



### For more information

#### About kidney disease:

Call the National Kidney Disease Education Program (NKDEP) toll free at 1-866-4 KIDNEY (1-866-454-3639), or go online at [www.nkdep.nih.gov](http://www.nkdep.nih.gov).

More kidney information also is available at [www.kidney.niddk.nih.gov](http://www.kidney.niddk.nih.gov)

#### About diabetes:

Contact the National Diabetes Education Program (NDEP) at 1-800-438-5383, or visit [www.ndep.nih.gov](http://www.ndep.nih.gov).

#### About high blood pressure:

Contact the National High Blood Pressure Education Program (NHBPEP) at 1-800-575-WELL (1-800-575-9355), or visit [www.nhlbi.nih.gov/about/nhbpep](http://www.nhlbi.nih.gov/about/nhbpep).



# Diabetes & High Blood Pressure

## Tests for kidney disease

Blood and urine tests are used to find kidney disease.

A blood test helps your health care provider calculate your GFR (or glomerular filtration rate). GFR tells how well your kidneys are working. A urine test measures the amount of protein in your urine.

It is important for people with diabetes and high blood pressure to get tested regularly for kidney disease. Talk to your doctor or health care provider about how often you should get tested.

The two leading causes of kidney disease

## Make the Kidney Connection



NKDEP, a program of the National Institutes of Health, aims to raise awareness of the seriousness of kidney disease, the importance of testing those at high risk, and the availability of treatment to prevent or slow kidney failure.

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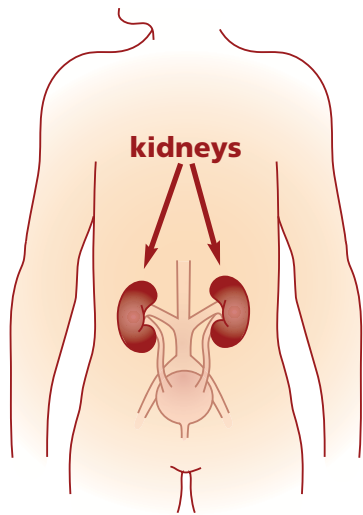


## Make the Kidney Connection

Diabetes and high blood pressure cause about 70 percent of kidney failure cases.

If you have diabetes or high blood pressure, it's important to learn about kidney disease. **Early kidney disease has no signs or symptoms.**

If not treated, kidney disease can lead to kidney failure. And if your kidneys fail, **your only option is dialysis or a kidney transplant.**



*Blood vessels in your kidneys (located near the center of your back) filter your blood to remove wastes. Damage to these blood vessels can cause wastes to build up in the body.*

## Risk factors for kidney disease

Diabetes is the leading cause of kidney disease. Both type 1 and type 2 diabetes can damage your kidneys. This damage can occur over many years, without you knowing.

High blood pressure is the second leading cause of kidney disease. It makes your heart work harder, which damages the kidneys over time.

You are also at risk for kidney disease if you have:

- cardiovascular (heart) disease, or
- a mother, father, sister, or brother with kidney disease, or
- protein in your urine. Protein can leak into the urine when the kidneys are not working well.

If you have **any** of these risk factors, you should get tested for kidney disease.

**Tests can find kidney disease in its early stages. And there are medicines to help prevent or slow kidney failure.**



## Take these steps to protect your kidneys

1. If you have diabetes or high blood pressure:
  - Continue to control these conditions through healthy eating
  - Stay active, and
  - Take medicines as prescribed.
2. Ask your doctor or health care provider to test your blood and urine for kidney disease.
3. If tests show kidney disease, special medicines called ACE inhibitors and ARBs can help keep your kidneys healthy. Ask your doctor or health care provider about these medicines.