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**Dietary guide for chronic kidney disease patients
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

The main drafting organizations of this standard. Peking Union Medical College Hospital, Peking University First Hospital, Chinese People's Liberation Army General Hospital, Shanghai Huashan Hospital, Shanghai First People's Hospital, Shanghai Sixth People's Hospital, Chinese Center for Disease Control and Prevention Nutrition and Health Institute, West China Hospital of Sichuan University, South China General Hospital of Beijing Military Region, First Affiliated Hospital of China Medical University, Guangzhou Red Cross Hospital, Qilu Hospital of Shandong University.

1 Scope

This standard specifies the dietary guidelines for patients with chronic kidney disease, the recommended intake of energy and nutrients, the formulation of dietary prescriptions, and nutrition Intake monitoring and evaluation.

This standard applies to dietary guidance for patients with chronic kidney disease.

2 Terms and definitions

The following terms and definitions apply to this document.

Chronic kidney disease; CKD Renal injury or GFR confirmed by renal biopsy or detection of renal injury markers lasts less than 60 mL/(min·1.73m²) $\geq$ 3 months. Kidney damage Positive indicators of injury include abnormal blood and urine components or abnormal imaging studies.

Stage of CKD

CKD is staged according to GFR value, see Table 1.

Medical nutrition therapy; MNT Nutritional treatment measures for specific diseases under clinical conditions, including individualized nutritional assessment, diagnosis, and nutrition of patients the formulation, implementation and monitoring of treatment plans.

High quality protein Complete protein the essential amino acids contained in protein are complete, sufficient, and proportioned, such as protein from animal sources (such as milk, egg Class, meat, etc.) and soy protein.

Food exchanges based on protein Common foods are divided into different categories according to their sources and properties. Similar foods contain similar protein and energy within a certain weight.

Similar foods can be interchanged, which enriches the range of food choices.

3.1 Balanced diet

While properly limiting protein intake, ensure adequate energy intake to prevent malnutrition. Diversified choices and reasonable nutrition food.

3.2 Reasonably plan meals and energy and protein distribution

Eat regularly and quantitatively, the energy of breakfast, lunch and dinner can account for 20%-30%, 30%-35%, 30%-35% of total energy. Evenly distribute three Protein in meals. To ensure sufficient energy intake, snacks can be added between meals, accounting for 5% to 10% of the total energy.

3.3 Individualized meal plan and nutrition education

Individualized dietary arrangements and corresponding nutritional education should be carried out according to the patient's lifestyle, CKD staging, nutritional status, and economic conditions.

3.4 Food choices

3.4.1

Restrict the intake of plant protein such as rice and noodles, and use wheat starch (or other starch) as the staple. Rice, noodles, milk, eggs, various meats, soy protein and other high-quality protein foods are the main sources of protein.

source.

3.4.2

Foods that can be used include potatoes, sweet potatoes, lotus roots, water chestnuts, noodles, yam, taro, pumpkin, vermicelli, water chestnut powder and other rich foods.

Starch-containing foods replace ordinary staple foods. Low-phosphorus, low-potassium, low-protein rice and noodles can also be used to replace ordinary staple foods.

3.4.3

When the disease needs to restrict foods with high phosphorus content, animal liver, nuts, dried beans, and various processed foods containing phosphorus should be carefully selected. Wait.

3.4.4

When the disease needs to limit foods with high potassium, fruits, potatoes and their starches, green leafy vegetables, etc. should be carefully selected.

When the patient's energy intake is insufficient, some carbohydrates and vegetable oils can be added to the food to achieve the required energy.

4.3 Fat

The daily fat energy supply ratio of CKD patients is 25% to 35%, of which saturated fatty acids do not exceed 10%, and trans fatty acids do not exceed 1%. Can be appropriately mentioned. High intake of n-3 fatty acids and monounsaturated fatty acids.

4.4 Carbohydrates

Appropriately increase the intake of carbohydrates on the basis of reasonable total energy intake, and the carbohydrate energy supply ratio should be 55%-65%. Have People with abnormal glucose metabolism should limit the intake of refined sugar.

4.5 Minerals

In each stage of CKD patients, the sodium intake should be less than 2000 mg/d, the phosphorus intake should be less than 800 mg/d, and the calcium intake should not exceed 2000 mg/d.

When CKD patients develop hyperkalemia, potassium intake should be restricted. When anemia occurs, foods with high iron content should be supplemented. Other trace elements it is advisable to maintain the normal range in the blood to avoid abnormal blood electrolytes.

4.6 Vitamins

Long-term treatment of CKD patients need to be supplemented with natural vitamin D in order to improve mineral and bone metabolism disorders. You can choose to push if necessary A multi-vitamin preparation within the intake range is recommended to supplement the daily dietary deficiency and prevent vitamin deficiency.

4.7 Dietary fiber

According to the daily energy intake, the recommended dietary fiber intake is 14 g/4180 kJ (1000 kcal).

4.8 Liquid

When CKD patients have oliguria (less than 400 mL of urine per day) or have severe cardiovascular disease or edema, water intake should be appropriately restricted in order to maintain a balance of input and output.

5 Formulation of dietary prescriptions for patients with chronic kidney disease

Using the five-step method, calculate the total daily energy and protein requirements of the patient based on the patient's height, weight, activity intensity, CKD staging, etc.

And calculate the number of exchanges based on food protein, and finally distribute them to the meals throughout the day. See Appendix A for examples.

6.1 Nutrition status monitoring

Patients with CKD stages 3 to 5 are prone to malnutrition due to diseases and nutrient intake restrictions, and the nutritional status of patients should be monitored regularly.

When controlling protein intake, patients' compliance and nutritional status should be closely monitored to prevent malnutrition. If there is a camp the occurrence of malnutrition