



# End-Stage Renal Disease



Two types of dialysis include:

► **Hemodialysis:** in this therapy, blood will be sent through a tube to a machine that cleans it by removing the wastes and extra fluid that the kidneys would normally remove.

► **Peritoneal dialysis:** in this therapy, some fluid is put into the abdomen. This fluid will absorb the chemicals, other waste, and extra fluid that the kidneys usually remove.

In the kidney transplant, the failed kidneys are replaced with new ones.

## ► Diet Therapy In End-Stage Renal Disease ◀

► **Sodium and Potassium Balance:** ESRD patients should avoid foods high in sodium. Hypertension in dialysis patients is largely attributed to positive sodium balance and volume expansion. While many patients on dialysis can effectively control blood pressure without drugs on a low-sodium (2 g) diet and a low-sodium (130 mmol) dialysate. Potassium builds up in the body when kidney function declines. Patients should Avoid the highest potassium foods and track the potassium level by getting regular blood tests.

High potassium foods:

- Banana
- Legumes
- Nut and seeds
- Potatoes
- Oranges
- Tomato products




► **Fluid Restriction:** It is essential that ESRD patients restrict their fluid intake. The typical fluid allowance for patients on dialysis is 700-1000 ml/ d plus urine output.

► **Phosphorus:** Management of hyperphosphatemia and renal osteodystrophy has improved with phosphate binders. Certain factors continue to confound adequate control of phosphorus levels. These include covert phosphate intake from processed foods, treatment with high doses of vitamin D analogues, and the high protein needs of ESRD patients. patients on hemodialysis should include an abundance of foods of plant origin and avoid processed food. High phosphorus foods:

- Cheese
- Chocolate
- Nuts and seeds
- Milk and yogurt


Dialysis patients should follow a diet with low saturated fat and cholesterol.



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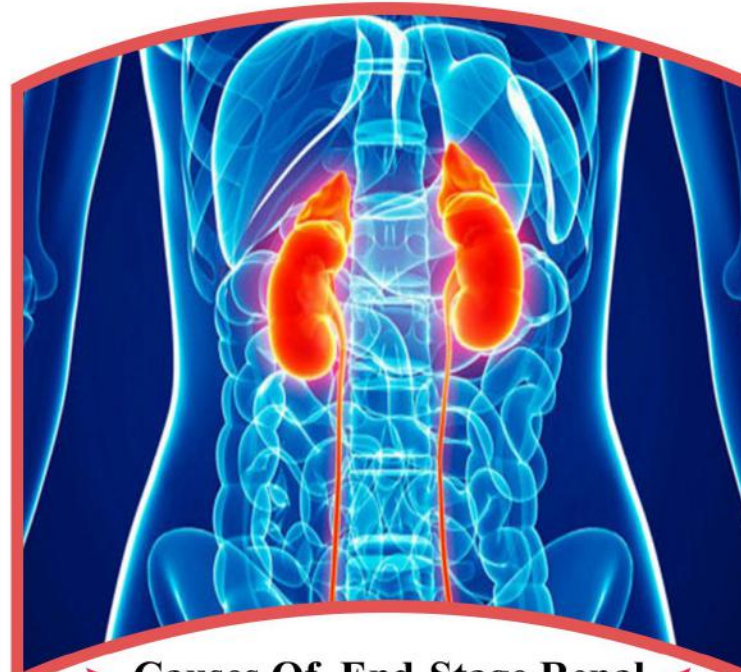
When fluid is not removed from the body, tissues will swell and lead to a condition called edema. Excess fluid in the bloodstream can also increase blood pressure. Kidneys with ESRD can't regulate the levels of electrolytes. Excessive potassium can cause an abnormal heart rhythm.

### ► End-Stage Renal Disease ◀ Definition

End-Stage Renal Disease is the last stage of chronic kidney disease, where kidney function has declined to the point that the kidneys can no longer function on their own. In end-stage renal disease, the kidneys function below 15 percent of their normal ability. Chronic kidney disease typically doesn't reach the end stage until 10 to 20 years after a patient is diagnosed.

### ► End-Stage Renal Disease ◀ Symptoms

Kidneys with ESRD have a very poor function and because of this, waste and fluid buildup in the body to unhealthy levels. Accumulated waste in the bloodstream can make people feel sick. This is a condition called uremia.



### ► Causes Of End-Stage Renal Disease ◀

3 Diabetes is the most common cause of ESRD.

The other causes of end-stage renal disease are:

- High blood pressure
- Autoimmune diseases
- Genetic diseases
- Nephrotic syndrome
- Urinary tract problems

### ► End-Stage Renal Disease ◀ Treatment

There are only two treatments for ESRD:

- Dialysis
- kidney transplant

Hemodialysis is the most common treatment.