End Stage Renal Disease from A to Z

A dictionary for dialysis and transplant patients

The mission of the Southeastern Kidney Council is to improve the lives of patients with or at risk for End Stage Renal Disease by promoting and advancing quality of care.
The Southeastern Kidney Council, ESRD Network 6 Consumer Committee developed this dictionary. We hope it helps you understand the words associated with ESRD, and enhances communication with your health care team.

*The definition of bold italicized words appears throughout the dictionary.

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**Access**
It is a means to reach the bloodstream. In *hemodialysis*, *fistulas, grafts, catheters, and subcutaneous vascular accesses* are used. Access to the *peritoneal cavity* for *peritoneal dialysis* is through a *peritoneal catheter*.

**Access Aneurysm**
A thinned, bulging, pulsating area on the *fistula* or *graft*. Aneurysms can be caused by repeated puncture of an *access* in one spot. This trauma weakens the *access* wall, and could cause it to rupture.

**Acute Renal Failure**
A condition in which the *kidneys* suddenly stop working. In many cases, *kidneys* can recover.

**Acute Tubular Necrosis (ATN)**
Reversible *kidney* damage resulting in delayed *kidney* function.

**Adequacy**
It is the amount of dialysis to prevent *uremic* symptoms. In *hemodialysis*, this is measured by *Kt/V* and *URR*. In *peritoneal dialysis*, *Kt/V* and Creatinine Clearance measures this.

**Advanced Directives**
Written documents to record a patient’s wishes regarding his or her medical treatment, in case that patient is unable to make their choices known later.
**Albumin**
One of a class of proteins in the blood. A reduced level of albumin may be a sign of inadequate protein intake in the diet.

**Allograft**
An organ or tissue *transplant* from one human to another.

**American Association of Kidney Patients (AAKP)**
An organization composed primarily of patients on *dialysis*, *transplant* recipients, and family members. AAKP is a non-profit association, which strives to meet the needs of all *kidney* patients through educational programs, patient advocacy, and the promotion of *rehabilitation*.

**American Kidney Fund (AKF)**
A national non-profit organization that provides direct financial assistance to those who suffer from *kidney* disease.

**Anemia**
A common condition in patients with kidney disease, which there are not enough red blood cells in the blood to carry oxygen. Anemia also referred to as “low blood” and causes weakness and fatigue.

**Angioplasty**
The inflation of a balloon inside a narrowing blood vessel. The inflation of the balloon makes the vessel opening bigger and allows for more blood flow.

**Antibiotic**
A medication used to kill bacteria that may be causing an infection in the body.
Antibody
A protein in the body that helps fight disease.

Anticoagulant
A substance given to prevent clotting of the blood (example: Heparin).

Antigen
A substance in the body that stimulates the production of antibodies.

Antihypertensive
A medication that reduces high blood pressure (hypertension).

Anuria
A condition in which a person stops making urine.

Arterial Line
The tube carrying blood from the body into the artificial kidney (dialyzer).

Arteriogram, Renal
An X-ray test involving injection of dye into the main artery supplying the kidney, used to determine if the blood vessels to the kidney are normal.
**Arteriovenous Fistula**
Surgical connection of an *artery* directly to a *vein*, usually in the forearm, created in patients who will need *hemodialysis*. The AV fistula causes the *vein* to grow thicker, allowing the repeated needle insertions required for *hemodialysis*.

**Artery**
A blood vessel that carries blood away from the heart and to the body.

**Artificial kidney**
Another name for a *dialyzer*.

**Ascites**
Fluid retained in the abdominal cavity.

**Autoimmune Disease**
A disorder where the *immune system* attacks its own tissues and organs of the body.

**AV Fistula**
See *Arteriovenous Fistula*. 
**Bacteria**
“Germs” too small to see with the naked eye that can produce diseases or infections.

**Bath**
Another name for *dialysate fluid*, which is a clean salt-containing solution. Inside the dialyzer, waste products will flow from the blood into the *dialysate* and are then washed away.

