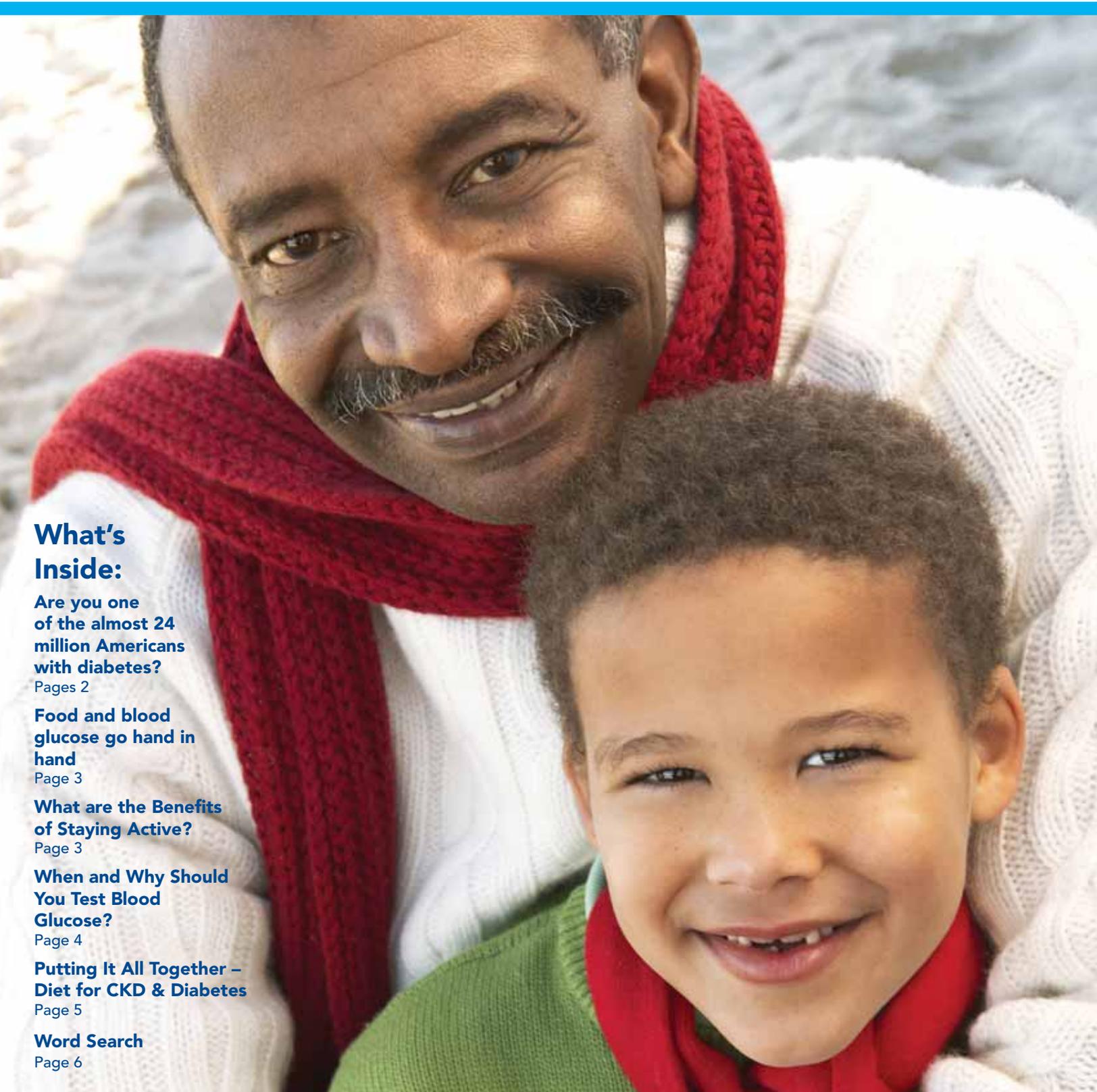


Winter

# The Kidney Korner<sup>®</sup>

for people on dialysis from the makers of *Nepro*<sup>®</sup> with Carb Steady<sup>®</sup>



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# Chronic Kidney Disease and Diabetes: Are you one of the almost 24 million Americans with diabetes?

