When renal function declines, the kidney can not remove metabolic waste and excess water and electrolytes (sodium, potassium, phosphorus ...) from the body, leading to the accumulation of a lot of waste in the body, deterioration of renal function, and occurrence of complications. Therefore, when decline in renal function, the patient should adjust and modify his/her diets.

#### 1. Modify protein intake:

Protein foods include: fish, meat, chicken, duck, eggs, milk, soybeans and soy products. If the patients with kidney disease take too much protein, deterioration of their renal function will accelerate. It is suggested that the patient takes approx. 3 - 5 " serving size" of meat per day (1= serving = 1 ounce= about the size of 3 fingers) according to his/her own situation, nutritional status, and posture and follows the recommendation of his/her nutritionist to make a diet plan.

2. Boost calories to compensate:

When protein intake is strictly controlled, the patient is prone to have inadequate calorie intake. So, he/she is suggested to have high-calorie low-protein snacks, such as lotus root powder, Taibai powder, mung bean noodles, etc. Patients without diabetes or hypertriglyceridemia problems can add sugar, rock sugar, honey into the foods for flavor, and can also fry or cook their foods with vegetable oil. (Note: Patients with hyperlipidemia need to consult their dietitian for appropriate cooking methods.)

## 3. Restrict phosphorus:

When the kidney can not remove phosphorus from the body, the patient is prone to renal osteodystrophy, vascular sclerosis, itching, and other symptoms. The best way to prevent these complications is to adjust the patient's diet.

Avoid eating phosphorus-rich foods:

- (1)Nuts: melon seed, peanuts, chestnut seeds, walnuts, sesame, cashew, almond.
- (2) Whole grain: brown rice, embryo rice, red bean, mung bean barley, yeast for whole wheat bread, cereal, broad beans, grains, barley, lotus seed.
- (3) Drinks: Coke, soda water, three-in-one coffee, canned drinks, Yakult, milk tea.
- (4) Dairy products: goat milk, milk, yogurt, cheese.

(5) Soup: gravy, chicken broth, gumbo.

- (6) Processing conditioning: Hot pot dumplings, sausages, pork ball, bacon, vegetarian food, egg tofu, ham.
- (7) Other: yeast, lecithin, chocolate, animal organs, egg yolks.

X If you need to use concentrated products such as chicken essence, clam essence, ginseng essence, etc., you need to discuss with your doctor or nutritionist.

- \* Processed meats may have added phosphates and are not recommended for consumption.
- 4. Limit potassium intake:

Renal failure will reduce the ability to excrete potassium ions. When the test reports that potassium ions are higher than normal, it is easy to cause arrhythmia; if the daily urine output is less than 1000 ml, foods with high potassium content should be restricted.

Avoid eating potassium-rich foods.

- (1) Staples: yams, taro, pumpkin, sweet potatoes, potatoes.
- (2) Vegetables: evaporate vegetables, seaweed, spinach, amaranth, straw mushrooms, leaf of sweet potato.

- (3) Fruit: dried fruits, durian, custard apple, banana, mino melon, kiwi, longan, cantaloupe, avocado, cherry tomato.
- (4) Snacks and beverages: coffee, tea, sports drinks, plum juice, chocolate, green herbal tea.
- (5) Soup: broth, vegetable soup, chicken essence, clam essence, beef essence, ginseng essence, herbs soup, energy soup.

XVegetables that are boiled first and then mixed with oil or fried can reduce potassium intake and increase enough calories.

\*Do not eat lettuce, such as lettuce salad; do not use thin-salt soy sauce and low-sodium salt.

It is forbidden for patients with kidney disease to take carambola products, such as: fresh carambola, carambola juice, dried carambola... etc., because the ingredients in carambola can cause kidney toxicity and neurotoxicity.

5. Restrict sodium intake:

Consume less the sodium-rich foods.

(1) Sauce: seasoning, salt, soy sauce with monosodium glutamate (MSG), miso, barbecue sauce, brisk chili sauce, black vinegar, tomato sauce.

- (2) Marinade: mustard , sauerkraut, dried vegetables with dried plum, dried radish, pickles, preserves.
- (3) Processed and canned foods: all kinds of canned foods, ham, sausage, pickle and bacon, foods with chicken essence, instant noodles.

X Apply seasonings only in a key moment. For example, to make braised pork balls, you do not add any seasoning into the meatballs but cook them with a little soy sauce later.

X Sodium-rich foods are generally those pickled or processed foods (see the above table). Avoid eating them or have them very carefully, so as to reduce sodium intake.

#### 6. Adjust water intake:

If your urine volume is within a normal range, you do not have to limit your water intake. If your urine output decreases, you are required to limit your water intake. When you have to restrict water intake, you can, in principle, take 500-700 ml of water plus the volume that you urinated the day before. Avoid drinking too much soup and soft drinks. Reduce the consumption of rice porridge and the like.

Consult with your dietitian if you have any questions in your dietary plan.

Please write down your question:
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### Self-Assessment (True/False)

()1.Please do not take chicken essence, clam essence, and medicated soup in the presence of poor renal function combined with hyperkalemia.

( )2.Renal patients should have restricted water intake to prevent edema.

Question Number	1	2
Answer	0	X

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# Dietary Guidance to People with Chronic Kidney Disease 慢性腎衰竭飲食方針

# 【英文版】

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