GLOBAL DIALYSIS™

Dialysis Glossary updated 6/10/2010

Here are definitions of commonly used words in the dialysis world. Please let us know if anything is missing or you think something needs amending and with your help we can make this as comprehensive as possible. Check back regularly – we are adding to this all the time!

Automated Peritoneal Dialysis (APD) - also referred to as Continuous Cycling Peritoneal Dialysis (CCPD):
Automated or Continuous Peritoneal Dialysis happens inside your body, using your peritoneal membrane as a filter. A machine performs the peritoneal dialysis solution exchanges in regular cycles.

Abdomen This is your belly, containing all of your structures between your chest and pelvis. Your abdomen is separated from your chest by your diaphragm, which is a powerful muscle below your lungs.

Access The point on the body where a needle or catheter is inserted

Acute renal failure Sudden and temporary loss of kidney function.

Adequacy This is used to indicate how well your dialysis is working. To measure adequacy, tests are carried out to see if enough fluid and waste products are being removed from your blood.

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

Amyloidosis A condition in which a protein-like material builds up in one or more organs. This material cannot be broken down and interferes with the normal function of that organ. People who have been on dialysis for several years often develop amyloidosis because the artificial membranes used in dialysis fail to filter the protein-like material out of the blood.

Anemia This is where you have too few red blood cells. Healthy red blood cells carry oxygen throughout the body. If the blood is low on red blood cells, the body does not get enough oxygen. People with anemia may be tired and pale and may feel their heartbeat change. Anemia is common in people with chronic kidney disease or those on dialysis.

Anuria A condition where a person stops making urine.

Anti-Inflammatory drugs are medications used to reduce inflammation.

Arterial line In haemodialysis this is the tube that takes blood from the artery to the dialyser.

Arteriovenous (AV) Fistula is a surgical connection of an artery directly to a vein, usually in the forearm, created in patients who plan to perform hemodialysis. The AV fistula causes the vein to grow thicker, allowing for the repeated needle insertions required in hemodialysis.

Artery A blood vessel that carries blood high in oxygen content away from the heart around your body. Blood in arteries is usually full of oxygen and the haemoglobin in your red blood cells is oxygenated. This oxyhaemoglobin is what makes arterial blood look bright red.

Autoimmune Disease A disease that occurs when the body's immune system mistakenly attacks the body itself.

Azotemia A higher than normal blood level of urea or other nitrogen containing compounds in the blood. The test is the serum BUN (blood urea nitrogen) level. This is usually caused by the inability of your kidney to excrete these compounds.

Biopsy A procedure to remove a tiny piece of body tissue to examine under the microscope

Bladder Balloon shaped organ in the pelvis that holds your urine.

Blood Glucose Glucose is a type of sugar. A blood test can show the level of blood glucose. Some people who have diabetes need medication to help control their blood glucose. Others may be controlled with diet alone.

Blood pressure The blood pressure is the pressure of your blood in your arteries. It is produced by the contraction of your heart muscle and it's measurement is recorded by two numbers. The first (systolic pressure) is measured after the heart contracts and is highest. The second (diastolic pressure) is measured before the heart contracts and lowest. A blood pressure cuff is used to measure the pressure.

Blood urea nitrogen Abbreviated BUN. A measure of the urea level in your blood. Urea is cleared by the kidney. Diseases that compromise the function of the kidney frequently lead to an increased BUN.

Calcium A mineral found mainly in the bones, where it is stored. Calcium is essential for healthy bones. It is important for muscle contraction, heart action, your nervous system, and blood clotting. Food sources of calcium include dairy foods, leafy green vegetables, canned salmon, oysters, calcium-fortified foods, and tofu. Recommended intake of calcium is 1,200 milligrams a day (four glasses of milk) for men and women 51 and older, 1,000 milligrams a day for adults 19- 50, and 1,300 milligrams a day for children 9 - 18. The upper limit for calcium intake is 2.5 grams daily.

