

Kidney Damage & Chronic Kidney Disease (CKD)

Kidneys clean waste products from blood and help our bodies remove excess fluid. Elevated BG levels over time may impair blood flow to the kidneys and/or reduce nerve ability to empty the bladder. Urine remaining in the bladder may cause excess pressure on kidneys, leading to damaged kidneys that have problems removing all the waste from the blood.

Kidney damage and waste buildup is known as CKD, diagnosed by excessive amounts of protein in the urine for three months or more. Prolonged high BG and high blood pressure, diets containing high amounts of protein, and genetics are leading factors in CKD.

Adults with diabetes, high blood pressure, or both are more likely to develop kidney disease. Chronic kidney disease (CKD) is estimated to be more common in women than in men.

Kidney Function and Risk Factors

CKD may not have any symptoms. The only way to be sure is results from specific urine and blood tests.

- **Albumin-to-creatinine ratio (ACR)** -

Urine test that measures the amount of albumin, a type of protein, excreted in the urine. A relatively high rate is called **macroalbuminuria**; a relatively low rate is called **microalbuminuria**.

- **Glomerular filtration rate (GFR)**-

Blood test that measures the amount of creatinine, a waste product, in the blood. The GFR determines **kidney function** (how well blood is filtered by the kidneys).

Blood pressure, blood glucose, and cholesterol levels are very important with CKD and diabetes.

Heart Meds May Help

ACE inhibitors: dilate blood vessels to improve the amount of blood the heart pumps, lower blood pressure, and increase blood flow. Some ACE inhibitors seem to slow the process that leads to kidney damage in many people with type 2 diabetes.

AR Blockers: block the angiotensin II hormone and widen/dilate blood vessels to improve blood flow.

Ways to Protect Kidneys and Lower CKD Risk Factors

- Take blood pressure meds as directed.
- Talk with your doctor about daily low-dose aspirin.
- Consult a dietitian about limiting sodium and protein, and choosing lower-potassium foods.
- Be active for about 30 minutes most days of the week. Maintain a healthy weight.
- Avoid drinking alcohol and quit smoking.

