YOUR KIDNEYS are among your most important organs. Kidneys filter and clean your blood. If you had no kidneys, waste products would build up in your blood and slowly poison you.

Over time, diabetes can injure and even destroy kidneys. Twenty to 30 percent of people with diabetes eventually develop some kidney damage.

But such damage isn’t inevitable. In fact, there are several things you can do to prevent kidney damage or slow its progression.

The kidneys are two bean-shaped organs in the middle of your back. Each contains about a million tiny filtering units called nephrons that remove wastes from the blood.

In diabetic kidney disease—the kidneys lose some ability to filter blood properly. Wastes aren’t removed from the body and start to build up, while useful proteins are passed in the urine. If kidney disease progresses far enough, a kidney transplant or dialysis treatments may be needed.

And the root cause of all this kidney damage? As with most diabetes-related complications, high blood glucose levels are to blame.

A future article will describe the tests doctors use to monitor kidney disease.

**Symptoms Of Kidney Disease**

Nephropathy is a sneaky disease. Lab tests can detect early signs,
but people usually do not have symptoms until their kidneys have suffered a lot of damage. For this reason, it’s important to have regular kidney tests and blood pressure checks, even if you feel fine.

The earliest symptom tends to be fluid build-up (edema), often in the abdomen and chest and around the heart. This fluid may cause fatigue, shortness of breath, or frequent bathroom trips at night. Shoes and clothes may feel too tight.

Other symptoms develop with more serious kidney disease. These include loss of appetite, feeling cold, poor concentration, nausea, itching, and feeling droopy. Later, vomiting, bruising, weight loss, daytime sleepiness, insomnia, muscle cramps, and restless legs may occur. Insulin needs may drop.

**Prevent Kidney Disease**

You can do many things to help your kidneys stay healthy.

- Keep your blood glucose levels as close to normal as possible.
- Keep your blood pressure (both top and bottom numbers) as low as possible.
- See your doctor as often as you’re supposed to. Be sure your doctor checks your blood glucose control and blood pressure regularly and tests your urine for protein at least once a year.
- Follow your diabetes meal plan.
- Avoid alcohol.
- Quit smoking.
- If you get a urinary tract infection, have it treated.

**Slow Its Progression**

If you already have kidney disease, you can slow its progress.

- Do everything in the “Prevent Kidney Disease” section. These steps are more urgent than ever when you have early signs of kidney disease.
- Eat a balanced diet low in cholesterol.
- Restrict salt to help lower your blood pressure and reduce swelling.
- Limit your protein intake if your doctor tells you to.
- Make other diet changes that your doctor recommends, such as limiting your intake of potassium or phosphorus.
- Limit use of supplements and drugs that are hard on the kidneys. Some common over-the-counter drugs can damage the kidneys, including ibuprofen (Advil, Motrin, and other names) and naproxen (Aleve).
- Discuss with your doctor taking an angiotensin-converting enzyme (ACE) inhibitor or an angiotensin receptor blocker (ARB). Both kinds of blood pressure–lowering pills can slow diabetic kidney disease.
- Be aware that injected dyes used in some X-ray procedures (such as the kidney X-rays called IVPs) can cause kidney failure a few days later. If you must have such an X-ray taken, make sure your X-ray technician knows you have kidney disease and gives you fluids and drugs to reduce your risk.

**Dialysis And Transplantation**

If your kidneys lose most of their filtering ability, then you will need some other way to clean your blood.

One option is dialysis. In hemodialysis, you are hooked to an artificial kidney machine about three times a week. Your blood flows through the machine, which cleans it and returns it to your body. Each treatment takes 3 to 6 hours.

In peritoneal dialysis, a tube is inserted into your abdomen. Several times a day, you fill your abdomen with a fluid called dialysate. Wastes leak into this fluid over the next 4 to 6 hours. Then you drain out the waste fluid and start the process over. Or, a machine can fill and drain your abdomen while you sleep instead of your doing it yourself.

Another option is a kidney transplant. A friend or relative may donate a kidney, or a stranger’s kidney may be used. Transplantation is the only treatment that can cure advanced kidney disease. But sometimes, despite immune system–suppressing drugs, the immune system rejects the new kidney. Then the person again needs dialysis or a new kidney.

Discuss your treatment options with a nephrologist (kidney doctor). Each treatment has its pluses and minuses, and treatments vary in safety and success rates.

Shauna S. Roberts, PhD, is a science writer in New Orleans, La.