

Diabetes

Life Lines



February-March, 2016

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Diabetes - the Medical Perspective

Diabetic Kidney Disease

Diabetes has become one of the main causes of kidney disease in the United States. This is especially true because so many people have type 2 diabetes. As many as 40 percent of individuals with type 1 diabetes and 20 to 30 percent of those with type 2 diabetes have some kind of kidney disease. The role of the kidneys is to filter waste products and extra fluids from the body. You have two kidneys because this function is so important. You cannot live without at least one working kidney. If your kidneys fail either dialysis or a kidney transplant is necessary. Dialysis is a treatment that uses a special machine to do the work of the failed kidneys.

In many cases kidney disease can be avoided with proper screening and treatment. Screening includes monitoring blood pressure, blood lipids and glucose. High blood pressure causes the blood vessels to stiffen which can lead to a kidney failure as well as heart attack or stroke. Additionally, high cholesterol and high

blood glucose increases the chance of blood vessel damage, including blood vessels in the kidneys.

The following recommendations may be appropriate to prevent and/or treat kidney disease for anyone with diabetes. These are general recommendations and your treatment plan should be individualized.

1. Maintain blood glucose control with a hemoglobin A1C less than 7 percent.
2. Control blood pressure. The general recommendation for preventing kidney disease in diabetes is having a blood pressure below 140/90 mm hg; however tighter control maybe recommended.
3. Take medications if needed for blood pressure control.
4. Keep total cholesterol less than 200 mg/dl, bad cholesterol (LDL) below 100 mg/dl, good cholesterol (HDL) above 40 mg/dl, and triglycerides less than 150 mg/dl.
5. Monitor hemoglobin to keep between 11-12 g/dl. Check each year to screen for anemia.

In the early stages of kidney disease there are no physical symptoms. One of

the earliest signs that your kidneys are not functioning 100 percent is when excess protein known as microalbuminuria shows up in the urine. The National Kidney Foundation recommends two annual screening tests to monitor kidney function in people with diabetes. One is measured with a urine sample and the other measured with a blood sample. The urine test measures excess protein in the urine and the blood test measures creatinine. Creatinine levels increase as kidney function decreases. Creatinine levels are used to estimate your kidney's filtering capacity which is important to recognize decreasing kidney function.

Individuals with type 1 diabetes should be screened 5 years after diagnosis and annually thereafter for microalbuminuria. Screening should happen at diagnosis with type 2 and yearly thereafter because it may have gone unrecognized for some time, causing damage to the kidneys. Screening should also take place during pregnancy with type 2 diabetes.

Your primary doctor should provide annual screening for kidney disease and if necessary refer you to doctor who specializes in treating and managing kidney disease. Doctors who specialize in kidney disease are called nephrologists.

Diabetes and Food

A healthy diet that promotes blood glucose, blood pressure, and cholesterol control will go a long way in preventing diabetic kidney disease. Eat a variety of

fruits, vegetables, whole grains, and non-fat dairy within your carbohydrate allowance. Limit saturated fats like butter, lard, and fatty meats and choose more fish, poultry, and lean meats. Olive, canola, and peanut oil along with nus and avocados are heart healthy fat choices.

Since high blood pressure is a major cause of diabetic kidney disease a lower sodium diet is recommended. Most sodium in the diet comes from processed foods like canned vegetables and soups, boxed and convenience items, processed meats and even bread. Chicken may be a source of sodium as well, depending on how it is processed. Fresh vegetables and frozen vegetables without sauces are low in sodium. Draining and rinsing your canned vegetables will reduce the sodium content by about 30 percent.

Other nutritional changes may be needed for progressive diabetic kidney disease. It may be necessary to restrict higher potassium foods if blood potassium levels are high. Depending on the degree of kidney function, a moderate protein restriction may be recommended. Your health care provider and registered dietitian will determine the best nutritional changes to maintain kidney function and slow progression of diabetic kidney disease. A registered dietitian can help you plan an appropriate meal plan that helps decrease the progression of kidney disease.

