Dietary Management in Chronic Kidney Disease

"Whosoever was the father of disease, an ill-diet is its mother"

The major objective of dietary treatment is:-

- To prevent protein catabolism and minimise toxicity due to uremia
- To avoid dehydration or over hydration
- To correct acidosis
- To correct electrolyte depletion and avoid excesses
- To maintain optimal nutritional status
- To avoid complications such as hypertension, bone pain and central nervous system abnormalities
- To retard progression of renal failure

Dietary therapy for Chronic Kidney Disease (CKD) involves variable nutrient adjustments primarily in protein, sodium, potassium, phosphate and water, according to individual needs.

Protein:

Protein intake should be sufficient to prevent tissue protein catabolism. At the same time it should not be too much in excess so as to lead to uremia. Protein provided should be of high biological value.

Protein rich foods that could be incorporated in the diet are–

- Pulses
- Soyabean
- Milk and milk products
- Chicken
- Fish
- Eggs or egg whites

Some of the protein rich foods may also contain a lot of phosphorus, which needs to be controlled. Hence, with the advice of the dietician the right amount of each protein source can be planned for good health and strength.

Sodium:

- Depending on the degree of sodium restriction, all food should be prepared & served without addition of salt, baking soda, baking powder or MSG (mono sodium glutamate or ajinomoto). Reduce the amount of salt in all recipes. Gradually cut back on the use of saltshaker.
- Carefully read labels of all prepared foods. Look not only for salt but also for bicarbonates of soda (baking soda), baking powder, MSG (ajinomoto), sodium compounds such as sodium benzoate, sodium citrate etc.
- Avoid medicines, laxatives & salt substitutes (eg: LoNa, rock salt) unless prescribed by the doctor.

Foods to avoid

- Commercial foods made up of milk, condensed milk, ice-cream, milk shakes.
- Natural sodium content of animal foods is high & hence meat, fish, chicken, eggs, milk, cheese & paneer should be used in restricted amounts. Organ meats (kidney, liver, brain) also contain more sodium than muscle meat & hence they are best avoided. Shell-fish (crab, lobster, oyster & shrimp) are also high in sodium. Salt water fish contains no more sodium than fresh water fish.
- Avoid use of canned fruits, dry fruits like raisins & canned vegetables. Spinach, carrots, Beetroot, & white Turnip contain good amount of sodium.
- Commercially baked products like bread, bread rolls, croissants, brioche, biscuits, cakes, pizzas, pastries etc. should be avoided.
- Unsalted butter or white butter prepared at home should be used instead of regular market butter.
- Soft drinks & prepared beverage mixes including fruit flavored powders.
- Eating snack foods outside like bhel, pani-puri, samosa, ragda-pattice, dahiwadas, chana- bhatura, burgers, popcorn, wafers, papad, medu-wada etc.
- Seasoning to avoid includes all types of sauces, pickles.

Foods low in sodium

Cereals, fruits, most vegetables, sugar, oil, cream, unsalted butter & margarine.

Tips:

Try using fresh or dried herbs and spices instead of salt to enhance the flavor of food. Also using souring agents like lime, kokum, tamarind, vinegar etc. helps impart flavor to food low in salt.

Potassium:

All natural foods (except pure fats and sugars) contain potassium. Careful measurement of all potassium rich foods is important in controlling the level of potassium in blood.

High potassium foods that need to be avoided are-

- All fruits are rich sources of potassium, however, apple, papaya, guava, pear, pineapple and orange have comparatively less potassium and could be advised.
- Pure fruit juices (fresh/canned), lime juice cordial.
- Coconut, coconut water, groundnuts
- Raw vegetables and soups
- Dals and legumes
- Cocoa and all cocoa products
- Aerated drinks (soft drinks)
- Dry fruits
- Malted drinks like bournvita, horlicks, beer, drinking chocolate etc.
- Salt substitutes (eg. LoNa)

To lower potassium content of food:

- Peel, cut and soak vegetables in water for sometime. Rinse them and boil them in large volume of water. In this way the potassium is leached into the water. This water should be discarded and vegetables cooked as required.
- Do not use a pressure cooker or microwave for cooking vegetables and fruits.

Phosphate:

Phosphorus is a mineral found in all foods. Large amounts of phosphorus are found in,

- Dairy products such as milk, cheese, yoghurt etc.
- Shellfish, seafood, meat, poultry, eggs
- Nuts & oilseeds
- Dried beans and peas such as kidney beans, split beans and lentils
- Beverages such as cocoa, beer and dark cola drinks

To keep blood phosphorus at safe levels, phosphorus rich foods should be limited and phosphate binders should be used with meals.

Water:

- Avoid salty foods, as these increase thirst
- If the mouth gets dry , chewing gum or sucking on some hard candies can be tried
- Small cups should be used for drinking.
- If possible medications should be taken with meals to avoid taking extra water after meals
- Drinking in small sips helps drinking less water

Energy giving foods:

When protein, sodium and potassium are restricted , there are some foods that can be eaten which provide sufficient energy despite being low in sodium and potassium.

These include-

- Sugar
- Honey
- Arrowroot
- Sago (sabudana)
- Sweets made from cereals like rice, suji, savia, sago etc.
- Unsalted butter
- Vegetable oil & ghee
- Milk based sweets like ice-cream (all flavors except chocolate or cocoa and ones with dry fruits or fruit pieces), pudding, halwa etc.
- Rice products (poha, kurmura, sevia)
- Corn

Priya Mendon
Dietician