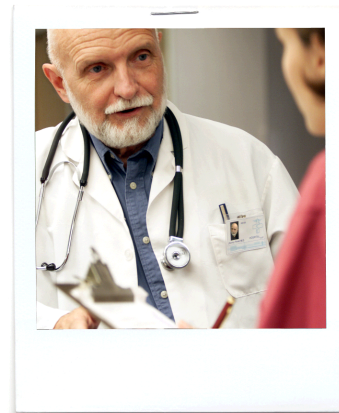


Diabetes

Diabetes is a major cause of end stage renal disease, and approximately 25-40% of end stage renal disease patients have diabetes. The most common types of diabetes are Type 1 and Type 2. In Type 1 Diabetes, or Insulin-dependent diabetes, the body does not make enough insulin. Insulin is a small protein made by the pancreas that helps the body use or store glucose from food. Type 1 patients are treated with insulin injections. Patients with Type 2 diabetes, or non-insulin dependent diabetes, do make insulin, but the cells in their body are resistant to insulin's actions or they do not make enough insulin.



Diabetic nephropathy is the term used for kidney disease associated with diabetes. Not all diabetic patients will develop diabetic nephropathy. Kidney damage is more common in people with Type 1 Diabetes than in Type 2 Diabetes. It should be noted however, that kidney damage can be a result of high blood pressure and many patients with Type 2 Diabetes also have high blood pressure. Nearly 60% of people with Type 2 Diabetes also have high blood pressure. If your blood pressure is too high, the delicate blood vessels in your kidneys can become damaged.

Diabetes

In people with nephropathy the kidney's blood vessels are unable to filter out the impurities in the blood. These blood vessels become blocked and leaky at the same time. As a result, some of the waste products that should be removed stay in the blood, and some of the proteins and nutrients that should stay in the blood are lost in the urine. Symptoms of kidney disease usually occur after considerable kidney damage has been done. These symptoms may include:

- Fluid build-up (swelling or edema)
- Sleeplessness or tiredness
- Vomiting
- Weakness
- Itching
- Muscle cramps

The following is a list of preventative measures that you may **discuss with your physician** as a means to delay the progression of kidney damage.

1. Tighten up your blood glucose/blood sugar control.
2. Follow a low-protein diet
3. Maintain a blood pressure lower than 135/85
4. Lose weight, if you are overweight
5. Exercise
6. Stop smoking
7. Reduce stress
8. Avoid medicines that may damage the kidneys (especially pain-relieving medicines)

References:

- "Diabetes, High Blood Pressure, and Other Causes of Kidney Disease". *Stay in Touch*, Baxter International Inc., May 2000, 5L0037
- Lancaster, L., *Core Curriculum for Nephrology Nursing*, 4th edition, 2001, pp. 103-105.
- *American Diabetes Association Complete Guide to Diabetes*, 2nd edition, 1999, pp. 308-310.

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