**Bilateral nephrectomy**
The removal of both *kidneys*.

**Biopsy**
The process of surgically removing tissue from living patients for diagnostic examination.

**Bladder**
The part of the urinary tract that receives *urine* from the *kidneys* and stores it until urination.

**Blood Flow Rate (BFR) or QB**
The amount of blood passing through the *artificial kidney (dialyzer)* each minute. This is determined by the speed at which the *blood pump* is set.
Blood Glucose Meter
A machine that helps test how much glucose (sugar) is in the blood. A specially coated strip containing a fresh drop of blood is inserted in a machine, which then calculates the level of glucose in the blood sample and displays a result.

Blood Leak
The dialyzer fibers or membrane develop a small break or tear allowing blood to leak into the dialysate.

Blood Pressure
Pressure of the blood flowing through the blood vessels. Stated as a systolic number over a diastolic number.

Blood Pump
A pump that is used to bring blood from the patient, and push it through the artificial kidney or dialyzer and back to the body.

Blood Sugar
See Glucose.
Blood Urea Nitrogen (BUN)
A waste product, or toxin, that appears in the blood as protein from food is digested. BUN levels are a measure of how well the kidneys are functioning as well as adequacy of dialysis and nutritional status. A high BUN indicates that the kidneys are not removing enough waste.

Bloodlines
The arterial line and venous line used in hemodialysis.

Bright’s Disease
See Glomerulonephritis.

Bruit
The sound of blood moving through a fistula or graft that indicates that the access is working. You can hear bruits from an artery and that may indicate a blockage.
Cadaver Donor
A person who has just died that has agreed, before their death, to offer an organ, tissue, or blood for transplantation.

Calcium
A mineral that the body needs for strong bones and teeth. A combination of too much phosphorus and too little calcium causes weak, brittle bones.

Cannulation
The process of inserting a needle into the graft or fistula.

CAPD
See Continuous Ambulatory Peritoneal Dialysis.

Catheter
A tube inserted through the skin into a blood vessel or body cavity to draw out blood or body fluids, or to put in fluid. In peritoneal dialysis, a catheter is used to instill dialysis solution into the abdominal cavity and drain it out again. In hemodialysis, a catheter in a vein is used to create a temporary or longer-term dialysis access.

Centers for Medicare & Medicaid Services (CMS)
(Formerly known as HCFA – Health Care Financing Administration)
This department of the federal government oversees the Medicare and Medicaid programs.
Central Venous Stenosis
The narrowing of the central veins in the body can make the arm on that side unsuitable for a vascular access.

Chronic Renal Failure (CRF)
It is the slow and progressive loss of kidney function over several years, often resulting in End Stage Renal Disease.

Clotting time
Known as the time it takes a blood to form a clot.

CMS
See Centers for Medicare & Medicaid Services.

Complaint and Grievance Procedure
A process for a concerned person to request an investigation into an allegation involving a facility, physician, or other provider. The dialysis facility and the ESRD Network both have such a procedure.

Conditions for Coverage
ESRD dialysis facility requirements for Medicare program certification.
Conductivity
The measure of ions in a solution. A conductivity meter measures the chemical composition of dialysate by measuring the dialysate’s ability to conduct an electrical current. If the conductivity of dialysate is not correct an alarm will go off, and the dialysate is bypassed to the drain. This means the dialysate will not encounter the patient’s blood.

Conductivity Alarm
The conductivity alarm indicates an inappropriate mixture of water and dialysate concentrate. See Conductivity.

Congestive Heart Failure (CHF)
A condition in which the weakened heart does not pump blood effectively. This results in the body retaining excess fluid. The fluid collects in the lungs making breathing difficult. In a dialysis patient, treatment may include removal of excess body fluid during dialysis.