We probably all know someone, maybe even ourselves, who has diabetes. The statistics show that 246 million people worldwide and nearly 24 million people in the United States have diabetes. And the reach extends to chronic kidney disease (CKD). **Diabetes is the leading cause of kidney failure in the US, accounting for about 45% of people who start treatment for kidney failure each year.** As a result, many people on dialysis also have diabetes.

## What is Diabetes?

Diabetes is a condition where your body cannot use food as it should. Normally, your body breaks down food into sugar (glucose) and moves it into your blood stream. Insulin, a hormone made by the pancreas, helps transfer glucose from the blood into the cells to be used for energy. In people with diabetes, the pancreas either does not make insulin or does not make enough insulin. Without enough insulin, glucose in the blood increases. In the short term, high blood glucose can cause excessive urination and thirst, changes in vision and increased likelihood of infections. High blood glucose over long periods can cause damage to important body parts such as your eyes, kidneys, heart, skin and nerves.



## What are the Different Types of Diabetes?

There are two main types of diabetes.

**Type 1** diabetes is a disease in which the body does not make insulin. People with type 1 diabetes take insulin every day. Type 1 diabetes usually develops in childhood and accounts for **5-10%** of diabetes.

**Type 2** diabetes is a disease in which the body does not make sufficient amounts of insulin. People with type 2 diabetes manage their condition by using a meal plan, being physically active, and taking diabetes medications (oral medication or insulin). Type 2 diabetes often occurs in people who are overweight and/or physically inactive and accounts for **90-95%** of all cases of diabetes.

# Food and blood glucose go hand in hand.

Your body requires food for energy and a mix of vitamins, minerals, and nutrients for general health and strength. Carbohydrates (carbs) are the body's main energy source. The body digests carbs into glucose, which enters the blood stream. The pancreas releases insulin, to transfer blood glucose from the blood into cells where it can be used.

The problem comes when the body does not produce enough insulin or doesn't use it effectively. Then blood glucose levels can become dangerously high.

## Healthy Diet

The basic recommendations for people with diabetes are surprisingly similar to the dietary advice for any adult: Watch your carb intake closely. Eat more vegetables and fruits, along with low-fat dairy foods, whole grains, fish, poultry, and nuts. Eat more fiber and less saturated and trans fats.

## Carbohydrates (carbs)

Because carbs cause your blood glucose to rise, people may assume they are "bad" or indulgent. However, carbs are an important part of a healthy diet. They are the body's main energy source and must be included as part of your daily meal plan, together with proteins and fats. Carbs are one of the most important parts of your diet to consider when your goal is tight blood glucose control.

- Keep track of your daily carb servings.
- Space out carb servings over the whole day and try eating small, frequent meals.
- Choose complex carbs (brown rice) over simple carbs (white rice).
- Focus on a consistent amount of carbs day to day.



## What are the Benefits of Staying Active?

Physical activity plays a very important role in managing your diabetes. That's because the cells in your body require more blood glucose for energy when you're physically active than when you're at rest. By finding ways to be physically active each day, you may help:

- Improve your blood glucose
- Reduce your risk for heart disease, including high blood pressure
- Feel better about yourself

# When and Why Should You Test Blood Glucose?

Monitoring and recording blood glucose levels gives you valuable information for controlling your diabetes. Checking blood glucose regularly and understanding the results will help you and your health care team adjust your treatment plan as needed.

Keeping your blood glucose in the recommended target range can prevent or delay the long-term health problems caused by diabetes. You can best manage your diabetes by keeping track of your blood glucose numbers using a blood glucose meter and with the results of your A1C (pronounced a-one-c) tests — a long-term measure of blood glucose levels in your body.

## Blood Glucose

The targets recommended by the American Diabetes Association® are listed below. Work with your physician, dietitian or diabetes educator to set your personal targets.