Catheter A thin, flexible tube. For example, a catheter placed in a vein provides a pathway for giving drugs, nutrients, fluids, or blood products. Samples of blood can

also be withdrawn through the catheter. Catheters may be inserted into your bladder to drain urine at certain times – if you are making any.

Chronic kidney disease Slow and progressive loss of kidney function over several years, often resulting in permanent kidney failure. People with permanent kidney failure need dialysis or transplantation to replace the work of the kidneys.

Collarbone A flat, slender bone joining the breast bone to the shoulder blade.

Continuous ambulatory peritoneal dialysis (CPD) The most common type of peritoneal dialysis needing no machine. With CAPD the blood is always being cleaned. The dialysis solution passes from a plastic bag through a catheter, into the abdomen. The solution stays in the abdomen with the catheter sealed. After a few hours the fluid is drained out of the abdomen into a disposal bag. The person refills the abdomen with fresh solution to begin the cleansing process again.

Continuous cycling peritoneal dialysis (CCPD) A form of peritoneal dialysis that uses a machine. This machine automatically fills and drains the dialysis solution from the abdomen. A typical CCPD schedule involves three to five exchanges during the night while the person sleeps. During the day, the person using CCPD performs one exchange with a dwell time that lasts the entire day.

Creatinine A chemical waste product generated from muscle metabolism. Creatinine is produced from creatinine, a molecule of major importance for energy production in muscles. Approximately 2% of the body's creatinine is converted to creatinine every day. Creatinine is transported through the bloodstream to the kidneys. The kidneys filter out most of the creatinine and dispose of it in the urine.

Creatinine clearance A test to measure ho w efficiently the kidneys remove creatinine and other waste from the blood. Low creatinine clearance indicates reduced kidney function.

Cross-matching Before a transplant or blood transfusion, the donor’s blood is tested with the recipient’s blood to see whether they are compatible

Cycler A machine that performs Peritoneal Dialysis (PD) solution exchanges in regular cycles.

Cystitis A type of infection that causes inflammation of the bladder.

Cysts Small sacs that form in the body that contain gas, fluids, or partly solid material. Cysts are not normal; the body does not need them to function.

Diabetes mellitus A condition characterized by high blood glucose (sugar) resulting from the body’s inability to use glucose efficiently. Insulin normally helps the body’s

cells use glucose. In type 1 diabetes, the pancreas makes little or no insulin; in type 2 diabetes, the body is resistant to the effects of available insulin.

Dialyzer A part of the haemodialysis machine. The dialyzer has two sections separated by a membrane. One section holds dialysis solution. The other holds the patient's blood.

Dialysis The process of cleaning the blood by passing it through a special machine. Dialysis is necessary when the kidneys are not able to filter the blood. Dialysis allows patients with kidney failure a chance to live productive lives. There are two types of dialysis: haemodialysis and peritoneal dialysis. Users choose the type of long term dialysis that best matches their needs.

Dialysis Centre The Dialysis centre is a place where a team of health care professionals help someone with kidney disease.

Dialysis machine A machine that filters a patient's blood to remove excess water and waste products when the kidneys are damaged, dysfunctional, or missing. Blood is drawn through a specially created vein in the forearm, which is called an arterio-venous (AV) fistula. From the AV fistula, blood is taken to the dialysis machine through plastic tubing. The dialysis machine itself can be thought of as an artificial kidney. Inside, it consists of more plastic tubing that carries the removed blood to the dialyser, a bundle of hollow fibres that forms a semi permeable membrane for filtering out impurities. In the dialyser, blood is diffused with a saline solution called dialysate, and the dialysate is in turn diffused with blood. Once the filtration process is complete, the cleansed blood is returned to the patient. Most patients using dialysis due to kidney impairment or failure use a dialysis machine at a special dialysis clinic. Most sessions take about four hours, and typically patients visit the clinic one to three times per week.