Continuous Ambulatory Peritoneal Dialysis (CAPD)
A type of dialysis where the patient’s peritoneal membrane is used as the dialyzer. The patient dialyzes at home, using special supplies, but without the need for a machine. When you are on CAPD, you change the fluid in your peritoneal cavity by doing what is called "an exchange". This can be performed in any clean and convenient place - at home, at work, at school or on vacation. The exchanges use gravity to drain the used fluid out of the peritoneal cavity and to replace it with fresh fluid. Most CAPD patients need to do about 3 to 5 exchanges a day. (See Peritoneal Dialysis)
Continuous Cycling Peritoneal Dialysis (CCPD)
A type of dialysis where the patient dialyzes at home and uses a machine that automatically delivers cycles of dialysis exchanges. A typical CCPD schedule involves three to five exchanges during the night while the person sleeps. One or more additional exchanges may also be performed during the daytime. (See Peritoneal Dialysis)

Creatinine
A waste product released from the muscles of the body. Creatinine is normally removed from the blood by the kidneys.

Creatinine Clearance
A test that measures how well the kidneys remove creatinine from the blood. A decreased creatinine clearance reading means decreased function of the kidneys.

Cross Matching
A test used to establish blood compatibility before transfusion. Before a transplant, the donor’s blood is tested with the recipient’s blood to see whether they are compatible.

CROWNWeb (Consolidated Renal Operations in a Web Enabled Network)
CMS required electronic web-based data collection system to enter patient information and records.
Declotting
The removal of a blood clot so fluid can flow through a blood vessel or tube, such as a dialysis access.

Department of Health and Human Services (DHHS)
DHHS administers many programs at the Federal level dealing with the health and welfare of the citizens of the United States. It is the “parent” of the Centers for Medicare & Medicaid Services (CMS).

Diabetes Mellitus
A disease that occurs when a person has high blood sugar.

Diabetic Nephropathy
Kidney disease caused by diabetes.

Diabetic Neuropathy
Damage of nerves by diabetes. (See peripheral neuropathy.)

Diabetic Retinopathy
An eye disease caused by diabetes that may result in reduced vision or blindness.

Dialysate/Dialysate fluid
Also called bath. The solution used to remove excess fluids and waste products from the blood.

Dialysate Flow Rate (DFR) or QD
The rate at which dialysate fluid moves through the dialyzer.
**Dialysis**
The process of cleaning wastes from the blood artificially. The kidneys normally do this job. If the kidneys fail, the blood must be cleaned artificially with special equipment. The two major forms of dialysis are hemodialysis and peritoneal dialysis.

**Dialysis Technician**
An individual who provides dialysis care under the supervision of a registered nurse or a physician. Also called a Patient Care Technician (PCT).

**Dialyzer (artificial kidney)**
An artificial kidney used with the hemodialysis machine. The dialyzer has two sections separated by a membrane. One section holds dialysate fluid and the other holds the patient’s blood. Waste products and fluid travel from the blood into the dialysate fluid, across the dialyzer membrane, and are disposed of.

**Diastolic**
The bottom blood pressure number (or second number) which measures the force of the heart muscle at rest, when it expands and fills with blood.

**Dietitian**
An expert in nutrition who helps people with special health needs plan the kinds and amount of foods to eat. Also called a nutritionist.
Disequilibrium Syndrome
The term used to describe a condition that may result from dialysis therapy, most commonly in patients new to dialysis. Some symptoms may be headache, cramps, nausea, or vomiting.

Donor
A person who offers blood, tissue, or an organ for transplantation.

Dry Pack
A dialyzer that has not been pre-processed for first use of hemodialysis.

Dry Weight (ideal weight) (target weight)
The weight at which all excess fluids have been removed.

Durable Medical Equipment (DME)
Items commonly covered under the Medicare program such as oxygen equipment, wheelchairs, and other medically necessary equipment prescribed by a physician for a patient’s in-home use.

Dwell Time
In peritoneal dialysis, the amount of time that dialysate fluid remains in the patient’s abdominal cavity during an exchange.
Edema
Swelling caused by too much fluid in the body.

Electrolytes
Salts in the body fluids including sodium, potassium, magnesium, and chloride. The kidneys control the amount of these electrolytes in the body. When the kidneys fail, electrolytes get out of balance, causing potentially serious health problems. Dialysis can help correct this problem.

