

## ACUTE RENAL FAILURE

Acute renal failure is a clinical syndrome in which there is rapid reduction of the excretory functions of the kidney.

If immediate action is taken derangement caused due to renal failure can be reversed.

### CAUSES

- 1) Reduced circulatory blood volume - haemorrhage, dehydration and severe decrease in protein levels in blood.
- 2) Cardiac failure.
- 3) Acute gastroenteritis.
- 4) In shock due to septicaemia or anaphylaxis.
- 5) Thrombosis / embolism in renal arteries or aortic dissections.
- 6) Accelerated hypertension.
- 7) Blood poisoning during pregnancy - from toxins formed by bacteria growing in local area of infection.
- 8) Disseminated intravascular coagulation.
- 9) Glomerulonephritis.
- 10) Acute tubular nephritis.
- 11) Certain drugs which are toxic to the kidney e.g. aminoglycosides, lithium etc.
- 12) Mismatched blood transfusion.
- 13) Virulent malaria.
- 14) Blockage of one ureter when other kidney is absent or non-functioning, usually due to calculi.
- 15) Neurogenic bladder.
- 16) Blockage of the urinary bladder neck, urethral stricture.

### DIETARY MANAGEMENT

Dietary changes are made to correct the fluid and electrolyte imbalance and to maintain proper nutritional status so as to minimize protein catabolism and uraemia. But these dietary changes should be done under guidance of a professional dietician.

### AVOID

- 1) Avoid potassium rich food, as in renal failure potassium excretion is decreased, hence serum potassium level are high which can have deleterious effects on heart.
- 2) Foods rich in potassium and to be avoided are restrict potassium intake to 1,000 mg per day.
- 3) Minimize or avoid protein - (0.5-0.6 gm per kg body weight) if you are not on dialysis and blood urea and nitrogen is increasing.
- 4) Avoid high sodium diet - Restrict Sodium intake to 500-1,000 mg per day.
- 5) Avoid phosphorus in diet, in renal disease phosphorus levels increase, which cause blood calcium levels to decrease and can lead to bone loss.

### CONSUME

- a. Fluid intake is regulated on basis of urinary output, other water loss from vomiting or diarrhoea. Total fluid intake should not exceed - 500 ml + previous day's urine output + total water loss from vomiting or diarrhoea or any other causes.
- b. You should consume a minimum of 600-1,000 kcal.
- c. Generally 35-50 kilocalories per kg body weight should be consumed to maintain positive nitrogen balance.
- d. Have high calorie diet. Increase intakes of fats and carbohydrates.
- e. Reduce intake of proteins - (40 gm per day / 1.0-1.5 gm per kg body weight) if you are on dialysis or hemodialysis.
- f. Consume at least 100 gms of carbohydrate per day, it minimizes tissue protein breakdown.
- g. If on nasogastric tube feeding administer 700 ml of 15 % glucose.

- h. Sodium intake is based on measurements of sodium ions in serum and urine. If you are not on dialysis you should restrict sodium intake.
- i. Restrict Sodium intake to 500-1,000 mg per day.
- j. If you are on dialysis sodium can be consumed in accordance with the serum levels of sodium ion.
- k. In the recovery phase, urine output is increased and a return of the ability to eliminate wastes. Gradually you can increase intake of protein, potassium, phosphorus and sodium. Fluid and electrolyte balance should be monitored and dietary changes should be done accordingly. It will take at least six months to come back to normal routine diet.
- l. During kidney disease body's need for certain vitamins and minerals changes. Normally in healthy condition we get adequate amount of vitamins and minerals from our regular diet, but as in kidney disease diet limits certain food groups, hence one needs to take certain vitamin and mineral supplements. Take these supplements under the guidance of your physician.
- m. Vitamin C supplements, helps to increase immunity and combat the infection.
- n. Vitamin B complex, certain B vitamins like B6, B12 and folic acid along with iron and EPO (erythropoietin, given in renal failure to avoid anaemia) and iron prevents anaemia. Other B vitamins like - thiamine, riboflavin, pantothenic acid and niacin helps to convert food into energy.
- o. Iron supplements can be taken, but consult your physician.
- p. You can also take calcium supplements; it binds the phosphorus from food and serves to provide extra calcium that your body needs. Along with calcium you can take vitamin D supplements, helps to keep bones healthy.
- q. Consume 2 table spoon of fresh flax seed oil, reduces / slows the process of further renal damage.

### **CONSULT PHYSICIAN**

- a. Consult physician immediately if any of the above sign and symptoms appear, as timely treatment and management can reverse the changes and prevent any further damage of the kidney.
- b. Diet and water intake should be under strict medical guidance.

**NOTE : PLEASE CONTACT WITH YOUR DOCTOR FOR EXACT DIET FOR THE HEALTH PRBLEMS YOU HAVE.THIS A SAMPLE DIET CHART TO GET THE IDEA OF YOUR DAILY ROUTINE FOOD INTAKE TO MAKE YOUR LIFE HEALTHY .**