Before meals: 70 to 130 mg/dL

1-2 hours after the start of a meal:  
Less than 180 mg/dL

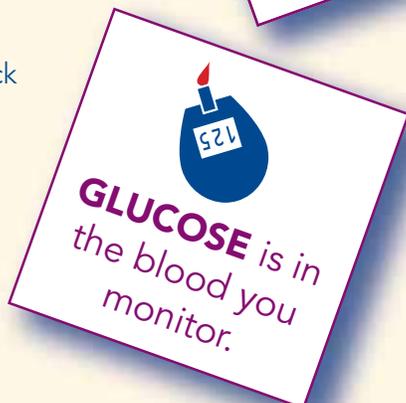
Many people use their meter to check their blood glucose several times a day. Talk with your doctor about when and how often to check your blood glucose.

## What can make blood glucose rise?

- A meal or snack with more food or carbohydrates than usual
- Inactivity
- Not enough diabetes medication
- Side effects of other medications
- Infection or other illness such as a cold or the flu
- Changes in hormone levels, such as during menstrual periods
- Stress

## What can make blood glucose fall?

- A meal or snack with less food or fewer carbohydrates than usual
- Drinking alcoholic beverages
- Missing a meal or snack
- Extra activity
- Too much diabetes medication
- Side effects of other medications



## Hemoglobin A1C

Hemoglobin A1C is also known as HbA1C or just A1C. A1C is a test that provides information about your average blood glucose level over a period of approximately 2-3 months. To obtain this information, your physician takes a sample of your blood and sends it to a laboratory for testing. It is recommended to have your A1C checked twice a year.

A1C is represented as a percent. The higher the percent, the more glucose that has been in the blood over time.

The American Diabetes Association recommends that people with diabetes have an A1C of 7% or less.

Although A1C is a measure of long-term blood glucose control, it still reflects your average daily blood glucose levels. To help you see this relationship, you can use the chart below:

| A1C | Estimated Average Blood Glucose Level |
|-----|---------------------------------------|
| 6%  | 126 mg/dL (100-152 mg/dL)             |
| 7%  | 154 mg/dL (123-185 mg/dL)             |
| 8%  | 183 mg/dL (147-217 mg/dL)             |
| 9%  | 212 mg/dL (170-249 mg/dL)             |
| 10% | 240 mg/dL (193-282 mg/dL)             |
| 11% | 269 mg/dL (217-314 mg/dL)             |
| 12% | 298 mg/dL (240-347 mg/dL)             |

This chart does not replace getting your A1C checked by your health care professional, but it can be very helpful in guiding your approach to diabetes management. Getting your A1C checked is not a replacement for regularly monitoring your blood glucose.

You may also start hearing about average blood glucose, so pay attention to those values as well.

# Putting It All Together – Diet for CKD & Diabetes:

So maybe you are wondering how you can balance your diabetes with your dialysis meal plan. As you know, diet is important for people with CKD, and it is even more important for people with both CKD and diabetes. You need to not only watch what you eat to reduce the amount of wastes and fluids your kidneys process, but you also need to watch what you eat to help manage your blood glucose levels. This can be done by following these steps, in addition to any other recommendations from your dietitian:

- Eat regular meals and snacks at around the same time each day
- Do not skip meals
- Keep the amount of carbs consistent at each meal and snack
- Check your blood glucose every day
- Follow your doctor's advice for taking insulin or oral medications



you are busy with errands or appointments.

- Do not skip meals

## Here are some quick snack ideas that might help:

- Cold sandwiches (sliced meat, chicken, tuna, egg salad)
- Fresh fruit (apple, pear, grapes, berries)
- Canned fruit (applesauce, pineapple, peaches in light syrup)
- Graham crackers
- Unsalted popcorn

It is important that you eat regularly and often each day to help maintain your blood glucose levels. If you skip meals, your blood glucose level could fall and cause symptoms such as shakiness and dizziness.

- Keep the amount of carbohydrate consistent at each meal and snack from day to day
  - Try to eat the same amount of carbohydrates at each meal and snack to help keep your blood glucose level on target. For example, if your meal plan involves eating 2 carb/starch choices for breakfast, you could eat 2 pieces of toast on Monday and 1 English muffin on Tuesday.
- Check your blood glucose every day

When you have CKD and diabetes, your blood glucose can change often. If it goes too low, you can feel weak and shaky, cranky and dizzy. You can even pass out. If it goes too high, you can feel thirsty, sleepy, fuzzy headed, or sweaty. To help avoid low and high blood glucose levels, you should check your blood glucose often and share your levels with your doctor and dietitian.

