

Warning Signs of Kidney Disease

Although many forms of kidney disease do not produce symptoms until late in the course of the disease, there are six warning signs of kidney disease:

1. High blood pressure.
2. Blood and/or protein in the urine.
3. A creatinine and blood urea nitrogen (BUN) blood test, outside the normal range. BUN and creatinine are wastes that build up in your blood when your kidney function is reduced.
4. A Glomerular [glow-Mair-you-lure] Filtration Rate (GFR) less than 60. GFR is a measure of kidney function.
5. More frequent urination, particularly at night; difficult or painful urination.
6. Puffiness around eyes, swelling of hands and feet.

For More Information, Visit

<http://kidney.niddk.nih.gov/kudiseases/pubs/highblood/>
<http://www.kidneyfund.org/kidney-health/are-you-at-risk>
<http://www.americanheart.org/presenter.jhtml?identifier=2153>

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Articles in this newsletter are not a substitute for the care and advice of medical professionals. When you have a question or need medical advice, diagnosis or treatment, consult your physician.

This newsletter is produced by Inova Health System in conjunction with your faith community. If you prefer not to receive this newsletter, please notify the appropriate personnel in your faith community.

Inova Health System is a not-for-profit health care system based in Northern Virginia that consists of hospitals and other health services including emergency and urgent care centers, home care, nursing homes, mental health, blood donor services, and wellness classes. Governed by a voluntary board of community members, Inova's mission is to improve the health of the diverse community we serve through excellence in patient care, education and research.

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For Your Health

Kidneys and High Blood Pressure

The kidneys play a very important role in keeping a person's blood pressure in a normal healthy range. When your blood pressure is not in a normal range, it can in turn affect the health of your kidneys.

Blood pressure measures the force of blood against the walls of the blood vessels. Extra fluid in the body increases the amount of fluid in the blood vessels and makes blood pressure higher. Narrow, stiff or clogged blood vessels also raise blood pressure.

High blood pressure makes the heart work harder, and over time, can damage blood vessels throughout the body. If the blood vessels in the kidneys are damaged, they may stop removing wastes and extra fluid from the body.

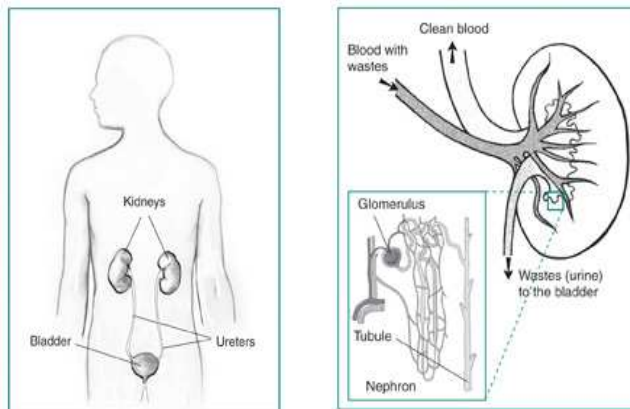
Most people with high blood pressure have no symptoms, and the only way to measure it is with a blood pressure cuff. The result is expressed as two numbers. The top number, called systolic pressure, represents the pressure when the heart is beating. The bottom number, called the diastolic pressure, shows the pressure when the heart is resting between beats. A person's blood pressure is considered normal if it stays at or below 120/80.

To help keep your kidneys healthy, it is important to ask your health provider about blood pressure medicines that can help slow down kidney disease. Also it is important to get blood and urine tests to check for kidney disease. If you have diabetes, it is important to manage your diabetes and keep your blood pressure below 130/80 mmHg. Everyone should eat healthy meals that are low in sodium, be active at least 30 minutes daily, and take medications as prescribed.

How Your Kidneys Work

The kidneys are powerful chemical factories that perform the following functions:

- remove waste products from the body
- remove drugs from the body
- balance the body's fluids
- release hormones that regulate blood pressure
- produce an active form of vitamin D that promotes strong, healthy bones
- control the production of red blood cells



There are two kidneys, each about the size of your fist. Your kidneys are located near the middle of the back, just below the rib cage, each one on each side of the spine.

Each day, a person's kidneys process about 200 quarts of blood to sift out about 2 quarts of waste products and extra water from the body. Wastes in the blood come from the normal breakdown of active tissues, such as muscles and from food. The body uses food for energy and self-repairs. After the body has taken what it needs from foods, wastes are sent to the blood.

The wastes and extra water become urine, which flows to the bladder through tubes called ureters. The bladder stores urine until releasing it through urination.

Causes of Kidney Disease

Common types and causes of kidney damage.

- **Diabetes** is a disease in which your body does not make enough insulin or cannot use insulin properly causing high blood sugar levels. Diabetes is the leading cause of kidney disease.
- **High blood pressure** occurs when the force of blood against your artery walls increases. It is the most common cause of kidney damage.
- **Glomerulonephritis** causes inflammation of the kidney's tiny filtering units called the glomeruli. It may happen suddenly, for example, after a strep throat, and the individual may get well again. The disease may develop slowly over years and it may cause progressive loss of kidney function.
- **Polycystic kidney disease** is the formation of kidney cysts that enlarge over time and may cause serious kidney damage and even kidney failure. Other inherited diseases that affect the kidneys include Alport's Syndrome, primary hyperoxaluria and cystinuria.
- **Kidney stones** are common, and when they pass, they may cause severe pain in your back and side. There are many causes, including an inherited disorder that causes too much calcium to be absorbed from foods and urinary tract infections or obstructions.
- **Urinary tract infections** occur when germs enter the urinary tract and cause symptoms such as pain and/or burning during urination and a more frequent need to urinate.
- **Congenital diseases** usually involve some problem that occurs in the urinary tract when a baby is developing in its mother's womb. One of the most common occurs when a valve-like mechanism between the bladder and ureter (urine tube) fails to work properly and allows urine to back up (reflux) to the kidneys, causing infections and possible kidney damage.
- **Drugs and toxins** can also cause kidney problems. Using large numbers of over-the-counter pain relievers for a long time may be harmful to the kidneys.