End Stage Renal Disease (ESRD)
Any irreversible kidney disease that requires dialysis therapy or kidney transplant in order to live. The term “end-stage” means that the renal disease is permanent and irreversible, and not that the person’s condition is terminal.

Erythropoietin
A hormone that stimulates the body to produce red blood cells. It is normally produced in the kidney, but with renal failure, the body cannot produce this hormone, resulting in anemia.

Equipment Technician
An individual, who performs the required tasks for the maintenance, monitoring, and repair of dialysis machines, reuse processing and water treatment systems and equipment at the dialysis facility.
ESRD Networks
The *U.S. Government established the ESRD Networks* in 1978 to oversee *dialysis* and *transplant* facilities, and ensure that patients receive high quality care. The Networks collect data, oversee quality improvement activities, encourage rehabilitation, establish a grievance procedure for patients, and provide resource materials to *ESRD* staff and patients.

**Exchange**
In *peritoneal dialysis*, the draining of used *dialysate fluid* solution from the abdomen, followed by refilling with a fresh bag of solution.

**Exit Site**
The site at which the *catheter* exits the body.
Femoral Catheter
A temporary catheter placed in the femoral vein in the groin.

Ferritin
The amount of stored iron in the body.

First-Use Syndrome
Symptoms that may occur after starting hemodialysis with a dry pack or dialyzer that has not been pre-processed for first use of hemodialysis. Symptoms may include chest pain, back pain, nervousness, and itching.

Fistulogram
A special procedure performed in the Radiology Department of a hospital. With the use of X-ray dye, the blood flow through a fistula will be evaluated. The procedure can detect problems such as a clot or narrowing. Early detection and treatment of problems with a fistula can improve its performance and limit future complications.

Fluid Overload
Excess sodium (salt) and fluid retained in the body between dialysis treatments; may cause shortness of breath and swelling.

Fluid Restriction
The amount of fluid a patient is allowed to drink in a 24-hour period to avoid adding extra weight that would cause fluid overload and undue stress to the heart.

Folic Acid
A vitamin necessary for red blood cell production.
**Glomeruli**
Plural of *glomerulus*.

**Glomerulonephritis**
Also called *Bright’s disease* or *Nephritis*. It is an inflammation of the *glomeruli*. It usually affects both *kidneys* and generally first occurs in early childhood. Recovery from the acute form may take one year. Those with the chronic form suffer low, progressive damage that may ultimately lead to *ESRD*.

**Glomerulus**
A tiny set of looping blood vessels in the *kidney* where the blood is filtered.

**Glucose**
A type of sugar found in the body. Also called *blood sugar*.

**Graft**
In *hemodialysis*, a *vascular access* surgically created using a synthetic tube to connect an *artery* to a *vein*. In *transplantation*, a *graft* is the *transplanted* organ or tissue.

**Guaiac Cards**
Cards used to test for hidden blood in the stool.
**Hematocrit**
A measure that tells how many red blood cells are present in a blood sample. Low hematocrit suggests *anemia* or increased blood loss.

**Hemodialysis**
The use of a machine to clean wastes from the blood after the *kidneys* have failed. The blood is circulated through tubes to a *dialyzer*, which removes wastes and extra fluid. The cleaned blood then flows through another set of tubes back into the body.

**Hemoglobin**
The substance in red blood cells that carries oxygen around the body. Low hemoglobin suggests *anemia* or increased blood loss.

**Heparin**
A medication that prevents the blood from clotting too quickly.

**Hepatitis**
Inflammation of the liver.
**Hepatitis B Antigen Test**
A test that determines the presence of an *antigen* associated with the circulation of the *Hepatitis* B virus in the blood.

**Hereditary**
A disease, trait, or condition that is passed on in a family (blood relatives).

**High Blood Pressure**
See *Hypertension*.

**Human Insulin**
*Insulin* that is chemically the same as *insulin* naturally produced by one’s body.

**Hyperglycemia**
Too high a level of *glucose* (sugar) in the blood; a sign that diabetes is out of control.

**Hyperkalemia**
A high level of *potassium* in the blood; can cause irregular heartbeat and cardiac arrest if severe.

**Hypertension**
High *blood pressure*, which can be worsened by too much fluid in the blood vessels or *fluid overload*.

