

Diet guidelines for PROTECTING THE KIDNEY



What is the Kidney function?

In the human body there are two kidneys. Their main function is to filter waste products from the blood, and pass them out through urine. These wastes mainly come from the food we eat and fluids we drink. When there is renal dysfunction the filtration capacity decreases and the waste which normally passes out through urine will stay in the blood.

Dietary management

Planning a proper diet program can help in reducing the load, complications and the deterioration that may affect the kidneys (like renal failure), so some changes should be done regarding:

- 1. Energy:** taking adequate energy helps in preventing muscles wasting and maintains optimal weight; this energy can be taken from simple or complex carbohydrates like sugar, jelly, honey, jam, sweets, corn flour, bread, pasta, fruits and vegetables. If the patient is diabetic he / she has to adjust his / her meals regarding these needs, ask your dietician).
- 2. Proteins:** protein is very important for building and repairing body tissues. The waste product called urea is derived from protein, so taking too much proteins can increase the blood urea and too little intake of protein can cause muscle wasting, so balancing the protein intake is very important in renal diseases (around 60 gm/day) and this amount of protein intake depends on the patient's case and degree of renal insufficiency.

You can get the protein from two sources:

- **Animal sources** (high biological value): egg, meat, fish, and sea food, poultry like chicken, cheese, milk and milk products.
 - **Plant sources** (low biological value): legumes like peas, beans, lentils, chickpeas (which are also source of complex carbohydrates).
- 3. Fluids:** should be restricted and decrease in care of edema and low urine out put (depend on the patient condition) these fluids can be: water (preferable), juices, tea, coffee, ice cube.

Some minerals should be restricted depending on condition of the patients like:

- 1. Sodium salt:** high intake of sodium in the diet will increase the blood pressure and lead to water retention. To control the sodium intake:
 - Restrict the use of table salt because it is the main source of sodium and use instead lemon, vinegar or spices.
 - Avoid high salty food like: olives, pickles, nuts, chips, wheat, liver, oyster, Spanish, etc.
 - Use fresh or frozen food rather than canned foods.
- 2. Phosphorus:** high intake of it will lead to more deterioration of the kidney function and bone fatigue, the ratio of calcium to phosphorus should be stable rather by medication or controlling high phosphorus food sources like: milk and milk products, avocado, figs, kiwi, chicken, egg, etc.
- 3. Potassium:** high intake will cause muscles weakness mainly heart muscle, potassium can be found in: banana, orange, grapes, tomato, okra, dates, oatmeal, kiwi, potato, carrot, Spanish and cucumber.

Kidney stones

There are many types of kidney stones and each type has a special diet program depending on the content and the type of stone:

- In case of **oxalic acid stone** we advise the patients to follow these instructions:
 - Drink plenty of fluids especially water, at least 8 - 10 cups a day.
 - Avoid take highly oxalic food sources like: Spanish, rhubarb, strawberries, chocolate, cocoa, beet, pecans, wheat germ, peanuts, okra, and tea.
 - Take calcium food sources like dairy products in moderation because calcium combines the oxalic acid in the formation of the stone, but the calcium intake should be slightly higher than the oxalic intake to treat the stone.
- In case of **uric acid stone** we advise the patients to follow these instructions:
 - Drink plenty of fluids especially water, at least 8 - 10 cups a day.
 - Reduce the protein intake and restrict the high uric acid food sources like: meat, liver, brain, kidney, sardine, shrimp, anchovies, sweetbread...
 - To do exercise and reduce weight if he / she is overweight.

Sample menu for 60 gm protein diet (the amounts and the type of food could be changed if the patient is diabetic):

BREAKFAST	2 tsp (tea spoon) of honey 2 slice toast 1 cup of milk + 2 tsp sugar (use low fat milk & sweetener low sugar if diabetic)
SNACK	1 apple or any other fruit (choose low potassium types)
LUNCH	1 cup of rice or macaroni ¼ chicken without skin or 1 medium piece of lean meat 1 cup of salad (use low potassium types) 1 table spoon of vegetable oil ½ cup of cooked vegetable
SNACK	Fruits
DINNER	30 gm of cheese or 30 gm tuna (use cheese or tuna canned in water if diabetic) 2 slice of bread or 2/3 cup of rice 1 cup of salad 2 tsp of vegetable oil
SNACK	½ cup of yoghurt (low fat if diabetic)