The Connection Between Diabetes and Kidney Disease

by PATRICIA BRATIANU

Diabetes and Kidney Disease

If you have diabetes, you are at an increased risk of developing kidney disease. Kidney disease is also known as renal disease or nephropathy. Your kidneys may be affected within five to 10 years of your diagnosis with diabetes, with damage likely to occur for several years before it is detected.

The Progression of Renal Disease

Experts are not sure of how the damage to your kidneys occurs. The kidneys are affected in many different ways when you have diabetes:

- Tiny blood vessels in your kidneys may become damaged.
- Small structures called nephrons, which filter wastes from your blood, thicken and develop scars.
- Lesions may develop.
- As a result of kidney damage, protein may accumulate in your blood stream. Over 70% of people who have diabetes develop protein in their urine, which is often the first sign of kidney disease.
- Your body’s ability to maintain a healthy balance of fluids may become hindered.

Your kidneys secrete hormones that help to control your blood pressure. If renal damage is not reversed and it worsens, your kidneys may not be able to work as well as they previously did and it may become harder to manage your blood pressure. Should this problem arise, the damage to your kidneys may continue to increase.

If the disease is not treated and it progresses, swelling of tissues, especially of the legs, and fatigue may occur. Headaches, vague feelings of not feeling well, nausea, or vomiting may occur. A decrease in appetite or itchy skin may arise. Some of these symptoms could be confused for diabetes symptoms, like diabetes-related loss of appetite, so be sure to check with your doctor if you're concerned.

Chronic renal disease increases your chances of sustaining broken bones, as your body does not absorb calcium efficiently and vitamin D utilization becomes impaired. Constipation or diarrhea may develop. Your skin and eyes may have a yellowish, gold color. Anemia is common. Levels of electrolytes, such as potassium and magnesium, may be come imbalanced.

Diabetic nephropathy is the leading cause of End Stage Renal Disease (ESRD). If ESRD occurs, your kidneys may function minimally, or not at all. You may no longer produce urine. One result of a decrease in urine output is that your diabetic medication doses may need adjustment. You will need to be on a special diet. Every part of your body may be impacted. ESRD is a serious, life-threatening condition. If you have a diagnosis of ESRD, you may need dialysis or a kidney transplant.

A serious complication of renal disease is possible damage to your heart and blood vessels. If you have renal disease, your chances of developing cardiovascular diseases increase by 30 to 40 times.

Fortunately, early-stage kidney disease is often reversible. Taking good care of your kidneys is essential if you want to live a long and healthy life.

Risk Factors

You are more likely to develop kidney disease if:

- Diabetes or kidney disease runs in your family
- You are a smoker
- You are Native American, Black American, or Mexican American
- You have high blood pressure
- You have type 1 diabetes that was diagnosed prior to the age of 20

Next page: Caring for your kidneys and taking control of your blood pressure.

Caring for Your Kidneys

How well you control your blood sugar has a direct effect on the health of your kidneys. If protein is found in your urine, the functioning abilities of your kidneys may begin to decrease within one year.

Here are some actions you can take that may help to keep your kidneys functioning at an optimal level.

- **Test your blood sugar as directed by your healthcare provider.** Keep your blood sugar levels within healthy limits. By maintaining blood sugar levels within a normal range, you will be able to decrease your chance of developing kidney disease by over fifty percent.
- **Follow a healthy diet.** Learn how much protein your dietitian or physician wants you to eat. You may need to restrict your intake of protein containing foods if signs of kidney disease arise.
- **Take your medications as prescribed.**
- **Learn as much as you can about living with diabetes.** Use local and online resources to keep abreast of current recommendations for staying well.
- **Monitor your blood sugar carefully during periods of acute illness or elevated stress.** Both can elevate your blood sugar.
- **Follow your doctor's recommendations for diagnostic testing.** Your urine should be checked for protein at least annually. Your doctor will also monitor your creatinine and blood urea nitrogen, BUN, levels. If kidney damage is suspected, a biopsy may be ordered.
- **Be sure all of your healthcare providers know that you have diabetes, especially if they prescribe medications.** Many medications are processed in the kidneys. If alternative medications are available which do not stress the kidneys, they are preferable.
- **Check with your doctor if you are scheduled to have imaging studies that use dyes to see if alternatives are available.** The dyes can stress your kidneys.
- **If you develop a urinary tract infection, seek prompt treatment in order to avoid damage to your kidneys.** If you are prone to recurrent urinary tract infections, take measures to prevent them. Drink plenty of fluids. Consider the use of cranberry tablets or juice as a preventative measure. If you like blueberries, eat some every day, as they offer protection which is similar to the use of cranberries.
- **Check with your physician or pharmacist before using over the counter medications, as some may damage your kidneys.** Non-steroidal anti-inflammatory agents, NSAIDS, such as ibuprofen should not be used without medical advice.

Controlling Your Blood Pressure

Over 60% of diabetics have high blood pressure. The combination of high blood pressure and a decreased ability to utilize carbohydrates effectively damages your kidneys.

If you have diabetes, your blood pressure may be more difficult to control than if you did not have both conditions. You may need to try several different medications prior to finding the right drug or combination which works for you.

Here are some tips for controlling your blood pressure:

- Try to keep your blood pressure below 120/80, or as recommended by your healthcare provider. You may need to use multiple medications in order to maintain a healthy blood pressure.
- Limit your intake of salt.
- Check with your healthcare provider if you want to consume alcoholic beverages. Only drink them in small amounts.
- Maintain a healthy weight.
- Do not smoke or use tobacco products.
- Check your blood pressure as often as recommended by your healthcare provider.

Research indicates that even small reductions in blood pressure reduce the risk of developing renal complications, and the decrease in risk is more dramatic for diabetics than among non-diabetics.

By taking medications and employing other strategies to lower your blood pressure, you will dramatically reduce the likelihood of sustaining damage to your kidneys. If you already have kidney disease, your chances of needing dialysis may be reduced by making healthy choices.

While learning about kidney disease may be frightening, you now have the ability to make healthy decisions. The knowledge that you possess about the relationships between diabetes and kidney disease may empower you to take steps which prevent, reverse, or minimize renal illness.