**Hypoglycemia**
Low *blood sugar*.

**Hypotension**
Low *blood pressure*. 
**Ideal Weight**  
See *Dry Weight*.

**Immune System**  
The body’s system for protecting itself from viruses and *bacteria* or any “foreign” substance.

**Immunosuppressant**  
A drug given to suppress the natural responses of the body’s immune system. Patients are given immunosuppressants to prevent the body’s immune system from fighting and rejecting the *transplanted* organ. Also given to patients with *autoimmune diseases*.

**Implantable Port**  
See *Subcutaneous Vascular Access*.

**Infiltration**  
The leakage of a substance into body tissues. In *hemodialysis* patients, infiltration of blood into the tissues surrounding the *access* can occur if 1) the needle punctures the back of the vessel wall or 2) the needle is partially dislodged from the access.
**Influenza (flu)**
A contagious disease that is caused by the influenza virus. It attacks the respiratory track (nose, throat, and lungs). The flu is different from a cold. It usually comes on suddenly and may include symptoms such as fever, headache, tiredness, dry cough, sore throat, body aches, and nasal congestion. The influenza vaccine is recommended every Fall for all people age 50 and over, for people of all ages who have chronic diseases or for anyone of any age who wants to reduce the risk of contracting the “flu”. A flu shot can be given at any time during the autumn or winter but is most effective when it is given from early October to mid-November, before the flu season begins.

**Insulin**
A hormone that controls the body’s use of glucose (sugar). When the body cannot make enough insulin or is resistant to its own insulin, the person with diabetes may have to inject insulin.

**Internal Jugular Catheter (IJ)**
A temporary dialysis catheter that is placed in the internal jugular vein of the neck.

**Intravenous (IV)**
Within a vein.

**Iron Deficiency**
Lack of enough available iron to make red blood cells.
Kidney Failure
The loss of *kidney* function. (See also *End Stage Renal Disease*.)

Kidney Transplantation
The replacement of a diseased *kidney* with a healthy one.

Kidneys
The two bean-shaped organs located on either side of the spine, just above the waist. They rid the body of waste materials and maintain fluid balance through the making of *urine*.

Kt/V
A measurement of how much *urea* is being removed from the blood during *dialysis*. The measurement takes into account the efficiency of the *dialyzer*, the treatment time, and the total amount of *urea* in the body.
**Lipid**

A term for fat. The body stores fat as energy for future use just like a car that has a reserve fuel tank. When the body needs energy, it can break down the lipids into fatty acids and burn them like *glucose* (*sugar*).

**Living Related Donor (LRD)**

A living family member that donates an organ.

**Living Unrelated Donor (LUD)**

A living person, not a family member, who donates an organ.
**Medicaid**
A state and federally funded program that helps pay for medical bills. A person’s income must be below a certain level to receive Medicaid. Benefits vary from state to state.

**Medicare**
A federally funded program that helps pay for medical bills. The Centers for Medicare & Medicaid Services (CMS) administers this program.

**Membrane**
A thin sheet or layer of tissue that lines a cavity or separates two parts of the body. A membrane can act as a filter, allowing some particles to pass from one part of the body to another while keeping others where they are. The artificial membrane in a *dialyzer* filters waste products from the blood.

**Modality**
Methods of treatment for *kidney* failure. Modality types for *End Stage Renal Disease* include *transplant*, *peritoneal dialysis*, and *hemodialysis*.
National Kidney Foundation (NKF)
A voluntary health organization that 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.

Needle Gauge
Refers to the size of the needle. The larger the number, the smaller the size of the needle.

Negative Pressure
The method of removing extra water and salt from the blood by creating pressure inside the blood compartment of the dialyzer, allowing the process of ultrafiltration to take place.

