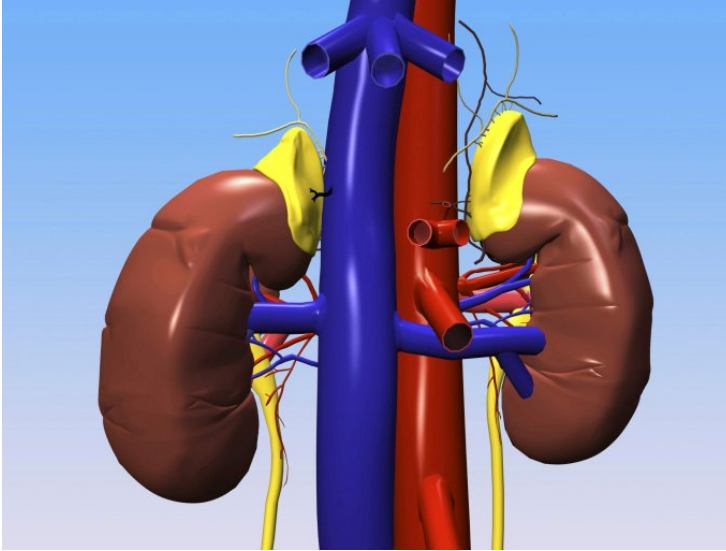


END-STAGE RENAL DISEASE (ESRD)



When a person's kidneys stop working or work so poorly that they cannot eliminate waste products from the body, that person has end-stage renal disease. Healthy kidneys filter water and waste products from the blood. They also produce hormones that prevent osteoporosis (thinning of the bones) and that promote the production of new blood cells. When the

kidneys fail, the body cannot eliminate enough liquid and swells. Many times blood pressure goes up. The body does not produce enough red corpuscles, and this causes anemia. The accumulation of harmful wastes over time causes tiredness, itching, general malaise, nausea, vomiting, and nervous system symptoms, such as confusion, memory loss and even coma if treatment is not started. When this happens, it is necessary to do a treatment to eliminate the liquid and the waste products that were previously eliminated by the kidneys.

Treatments

Hemodialysis is one treatment that filters the blood and eliminates excess liquid and waste products. It also controls blood pressure and helps the body keep the right balance of electrolytes (chemical substances in the blood that help the cells work normally), such as potassium, sodium and chloride.

In hemodialysis, a dialyzer is used to clean the blood. The dialyzer is a type of special filter. During the treatment, the blood moves from the bloodstream toward some tubes that take it to the dialyzer. The dialyzer filters the waste products and the excess liquid. The "clean" blood flows through another group of tubes back to the body.

To perform hemodialysis, it is necessary to access the bloodstream. In some patients, an arteriovenous path is placed under the skin before beginning dialysis to be able to easily access the bloodstream. An arteriovenous path is a type of large blood vessel that detours the blood between the arterial and venous systems to avoid the normal flow through the tissues. It is easy to insert the catheter into this new large vessel during dialysis. Other patients have catheters inserted in the blood system that remain in place for a long time. These catheters are later used to access the bloodstream during dialysis.

Hemodialysis is generally performed at a specialized center. At that center, nurses or trained technicians perform the treatment. Hemodialysis is generally done three times a week. Each treatment takes 2 to 4 hours.

The symptoms may be due to rapid changes in the balance of liquids and chemical substances in the body during treatment. Muscle cramps and hypotension (low blood pressure) may make you feel weak, dizzy or give you an upset stomach.

Adapting to hemodialysis may take several months. You must follow a proper diet and take medication as instructed to get the maximum benefit of hemodialysis. Always inform the doctor of the symptoms you have.