- Follow your doctor's advice for taking insulin or oral medications
  - Take insulin shots or oral medications to help control your blood glucose. These medications help to keep your blood glucose within your target range. Make sure you take your medication as directed and talk to your doctor about any changes or problems with your medications.

**As always, work with your dietitian to determine the meal plan that**



**Let's look at these steps in a little more detail:**

- Eat regular meals and snacks at around the same time each day
  - Eating your meals and snacks at the same times each day helps to keep your blood glucose stable. Planning ahead can help you achieve this goal.
  - Eating 5 or 6 small meals throughout the day is also a good option.
  - Plan ahead for times when it will be difficult to eat on schedule, like on dialysis days or days when



**works best for you, and refer to your dietitian's advice regarding your overall food intake.**

# Renal nutrition for real life



Between your activities, family and dialysis, sometimes eating right gets lost in the shuffle. But proper nutrition is especially important when you're on dialysis. That's why there's Nepro® with Carb Steady®.

Unlike general nutritional products, Nepro with Carb Steady is designed specially for renal diets. High in protein and calories, yet low in potassium, phosphorus and sodium. Ask your health care professional if Nepro with Carb Steady is right for you.

- Carb Steady carbohydrate blend contains ingredients clinically shown to help manage blood glucose levels

Now available at:



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## WORD SEARCH

|               |            |           |         |
|---------------|------------|-----------|---------|
| APPLESAUCE    | DIET       | INSULIN   | POPCORN |
| CARBOHYDRATES | GLUCOSE    | KIDNEY    | SNACKS  |
| CHICKEN       | GRAPES     | PANCREAS  | TUNA    |
| DIABETES      | HEMOGLOBIN | PINEAPPLE |         |

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X A P P L E S A U C E C V S T N
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- by WordFind for Crossword Maker 2000



Naturally and artificially flavored.  
Use under medical supervision.

## Hot Chai (Nepro)

Servings: 2    Serving size: 1¼ cups

### Ingredients:

- 1½ cups water
- 1 bag decaf black tea
- 2-inch piece fresh ginger, chopped
- 6 black peppercorns
- 6 whole cloves
- 2 cinnamon sticks, broken
- ¼ teaspoon ground cardamom
- ½ teaspoon vanilla extract
- 3 tablespoons sugar substitute such as Splenda®, or to taste
- ⅛ teaspoon nutmeg
- 1 cup (8 ounces) Homemade Vanilla Nepro with Carb Steady

### Directions:

1. Combine all ingredients in a non-reactive saucepan and bring to a simmer over low heat for 5 minutes.
2. Remove from heat, cover the pan with a lid and steep the ingredients for 10 minutes.
3. Strain and return the liquid to the pan.
4. Whisk in the Nepro with Carb Steady and continue to heat until the liquid is hot. Do not bring to a boil. Serve.

**Note:** The second serving can be stored in an airtight container and refrigerated. Reheat in the microwave on medium heat; do not bring to a boil.

Splenda is a registered trademark of a company other than Abbott Laboratories



### Per Serving:

|                    |        |
|--------------------|--------|
| Calories           | 220    |
| Calories from Fat  | 100    |
| Total Fat          | 11 g   |
| Saturated Fat      | 1 g    |
| Trans Fat          | 0 g    |
| Cholesterol        | 5 mg   |
| Sodium             | 125 mg |
| Total Carbohydrate | 25 g   |
| Dietary Fiber      | 2 g    |
| Sugars             | 3 g    |
| Protein            | 10 g   |
| Vitamin A          | 375 IU |
| Vitamin C          | 10 mg  |
| Calcium            | 140 mg |
| Iron               | 2.3 mg |
| Phosphorus         | 85 mg  |
| Potassium          | 135 mg |

|                      |             |
|----------------------|-------------|
| <b>Exchanges:</b>    | 1½ starch   |
|                      | 1 lean meat |
|                      | 2 fat       |
| <b>Carb Choices:</b> | 1½          |