

## Diet in Atypical HUS



### The Kidneys – Master Chemists of the Body

If you have early kidney failure, some of the waste products and extra fluid remain in your blood. Sometimes, early kidney failure may progress to total kidney failure. However, if you follow your doctor's orders carefully, you may be able to slow down this process.

#### How can a special diet help?

A special diet can help control the buildup of waste products and fluid in your blood and decrease the workload of your kidneys. This diet may also help slow down the loss of kidney function. The main goal of the diet is to keep you healthy. Your doctor may recommend a special diet, depending on the stage of your disease. If and when this diet is ordered for you, your doctor may want you to see a renal dietitian, who has special training in diet for kidney disease.

#### What is the diet like?

In general, the diet used for the early stages of kidney disease controls the amount of protein – usually from animal products and phosphorus – from dairy products - you eat. Usually, sodium/salt is also controlled. Getting enough calories to maintain healthy weight and growth is very important.

#### What about protein?

Your body needs protein every day for growth, building muscles and repairing tissue. After your body uses the protein in the foods you eat, a waste product called urea is made. If you have lost kidney function, your kidneys may not be able to get rid of this urea normally. You may need to reduce the amount of protein you eat to avoid buildup of urea in your body. Protein is found in two types of foods:

- in large amounts in foods from animal sources such as poultry, meat, seafood, eggs, milk, cheese and other dairy products.
- in smaller amounts in foods from plant sources such as breads, cereals, other starches and grains, and vegetables and fruits.

While you may need to limit the amount of protein you eat, it is important that you eat the right amount of protein. This helps to keep your body healthy.

#### **What about phosphorus?**

Your kidneys may not be able to remove phosphorus from your blood causing the phosphorus level to become too high. A high blood phosphorus level may cause you to lose calcium from your bones. This may weaken your bones and cause them to break easily.

To help control your phosphorus level you should eat fewer foods that are high in phosphorus such as:

- dairy products such as milk, cheese, pudding, yogurt and ice cream
- dried beans and peas such as kidney beans, split peas and lentils
- nuts and peanut butter
- beverages such as cocoa, beer and cola soft drinks

Using non-dairy creamers and recommended milk substitutes instead of milk is a good way to lower the amount of phosphorus you eat.

#### **What about sodium?**

You may need to limit the amount of sodium in your diet. This is because high blood pressure, kidney disease and sodium are often related. Learning to read labels can help you make lower sodium choices. Sodium is found in many foods, but is especially high in the following:

- table salt and foods with added salt such as snack foods, soups and processed cheese
- some canned foods, prepared foods and "fast foods"
- foods pickled in brine such as pickles, olives and sauerkraut
- smoked and cured foods such as ham, bacon and luncheon meats

#### **What about calories?**

Calories give you energy. Because you are getting fewer calories from protein, you will need to get more calories from other foods. Your dietitian may recommend that you get these extra calories from sugar and vegetable fats to help you get the right amount of calories.

Some ways to increase calories are as follows:

- Increase unsaturated fats such as vegetable oils (made with corn, cottonseed, safflower, and soybean or sunflower oils), olive oil and mayonnaise type salad dressings.
- Use sugar or sweets such as hard candy, gum drops, jelly beans, marshmallows, honey, jam and jelly.
- Use canned or frozen fruits in heavy syrup.

**Is there anything else that I need to control in my diet?**

**In general, you do not need to limit potassium or fluids in the early stages of your disease. However, it is best to avoid salt-substitutes that contain potassium. These can cause the level of potassium in your blood to become too high. Instead, try using spice blends to enhance the flavor of foods. Also, try adding a dash of hot pepper sauce or a squeeze of lemon juice to add flavor.**

**Will my diet be different from a general healthy diet?**

**Your new diet may have more fats and carbohydrates (starches and sweets) than you are used to eating. These are added to help maintain weight and protect your muscle tissue.**

**What will happen if I don't follow this diet?**

**Your special diet may help to slow the loss of kidney function and to protect you from malnutrition. In later stages of kidney disease, the diet may also help you control the amount of waste products in your blood. If these waste products build up to very high levels, they may cause nausea, vomiting, hiccups, tiredness, weakness, itching and sleepiness.**

**Will my diet change over time?**

**Your diet may change as your kidney function changes. In the early stages of your kidney disease, your diet may be reduced in protein. If dialysis or a kidney transplant is needed, your diet will change based on the treatment option you choose.**

**Will I have to take vitamins and minerals?**

**Vitamins and minerals come from a variety of foods you eat each day. If your diet is limited, you may need to take special vitamins or minerals. Take only the vitamins and minerals your doctor orders for you. Certain vitamins may be harmful to people with kidney disease.**

**What if I am a vegetarian?**

**If you are a vegetarian, it becomes very important to get good nutrition advice from a renal dietitian. Vegetarian diets by nature are high in potassium and phosphorus because of all the vegetables, whole grains and fruits that make up the diet. A vegetarian diet that includes eggs and milk is easier to work into the renal diet. The goal is to eat the right combinations of plant proteins while keeping potassium and phosphorus under control.**

**Can diet help prevent the bone disease seen in many kidney patients?**

**Yes. Calcium and phosphorus are two minerals important for healthy bones. Diseased kidneys are unable to remove phosphorus from the blood as well as they should. Too much phosphorus in your blood may lead to loss of calcium from your bones. This may cause your bones to become weak and to break easily.**

**As mentioned earlier, phosphorus comes from many foods in your diet. By eating fewer high phosphorus foods, you reduce the amount of phosphorus in your blood, which reduces calcium loss from your bones. Your doctor may order a medicine called a phosphorus binder to keep your body from absorbing phosphorus from foods. This medicine should be taken with your meals and snacks as your doctor orders.**

**Should I eat a high calcium diet to make my bones stronger?**

**Unfortunately, the best food sources of calcium are also high in phosphorus. The best way to avoid losing calcium from your bones is to limit high phosphorus foods, which lead to the calcium and phosphorus imbalance in your blood. In addition, your doctor may have you take medications to help raise the levels of calcium in your blood. As with all medication, it is important to follow your doctor's instructions very carefully.**

**Are there medications that can help balance these chemicals in the body and protect the bones?**

**Yes, check with your doctor to see if he/she can prescribe a calcium-free, aluminum-free phosphate binder if your child is on dialysis.**