Dialysis Nurse If you are on dialysis, you may become closest to your dialysis nurse. He or she specializes in dialysis treatment. Your dialysis nurse can teach you about the advantages and disadvantages of different kinds of dialysis. Dialysis nurses also help train people to do dialysis themselves.

Dialysis solution A cleansing liquid used in the two major forms of dialysis—haemodialysis and peritoneal dialysis. Dialysis solution contains dextrose (a sugar) and other chemicals similar to those in the body. Dextrose draws wastes and extra fluid from the body into the dialysis solution

Dialysis Specialists Nurses and other health care professionals who manage dialysis procedures and/or instruct patients on how to manage their own dialysis.

Dietician Someone trained in nutrition and diet planning.

Donor A person who offers blood, tissue, or an organ for transplantation. In kidney transplantation, the donor may be someone who has just died or someone who is still alive, usually a relative.

Drain A device for removing fluid from a cavity or wound. A drain is typically a tube or wick.

Dry weight The ideal weight for a person after a haemodialysis treatment. The weight at which a person's blood pressure is normal and no swelling exists because all excess fluid has been removed

Dwell time In peritoneal dialysis, the amount of time a bag of dialysis solution remains in the patient's abdominal cavity during an exchange

Dysplastic Means "having abnormal tissue development."

Edema Swelling caused by too much fluid in the body.

Electrolytes Chemicals in the body fluids that result from the breakdown of salts, including sodium, potassium, magnesium, and chloride. The kidneys control the amount of electrolytes in the body. When the kidneys fail, electrolytes get out of balance, causing potentially serious health problems. Dialysis can correct this problem

End stage renal disease (ESRD) Total and permanent kidney failure. When the kidneys fail, the body retains fluid and harmful wastes build up. A person with ESRD needs treatment to replace the work of the failed kidneys**.**

Endocrinologist A medical doctor who specializes in treating disorders of the endocrine glands, including the pancreas.

Erythropoietin A hormone made by the kidneys to help form red blood cells. Lack of this hormone may lead to anaemia.

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

Fistula An abnormal passageway in the body. The fistula may go from the body surface into a blind pouch or into an internal organ or go between two internal organs.

Fluid Allowance The amount of fluid a dialysis patient is allowed to drink each day.

Focal Segmental Glomerulosclerosis (FSGS) A type of glomerulonephritis that results from scarring in parts of the glomerulus (the filter of the kidney).

Glomerulonephritis Inflammation of the glomeruli. Most often, it is caused by an autoimmune disease, but it can also result from infection.

Glomerulosclerosis Scarring of the glomeruli. It may result from diabetes mellitus or from deposits in parts of the glomeruli (focal segmental glomerulosclerosis). The most common signs of glomerulosclerosis are proteinuria and kidney failure.

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

Graft In haemodialysis, 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

Haematocrit A measure that tells what portion of a blood sample consists of red blood cells. Low haematocrit suggests anaemia or massive blood loss.

Haematuria A condition in which urine contains blood or red blood cells.

Haemoglobin The substance in red blood cells that carries oxygen around the body.

Heart The muscle that pumps blood received from veins into arteries throughout the body. It is in your chest behind your sternum; in front of the trachea, oesophagus, and aorta; and above the diaphragm muscle that separates the chest and abdominal cavities. The normal heart is about the size of a closed fist, and weighs about 10.5 ounces. It is cone-shaped, with the point of the cone pointing down to the left. Two-thirds of the heart lies in the left side of the chest with the balance in the right chest.

Haemodialysis A medical procedure that uses a special machine (a dialysis machine) to filter waste products from the blood and to restore normal constituents to it. This shuffling of multiple substances is accomplished by virtue of the differences in the rates of their diffusion through a semi permeable membrane (a dialysis membrane).

Hormone A natural chemical produced in one part of the body and released into the blood to trigger or regulate particular functions of the body. Among the hormones the kidney releases are erythropoietin and an active form of vitamin D that helps regulate calcium for bones.

