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## Diet - chronic kidney disease

You may need to make changes to your diet when you have chronic kidney disease (CKD). These changes may include limiting fluids, eating a low-protein diet, limiting salt, potassium, phosphorous, and other electrolytes, and getting enough calories if you are losing weight.

You may need to alter your diet more if your kidney disease gets worse, or if you need dialysis.

### Function

The purpose of this diet is to keep the levels of electrolytes, minerals, and fluid in your body balanced when you have CKD or are on dialysis.

People on dialysis need this special diet to limit the buildup of waste products in the body. Limiting fluid intake between dialysis treatments is very important because most people on dialysis urinate very little. Without urination, fluid will build up in the body and cause too much fluid in the heart and lungs.

### Recommendations

Ask your health care provider to refer you to a registered dietitian to help you with your diet for kidney disease. Some dietitians specialize in kidney diets. Your dietitian can also help you create a diet to fit your other health needs.

The Kidney Foundation has chapters in most states. It is a good place for people with kidney disease and their families to find programs and information. You need to take in enough calories each day to keep you healthy and prevent the breakdown of body tissue. Ask your provider and dietitian what your ideal weight should be. Weigh yourself every morning to make sure you are meeting this goal.

### CARBOHYDRATES

If you do not have a problem eating carbohydrates, these foods are a good source of energy. If your provider has recommended a low-protein diet, you may replace the calories from protein with:

- Fruits, breads, grains, and vegetables. These foods provide energy, as well as fiber, minerals, and vitamins.
- Hard candies, sugar, honey, and jelly. If needed, you can even eat high-calorie desserts such as pies, cakes, or cookies, as long as you limit desserts made with dairy, chocolate, nuts, or bananas.

### FATS

Fats can be a good source of calories. Make sure to use monounsaturated and polyunsaturated fats (olive oil, canola oil, safflower oil) to protect your heart health. Talk to your provider or dietitian about fats and cholesterol that may increase your risk for heart problems.

## PROTEIN

Low-protein diets may be helpful before you start dialysis. Your provider or dietitian may advise a lower-protein diet based on your weight, stage of disease, how much muscle you have, and other factors. But you still need enough protein, so work with your provider to find the right diet for you.

Once you start dialysis, you will need to eat more protein. A high-protein diet with fish, poultry, pork, or eggs at every meal may be recommended.

People on dialysis should eat 8 to 10 ounces (225 to 280 grams) of high-protein foods each day. Your provider or dietitian may suggest adding egg whites, egg white powder, or protein powder.

## CALCIUM AND PHOSPHOROUS

The minerals calcium and phosphorous will be checked often. Even in the early stages of CKD, phosphorous levels in the blood can get too high. This can cause:

- Low blood calcium. This causes the body to pull calcium from your bones, which can make your bones weaker and more likely to break.
- Itching.

You will need to limit the amount of dairy foods you eat, because they contain large amounts of phosphorous. This includes milk, yogurt, and cheese. Some dairy foods are lower in phosphorous, including:

- Tub margarine
- Butter
- Cream, ricotta, brie cheese
- Heavy cream
- Sherbet
- Nondairy whipped toppings

You may need to take calcium supplements to prevent bone disease, and vitamin D to control the balance of calcium and phosphorous in your body. Ask your provider or dietitian about how best to get these nutrients.

Your provider may recommend medicines called "phosphorous binders" if diet changes alone do not work to control the balance of this mineral in your body.

## FLUIDS

In the early stages of kidney failure, you do not need to limit the fluid you drink. But, as your condition gets worse, or when you are on dialysis, you will need to watch the amount of liquid you take in.

In between dialysis sessions, fluid can build up in your body. Too much fluid will lead to shortness of breath, an emergency that needs immediate medical attention.

Your provider and dialysis nurse will let you know how much you should drink every day. Keep a count of foods that contain a lot of water, such as soups, fruit-flavored gelatin, fruit-flavored ice pops, ice cream, grapes, melons, lettuce, tomatoes, and celery.

Use smaller cups or glasses and turn over your cup after you have finished it.

Tips to keep from becoming thirsty include:

- Avoid salty foods
- Freeze some juice in an ice cube tray and eat it like a fruit-flavored ice pop (you must count these ice cubes in your daily amount of fluids)
- Stay cool on hot days

## SALT OR SODIUM

Reducing sodium in your diet helps you control high blood pressure. It also keeps you from being thirsty, and prevents your body from holding onto extra fluid. Look for these words on food labels:

- Low-sodium
- No salt added
- Sodium-free
- Sodium-reduced
- Unsalted

Check all labels to see how much salt or sodium foods contain per serving. Also, avoid foods that list salt near the beginning of the ingredients. Look for products with less than 100 milligrams (mg) of salt per serving.

DO NOT use salt when cooking and take the salt shaker away from the table. Most other herbs are safe, and you can use them to flavor your food instead of salt.

DO NOT use salt substitutes because they contain potassium. People with CKD also need to limit their potassium.

## POTASSIUM

Normal blood levels of potassium help keep your heart beating steadily. However, too much potassium can build up when the kidneys no longer function well. Dangerous heart rhythms may result, which can lead to death.

Fruits and vegetables contain large amounts of potassium, and for that reason should be limited to maintain a healthy heart.

Choosing the right item from each food group can help control your potassium levels.

When eating fruits:

- Choose peaches, grapes, pears, apples, berries, pineapple, plums, tangerines, and watermelon

- Limit or avoid oranges and orange juice, nectarines, kiwis, raisins or other dried fruit, bananas, cantaloupe, honeydew, prunes, and nectarines

When eating vegetables:

- Choose broccoli, cabbage, carrots, cauliflower, celery, cucumber, eggplant, green and wax beans, lettuce, onion, peppers, watercress, zucchini, and yellow squash
- Limit or avoid asparagus, avocado, potatoes, tomatoes or tomato sauce, winter squash, pumpkin, and cooked spinach

## IRON

People with advanced kidney failure also have anemia and usually need extra iron.

Many foods contain extra iron (liver, beef, pork, chicken, lima and kidney beans, iron-fortified cereals). Talk to your provider or dietitian about which foods with iron you can eat because of your kidney disease.

## Alternative Names

Renal disease - diet; Kidney disease - diet

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