Nephrectomy
Surgical removal of a kidney.

Nephrolithiasis
Kidney stones.

Nephrologist
A medical doctor who treats patients with kidney problems or hypertension.
Nephron
A tiny part of the **kidneys**. Each **kidney** is made of about 1 million nephrons, which are the working units of the **kidneys**, removing wastes and extra fluids from the blood.

Nephrosis
A condition in which there is a large and abnormal leakage of protein into the **urine**.

**Nocturnal Home Hemodialysis (NHHD)**
**Hemodialysis** done at night while a person sleeps. The patient sleeps through the treatment and disconnects in the morning. The patient typically dialyzes 6 nights a week and usually for a minimum of 7 hours each night.

**Nocturnal Intermittent Peritoneal Dialysis (NIPD)**
A type of **dialysis** where the patient generally dialyzes at home and uses an automated **peritoneal** cycler for delivering **dialysis** exchanges. NIPD differs from **CCPD** in that the patient does not perform any exchanges during the day.

**Non-Insulin Dependent Diabetes Mellitus (NIDDM)**
**Diabetes mellitus** that does not require the use of **insulin** injections; it may be controlled by diet and medications. (See **Type II Diabetes Mellitus**.)

**Nuclear Scan of the Kidneys**
A test of the structure, blood flow, and function of the **kidneys**. The doctor injects a solution into an arm **vein** and uses a radiation detector to monitor its progress through the **kidneys**.
Occlude
Obstructed or blocked flow in a blood vessel, *graft*, or *catheter*.

**Occupational Therapist**
A person trained to help patients to improve the use of fine motor skills. (i.e., finger and hand movement).

**Organ Donation**
The act of giving one's organs to someone else.

**Organ Procurement**
The process of acquiring donor organs such as *kidneys* in the *ESRD* program. *UNOS* directs the collection and placement of donor kidneys.

**Organ Procurement Organizations (OPO)**
An organization that coordinates activities related to *organ procurement*. OPO activities include evaluating potential donors, discussing donation with surviving family members, arranging for the surgical removal and transport of donated organs, and educating the public about the need for donations.

**Osmosis**
Passing of fluid through a *semipermeable membrane* from a solution with a low *solute* concentration to a solution with a higher *solute* concentration until there is an equal concentration of fluid on both sides of the *membrane*.

**Osteodystrophy**
Bone disease.
Palpate
To examine by touching.

Parathyroid Glands
Glands producing parathyroid hormone that regulates calcium metabolism.

Parathyroidectomy
The procedure of surgically removing the parathyroid glands.

Patent
Unblocked flow of blood in a blood vessel, graft, or catheter.

Patient Care Technician (PCT)
See dialysis technician.

Perfusion Machine
A machine that keeps a donor kidney in the best possible condition outside the body until such time as it can be transplanted into a recipient.

Peripheral Neuropathy
Damage to nerves of the peripheral nervous system. Can affect hands, toes, and feet. See Diabetic neuropathy.
**Peritoneal Cavity**
The space inside the abdomen but outside the internal organs.

**Peritoneal Dialysis**
A treatment for *kidney* failure in which *dialysate* is put into the *peritoneal cavity*. The *dialysate* causes waste and excess water to be drawn across the peritoneal membrane into the cavity. When the process is complete, the fluid is drained off and replaced.

**Palliative Care**
A treatment that treats but does not cure an illness.

**Peritoneum**
The *membrane* lining the *peritoneal cavity*.

**Peritonitis**
Infection in the *peritoneal cavity* usually treated with antibiotics.

**Phosphate Binders**
Phosphate binders help to pass excess phosphate out of the body in the stool, reducing the amount of phosphate that gets into the blood. These medicines "bind" the phosphate in the digestive tract by combining with it to form a compound that is not absorbed into the blood.
Phosphorus
A mineral necessary for bone strength. A combination of too much phosphorus and too little calcium causes weak, brittle bones.

Polycystic Kidney Disease
An inherited disorder characterized by many grape-like clusters of fluid-filled cysts that make both kidneys larger over time. These cysts take over and destroy working kidney tissue.