Remember, the best defense against diabetic kidney disease is prevention with glucose, blood pressure and cholesterol control.

Recipes to Try

Baked Parmesan Perch

2 servings per recipe

Ingredients

8 ounces perch fillets, thawed

½ cup bread crumbs, plain

¼ cup skim milk

½ teaspoon rosemary

1 tablespoon Parmesan cheese

Cooking spray



Directions

1. Preheat oven to 450°F. Spray shallow baking pan with cooking spray.
2. Combine Parmesan cheese, bread crumbs, and rosemary. Dip fillets in milk, and then roll in bread crumb mixture.
3. Place fillet in pan and bake for 15-20 minutes or until fish flakes easily with fork.

Nutrition Facts per serving

| | | | |
|--------------|----------|-------------------|--------|
| Calories | 232 | Fat | 3 gram |
| Protein | 27 gram | Calories from fat | 27 |
| Carbohydrate | 21 grams | Cholesterol | 105 mg |
| Fiber | 1 gram | Sodium | 365 mg |

This and other recipes available at
<http://urbanext.illinois.edu/diabetesrecipes/intro.cfm>

Roasted Vegetable Salsa

12 servings per recipe

Ingredients

2 cups chopped tomato
1½ cups chopped summer squash
1½ cups chopped zucchini squash
½ cup chopped green pepper
½ cup chopped onion
2 teaspoons olive oil
¼ teaspoon thyme
1/8 teaspoon salt
1/8 teaspoon black pepper
¼ teaspoon dried dill weed
Cooking spray



Directions

1. Spray a 7x11 inch glass pan with cooking spray. Heat oven to 400°.
2. Toss ingredients lightly in bowl. Pour into pan.
3. To shorten roasting time, cover pan with wax paper and microwave on high for 4-5 minutes.
4. Roast for 25-30 minutes, stirring occasionally. If not microwaving, roast for 55-60 minutes.
5. Serve warm or cold, as an appetizer with crackers, or as a vegetable,

Nutrition facts per serving

| | | | |
|--------------|---------|-------------------|---------|
| Calories | 21 | Fat | 1 grams |
| Protein | 1 gram | Calories from fat | 9 |
| Carbohydrate | 3 grams | Cholesterol | 1 mg |
| Fiber | 1 gram | Sodium | 27 mg |

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Sample Menu

| BREAKFAST | Amount/ Portion |
|--|-----------------|
| Scrambled egg | 1 egg |
| Whole wheat toast | 2 slices |
| Soft tub margarine | 2 teaspoons |
| Purple grapes | 16 grapes |
| Non-fat Greek peach yogurt | 6 ounces |
| Skim milk | 1 cup |
| 560 Calories; 75 grams carbohydrates; 5 carbohydrate choices | |
| | |
| LUNCH | |
| Italian turkey casserole [†] | 1 serving |
| Steamed green beans | 1 cup |
| Soft tub margarine | 2 teaspoons |
| Watermelon | 1 cup |
| Banana Walnut Muffin † | 1 muffin |
| Skim milk | 1 cup |
| 690 Calories; 76 grams Carbohydrates; 5 Carbohydrate Choices | |
| | |
| DINNER | |
| Parmesan baked perch † | 1 serving |
| Baked sweet potato | 1 medium |
| Soft tub margarine | 2 teaspoons |
| Roasted vegetable salsa † | 1 serving |
| Sugar-free vanilla pudding | ½ cup |
| Skim milk | 1 cup |
| 593 Calories; 74 Carbohydrates; 5 Carbohydrate Choices | |
| Total: 1843 Calories, 225 Carbohydrates, 15 Carbohydrate Choices | |

† Recipes from *Recipes for Diabetes* at

<http://urbanext.illinois.edu/diabetesrecipes/>

or this newsletter



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