

Preserving Kidney Function When You Have Diabetes

Steps to prevent kidney damage or halt its progress

Over time, diabetes can harm the kidneys. This can lead to kidney failure. But here's the good news. Many people with diabetes do not end up with kidney problems. You can help prevent kidney damage or keep it from getting worse.

When kidney function goes wrong

The kidneys filter waste products and excess fluid from the blood. Blood goes into the kidney through an artery. It then passes through clusters of small blood vessels. The clusters ("glomeruli") act as filters. The cleaned blood returns to the rest of the body through a vein. Waste products and excess fluid go into the urine.

High blood sugar and high blood pressure can harm the filters. This may let protein leak into the urine. Kidney damage may begin 10 to 15 years after diabetes starts. As damage gets worse, the kidneys become worse at cleansing the blood. If the damage gets bad enough, the kidneys can stop working.

Kidney damage can't be reversed. And you may not feel it until there's a lot of damage. So, take steps now to prevent kidney damage or stop its progress.

Assessing your risk

Some ethnic groups are at greater risk for kidney damage from diabetes. These include:

- Native Americans
- Hispanic people
- African-Americans

People in these groups should take extra care to protect their kidneys.

Do you have a parent or sibling with kidney damage from diabetes? If so, this raises your risk. And men with diabetes are more likely to get kidney problems than women. But you may have had diabetes for 40 years with no kidney disease. If so, you will likely never have kidney problems.

Preventing kidney failure

People with diabetes should be tested frequently for protein in the urine. That is the advice of the American Diabetes Association (ADA). People with type 1 diabetes should get this test five years after being diagnosed. Then they should be tested each year after that. People with type 2 diabetes should be tested at the time of diagnosis. They should be tested each year after that. You may need blood tests for kidney damage as well. The earlier kidney damage is found, the better. That way, it's easier to prevent kidney failure.

If you have kidney damage, you can take steps to keep it from getting worse.

1. Keep tight control of your blood sugar. Kidney damage is less likely to get worse if you keep good control of your sugar levels.
2. Control your blood pressure. Keep it below 130/80 mm Hg. To do so, you may have to:
 - Lose weight
 - Exercise
 - Cut back on salt
 - Limit alcohol
 - Stop smoking

You may also need medicines to lower blood pressure. ACE inhibitors are often used first. You may also need a diuretic. Even with both drugs, you might not reach the blood pressure number noted above. If that's the case, your doctor may add a calcium channel blocker. If you still have not reached the target pressure, your doctor may want you to take a beta-blocker as well.

3. Work out a diet plan with your doctor or dietitian. You may be asked to eat less protein and salt. Large amounts of protein may make the kidneys work harder. This can make kidney problems worse. The ADA suggests that 10 to 20 percent of your calories come from protein. Less may be best if you have kidney damage.

4. Do not use too much pain medicine. Aspirin and other pain relievers can make kidney damage worse. They can also raise your risk of kidney damage. It's fine to take low doses of aspirin to help prevent heart disease. Still, talk to your doctor about the right dose.

Be sure to treat any bladder or kidney infections right away. Signs include:

- A burning feeling when you urinate
- A frequent urge to urinate
- Reddish or cloudy urine
- Fever
- Pain in your back or on your side below the ribs

Last, dyes (“contrast agents”) used for some imaging tests may make kidney damage worse. To prevent this, drink lots of water before and after the test. Or, your doctor may choose a test that does not require a dye.

*****Authored by Johns Hopkins University and Johns Hopkins Health System*****