Potassium
An essential chemical salt in the body that regulates heart and muscle movement. High or low levels in the blood may cause muscle weakness and cause the heart to stop.

Priming
Filling and rinsing the bloodlines and the dialyzer with a solution of saline.

Proteinuria
The presence of protein in the urine. This indicates that the kidneys are not working properly.

Pyelonephritis
An infectious swelling of the tissue of the kidneys, which at the onset may not interfere with kidney function, but if left untreated, may lead to kidney failure.
QB
See Blood Flow Rate.

QD
See Dialysate Flow Rate
**Rehabilitation**
A return to stable health, a positive outlook, and enjoyable activities that make people feel better physically and mentally. A successful rehabilitation program uses medical treatment, counseling, education, diet, and exercise.

**Rejection**
When the body does not accept a transplanted organ.

**Renal**
Having to do with, or referring to, the kidneys.

**Renin**
A hormone produced by the kidney, which helps regulate the volume of fluid in the body and blood pressure.

**Reuse**
The process of cleaning and sterilizing dialyzers to use again. Strict reuse regulations have been established by the Federal Government to insure patient safety and quality of treatment. Only the same patient reuses a dialyzer.

**Reuse Technician**
An individual who performs the procedures necessary to clean and properly prepare dialyzers to be used again.

**Rinse back**
The process of using saline to flush the patient’s blood back into the body from the dialysis tubing after dialysis.
Saline
A salt solution containing sodium and chloride.

**Self-dialysis**
*Dialysis* performed with little or no staff assistance (except in emergencies) by an ESRD patient who has completed an appropriate course of training.

**Self-Cannulation**

**Semipermeable Membrane**
A material through which only certain particles may pass, and to which other particles cannot pass.

**Staff-assisted dialysis**
*Dialysis* performed by the staff of the renal dialysis center or facility.

**Sepsis**
An infection in the blood caused by bacteria.

**Shunt**
Another word for fistula or graft.

**Sodium**
One of the major chemical salts of the body. Found and taken into the body most commonly as table salt. When excess amounts cannot be excreted from the body by the kidneys, edema and high blood pressure may result. The intake of this salt must be controlled by diet in patients with most types of renal failure.
Sodium Modeling
Sodium modeling means to adjust the concentration of sodium in the dialysate to fit the individual patient, according to the doctor’s orders. Sodium modeling may make the dialysis treatment more comfortable by reducing some symptoms such as cramping. It may also reduce drops in the blood pressure.

Solute
A substance dissolved in another substance (i.e., salt water).

Steal Syndrome
Occurs when a fistula or graft “steals” too much blood away from the distal (farthest from center of body) part of the arm, usually the hand.

Stenosis
The narrowing (getting smaller) of a blood vessel which can lead to clotting of the vessel.

Sterile
Being completely free from all germs.

Subclavian/Subclavian Vein
Means "beneath the clavicle." The clavicle is the collarbone, a bone in the shoulder. The subclavian vein is the large vein behind the collarbone, which is sometimes used for hemodialysis.

Subclavian Catheter
A catheter placed in the subclavian vein.
Subcutaneous Vascular Access (LifeSite®)
A small metallic device or devices placed under the skin, usually in the upper chest area, to deliver hemodialysis. These devices are connected to the hollow flexible catheters, which are connected to large veins in the central venous system. The entire system is completely under the skin.

Suture
The material used to surgically close a wound or join tissues.

Systolic
The top blood pressure number that measures the force of contraction of the heart muscle as blood is pumped out of the heart chambers.
**Target Weight**
See *Dry Weight*.

**Tenckhoff catheter**
A type of *catheter* used in *peritoneal dialysis*.

**Thrill**
The buzzing sensation that can be felt by touching a *fistula* or *graft*. This indicates that the *access* is working.

**Thrombus**
A clot formed in a blood vessel.

**Tissue Typing**
A laboratory test done on your blood to find the degree of matching between a potential donated *kidney* and the patient waiting for *transplant*.