Hypertension High blood pressure, which can be caused either by too much fluid in the blood vessels or by narrowing of the blood vessels.

Ideal Weight The ideal weight for a person after a dialysis treatment. The weight at which a person's blood pressure is normal and no swelling exists because all excess fluid has been removed.

Infection The growth of a parasitic organism within the body. (A parasitic organism is one that lives on or in another organism and draws its nourishment therefrom.) A

person with an infection has another organism (a "germ") growing within him, drawing its nourishment from the person.

Immune The body's system for protecting itself from viruses and bacteria or any "foreign" substances.

Immunosuppressant A drug given to suppress the natural responses of the body's immune system. Immunosuppressants are given to transplant patients to prevent organ rejection and to patients with autoimmune diseases like lupus.

Interstitial nephritis Inflammation of the kidney cells that are not part of the fluid-collecting units, a condition that can lead to acute renal failure or chronic kidney disease.

Intravenous pyelogram An x ray of the urinary tract. A dye is injected to make the kidneys, ureters, and bladder visible on the x-ray and show any blockage in the urinary tract.

Kidney One of a pair of organs located in the right and left side of the abdomen which clear "poisons" from the blood, regulate acid concentration and maintain water balance in the body by excreting urine. The kidneys are part of the urinary tract. The urine then passes through connecting tubes called "ureters" into the bladder. The bladder stores the urine until it is released during urination.

Membrane A very thin layer of tissue that covers a surface.

Nitrogen Element number 7, a colourless, odourless, tasteless gas that is biologically important. Nitrogen is a constituent of protein and nucleic acids and is present in all living cells. Nitrogen does not support respiration and is fatal if breathed alone, because of the lack of oxygen. Nitrogen is soluble in the blood and body fluids and, when released as bubbles of gas, can have serious or even fatal consequences.

Peritoneal Having to do with the peritoneum.

Peritoneal dialysis Technique that uses the patient's own body tissues inside of the belly (abdominal cavity) to act as a filter. The intestines lie in the abdominal cavity, the space between the abdominal wall and the spine. A plastic tube called a "dialysis catheter" is placed through the abdominal wall into the abdominal cavity. A special fluid is then flushed into the abdominal cavity and washes around the intestines. The intestinal walls act as a filter between this fluid and the blood stream. By using different types of solutions, waste products and excess water can be removed from the body through this process.

Phosphorus An essential element in the diet and a major component of bone. Phosphorus is also found in the blood, muscles, nerves, and teeth. It is a component of adenosine triphosphate (ATP), the primary energy source in the body.

Urea A nitrogen-containing substance normally cleared from the blood by the kidney into the urine. Diseases that compromise the function of the kidney often lead to increased blood levels of urea, as measured by the blood urea nitrogen (BUN) test.

Uraemia The presence of excessive amounts of urea in the blood, which may be a sign of kidney disease or failure.

Urine Liquid waste. The urine is a clear, transparent fluid. It normally has an amber colour. The average amount of urine excreted in 24 hours is from 40 to 60 ounces (about 1,200 cubic cm). Chemically, the urine is mainly an aqueous (watery) solution of salt (sodium chloride) and substances called urea and uric acid. Normally, it contains about 960 parts of water to 40 parts of solid matter. Abnormally, it may contain sugar (in diabetes), albumen (a protein) (as in some forms of kidney disease), bile pigments (as in jaundice), or abnormal quantities of one or another of its normal components.

Vascular access A general term to describe the area on the body where blood is drawn for circulation through a haemodialysis circuit. A vascular access may be an arteriovenous fistula, a graft, or a catheter.

Vein A blood vessel that carries blood low in oxygen content from the body back to the heart. The deoxygenated form of haemoglobin (deoxyhemoglobin) in venous blood makes it appear dark. Veins are part of the afferent wing of the circulatory system which returns blood to the heart.