of SLE is sometimes difficult to make, as signs and symptoms vary among individuals. Diagnosis is usually based upon physical examination, signs and symptoms, and the results of blood and urine tests. The most common blood and urine tests include:

- Complete blood count - Anemia (low white cell count) and/or low platelet count may occur in SLE.
- Erythrocyte sedimentation rate - This test is nonspecific to lupus but may be elevated in inflammatory diseases.
- Kidney and liver function tests - Lupus can cause damage to these organs.
- Urinalysis - Increased protein and red blood cells may be found in individuals with lupus.
- Antinuclear antibody (ANA) test - Most people with lupus test positive for this. It indicates some type of immune disorder.

If it is suspected that an individual with a tentative diagnosis of SLE may have heart or lung damage, a chest X-ray, EKG (electrocardiogram) or echocardiogram may be ordered. A biopsy of the kidney may be performed if damage to the kidney is suspected.

## TREATMENT

The treatment for lupus depends on the signs and symptoms and their severity. There is no cure for SLE. The benefits and risks of treatment should be weighed carefully.

### Treatment Options

- Nonsteroidal anti-inflammatory drugs (NSAIDs) - NSAIDs decrease swelling, pain, and fever. These drugs include Ibuprofen (brand names Motrin®, Advil®) and Naproxen (Naprosyn®, Aleve®). Some of these drugs can have serious side effects such as stomach bleeding and kidney damage.
- Antimalarial drugs - These drugs such as Plaquenil® can relieve symptoms of fatigue, rashes, joint pain, or mouth sores. They may also prevent blood clotting.
- Corticosteroids and immune suppressants - These drugs are usually reserved for individuals with serious and ☞

life-threatening inflammatory symptoms. These drugs include prednisone, Imuran®, Cytoxan®, Neoral®, Sandimmune®, or Cellcept®.

✔ Biologics - New treatment options that include drugs already approved for people with rheumatoid arthritis. Examples include Rituxan®, Orencia®, and Benlysta®.

Individuals with a diagnosis of SLE should be referred to a rheumatologist which is a specialist in treating autoimmune disorders. They should also learn as much as possible about their disease process and its implications. They should get adequate sleep and rest and be instructed on being safe in the sun such as wearing protective clothing and sunscreen with an SPF (sun protective factor) of 55 or greater. They should also be advised to get regular exercise to combat depression and improve mood, eat healthy, and quit smoking, and be encouraged to join a local support group to meet individuals with SLE.

## ■ ACTIVITY IMPLICATIONS

Lupus is not one of the most common diagnoses of our residents; however, when a person is diagnosed with lupus, there are a multitude of symptoms he or she may experience. Lupus is a chronic, long term disease that causes inflammation, pain, and swelling. It can affect the skin, joints, kidneys, lungs, and nervous system. Most people feel fatigue and have rashes, painful and swollen joints, and fever. Lupus flares vary from mild to serious. Most individuals have times when the disease is active, followed by times when it is mostly quiet, referred to as a remission. Activity and Recreational Professionals will need to have conversations with the care center's medical staff and the individual resident to determine which of the symptoms associated with lupus are impacting the person's leisure engagement.

### PURPOSEFUL PROGRAMS

Planning purposeful leisure programs for our residents with lupus will be extremely varied and constantly fluid, as each person will have a unique combination of multiple symptoms. Frequent verbal and visual assessments of the resident to check the activity level (flares versus remission) of the disease are necessary.

### PROGRAMS FOR PHYSICAL HEALTH

One of the more common symptoms of lupus is joint inflammation. The pain and stiffness of the joints is very similar to rheumatoid arthritis. Activity and Recreational Professionals need to educate the resident with lupus that exercising will decrease his or her pain and will make him or her feel more energetic. Inactivity decreases joint motion and flexibility. Inactivity also can lead to weak muscles and deformed joints. Regular exercise reverses joint stiffness, builds muscle, and boosts overall fitness. With regular exercise, the resident can feel stronger with less fatigue. Consulting with the medical team is always advised before starting an exercise program with the resident.

➢ **Isometric Magic** Isometric movements involve tensing the various muscles without any visible movements. Slowly moving the body into the isometric position lubricates the joints, while tightening the surrounding muscles builds overall strength and support to the specific joint. All isometric movements should be performed in sets. (It is okay to start with as few as three repetitions per movement, holding the movement for three to five seconds.) Increase the repetitions and holding time only when the resident is comfortable to do so. As the stiffness often starts in the smaller joints, start the isometric exercises with the hands and wrist.

✔ Place arms out straight, palms facing down, spread all fingers apart, and flex hands and fingers up and towards the forearms.

✔ With all the fingers straight, squeeze them tightly together.

✔ With all the fingers squeezed together, curl the fingers to the top of the palm.

✔ Make a fist with all fingers.

✔ With the hands in front of the chest, straighten fingers, place palms of hand together, and press against each other.

### PROGRAMS FOR SOCIAL HEALTH

Embarrassment from some of the physical symptoms of lupus can cause the residents to isolate themselves. Offer small-group programs for the residents with a few of their friends to promote camaraderie.

➢ **Cooking Success** Offer a cooking class where familiar items are cooked such as muffins but include the ingredient of flax seed. Flax seed contains a fatty acid called alpha-linolenic acid which may decrease inflammation in the body. Go to www.healthyflax.com for many delicious recipes.

### PROGRAMS FOR EMOTIONAL HEALTH

Because there is not a large percentage of our residents with the diagnosis of lupus, a person may feel alone without any peers who can truly understand what he or she is going through**.** Developing resources for a support group for the resident can be invaluable. Visit www.thelupusinitiative.org for an amazing number of videos, Power Point presentations, case studies, and printable handouts on lupus' disease process, the importance of cultural competency, treatments, and facilitation of support systems. These multimedia presentations can be provided to the resident and the family in a one-to-one or small group program format. Additionally on the web site, www.lupus.org (Lupus Foundation of America), click Local Chapters to get the contact information of the lupus support group in your area.

### PROGRAM CONSIDERATIONS

Frequent communications with the medical team and the resident are very important when planning leisure programs for the resident with lupus. Remember to:

✔ Practice exemplary infection control techniques with the resident within all group and one-to-one leisure programs, as the resident's immune system is compromised and can easily procure infections.

✔ Have a conscious awareness of the resident's exposure to the sun as ultraviolet rays can exacerbate the lupus rash symptom. CF