**Toxins**
Waste products that accumulate in the blood of *ESRD* patients. These are usually harmful to the body.

**Transfer Set**
The section of tubing attached immediately to a *peritoneal catheter*.
Transient Patients
Patients who receive dialysis treatment for a short length of time at a different facility than where they regularly dialyze (i.e. traveling patients).

Transplant
The replacement of a diseased organ with a healthy one.

Transplant Coordinator
The nurse who works with the transplant surgeon and the dialysis team to coordinate testing before transplant and to coordinate the patient’s care after transplant.

Transplant Surgeon
The doctor responsible for placing the transplanted kidney.

Trendelenburg position
A body position in which the head is placed at 45 degrees with the legs up (feet above the head). This position helps when a person has hypotension.

Tunneled Cuffed Catheter
A dialysis catheter that is inserted into a blood vessel through a tunnel created under the patient’s skin. Inside the tunnel tract, surrounding tissue grows into an attached cuff to help stabilize the catheter and provide a physical barrier to bacteria.
Twenty-Four Hour Urine Collection
The volume of the total amount of a person’s urine for a 24-hour period.

**Type I Diabetes Mellitus**
This type of diabetes usually occurs at a young age, and results from a lack of insulin production by the body and requires insulin therapy.

**Type II Diabetes Mellitus**
Non-Insulin dependent diabetes. Usually occurring in adults. See *Non-Insulin Dependent Diabetes*. 
Ultrafiltration
The process of removing excess water from the blood during dialysis.

Ultrasound
A technique that bounces safe, painless sound waves off organs to create an image of their structure.

United Network for Organ Sharing (UNOS)
A nonprofit charitable organization that maintains the nation’s organ transplant waiting list under contract with the Health Resources and Services Administration of the U.S. Department of Health and Human Services.

United States Renal Data System (USRDS)
A national data system, which collects, analyzes, and distributes information about End Stage Renal Disease (ESRD) in the United States. The USRDS is funded directly by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) in conjunction with the Centers for Medicare & Medicaid Services (CMS).

Urea
A waste product found in the blood and caused by the normal breakdown of protein in the body. Urea is normally removed from the blood by the kidneys and then excreted in the urine.

Uremia or Uremic Syndrome
Changes in the body caused by the build-up of waste products in the blood when the kidneys fail to function.
**Ureter**
One of the two tubes that carry urine from the kidney to the bladder.

**Urethra**
The tube that carries urine from the bladder to the outside of the body.

**Urinalysis**
A test of a urine sample that can reveal many problems of the urinary system and other body systems.

**Urinary Tract**
The system that takes wastes from the blood and carries them out of the body in the form of urine. The urinary tract includes the kidneys, renal pelvises, ureters, bladder, and urethra.

**Urinate**
To release urine from the bladder to the outside.

**Urine**
Liquid waste product filtered from the blood by the kidneys, stored in the bladder, and expelled from the body through the urethra by the act of voiding or urinating.

**Urologist**
A surgical doctor that treats diseases of the urinary tract and urogenital system.

**URR (Urea Reduction Ratio)**
A blood test that compares the amount of blood urea nitrogen (BUN) before and after dialysis to measure the effectiveness of the dialysis prescription.
**Vascular Access**
See *Access*.

**Vasculitis**
Inflammation of the blood vessel walls.

**Vein**
A blood vessel that carries blood toward the heart.

**Venous Line**
The tube carrying the blood back into the body from the artificial *kidney* machine.

**Vital Signs**
*Blood pressure*, temperature, pulse, and respiratory rate.

**Vocational Rehabilitation (VR)**
The process of facilitating an individual in the choice of, or return to, a suitable vocation. When necessary, assisting the patient to obtain training for such a vocation. Vocational rehabilitation can also mean preparing an individual regardless of age, or physical condition to cope emotionally, psychologically, and physically with changing circumstances in life, including remaining at school, work, or a work equivalent (homemaker).

**Void**
To *urinate* or empty the *bladder*.