Treatment for ESRD

Treatment for patients who have been diagnosed with renal failure or end stage renal disease often include renal replacement therapy, which is also known as dialysis, to take over the function of their kidneys which are no longer working properly.

Types of Dialysis Available

Hemodialysis is a process used to remove waste products and fluids from the body. This process replaces some of the functions of the kidney. It is done in an outpatient clinic for 4-5 hours at a time three times per week.

It is necessary to have an access inserted surgically in order to begin hemodialysis treatments. The access is called a fistula or graft and is normally inserted into the arm. For a fistula, the vein and artery are connected together which causes the vein to become larger, eventually becoming like another artery. It takes a process of about 2-3 months for the vein to "mature" or become large enough to use for the treatment. A fistula is the preferred access as it uses the patient's own vessels without any artificial material and it will last longer. A graft also connects the artery to the vein but with artificial material. This access requires a healing period of only about 3-4 weeks.

Both of these accesses allow the placement of two needles which are connected to the dialysis machine Through these needles, blood is removed from the patient, goes through the machine and through a filter, and is then returned to the patient.

The other type of renal replacement therapy is peritoneal dialysis which is done at home by the patient or a family member. The access used for this type of dialysis is a catheter which is surgically inserted into the patient's abdomen. A period of approximately 6 weeks is needed for healing. With this type of dialysis, the abdominal cavity is filled with a solution which stays in the abdomen for about 4 hours. This procedure is done 4-5 times per day. The solution is made up of glucose and electrolytes and pulls waste products, excess electrolytes, and fluid out of the patient's blood. This must be done as a sterile procedure in order to avoid an infection. Patients participate in a training period for approximately 1-2 weeks to learn how to perform the dialysis procedure.