

KidneyTimes

The Kidney Connection

Hypertension

By Gordon Lore

*[**T**his is the second in a series of articles briefly describing the connection between kidney disease and its underlying factors or related conditions.]*

What is hypertension, or high blood pressure (BP)? It's when the force of the blood pumping against the walls of your blood vessels is too high. This causes your heart to struggle to pump blood through the arteries to the rest of your body. Hypertension also damages the blood vessels by making them more narrow and their walls thicker and "harder" (*a.k.a* atherosclerosis, or hardening of the arteries).

Systolic and Diastolic

Your BP is measured by a top (systolic) and a bottom (diastolic) number. Systolic indicates the pressure of blood in the vessels when the heart is beating. Diastolic is the pressure when the heart relaxes between beats. Normal BP is less than 120/80 mmHg. A reading of 140/90 is considered high. If you have kidney disease and/or diabetes, a pressure of 130/80 is high.

Hypertension can cause harm to the kidneys' blood vessels, rendering them incapable of properly filtering your blood and removing the wastes

and extra fluids from your body. Your BP can also rise if your blood vessels are too narrow or clogged.

The Road to Kidney Failure

Most individuals with high BP experience no outward symptoms. While all racial groups are at some risk of developing hypertension-related kidney failure, African Americans are six times more likely than Caucasians to develop the condition!

Kidney disease often takes many years to develop. In its early stage, small amounts of albumin (blood proteins) begin leaking into the urine. At this stage, the kidneys are still working sufficiently enough to filter fluids and body wastes. As the disease grows worse, however, more albumin leaks into the urine, causing a filtering decrease. Renal failure occurs when the kidneys stop working altogether.

The "Silent Killer"

Hypertension is also known as the "silent killer" because it damages your health without your feeling any symptoms. The same is true for kidney disease. Your kidneys can nearly stop working altogether before there are recognizable signs or symptoms of renal failure.

High BP is not just the *second leading cause of kidney disease*. It can also be a *result* of kidney disease. In other words, as your kidney disease worsens, your BP will also probably rise.

Some individuals with hypertension experience related structural changes that progress to clear signs of renal dysfunction. Because chronic kidney disease slowly develops over several decades and there are frequently no symptoms prior to renal failure, methods to detect and quantitate the disease in people with no symptoms are needed in order to gain a better knowledge of how to manage and control the condition.

More Information

For more information, check the following websites:

- *DaVita^R*, www.davita.com/articles/ckd/index.shtml?id=21.
- *Defeat Diabetes Foundation*,
www.DefeatDiabetes.org/Articles/hypertension_kidney051202.htm.
- *HealthLifeInfo.com*,
www.healthlifeinfo.com/healthlib/article.asp?file=Blood_Pressure_and_Kidney.htm.
- *MedicineNet.com*,
www.medicinenet.com/script/main/art.asp?articlekey=42000&pf=3&page=1.
- *National Kidney and Urologic Diseases Information Clearinghouse*,
<http://kidney.nih.gov/kudiseases/pubs/highblood/index.htm>.
- *National Kidney Disease Education Program*,
www.nkdep.nih.gov/familyreunion.
- *National Kidney Foundation*,
www.kidney.org/atozTopic.cfm?topic=1.
- *Renal Support Network*,
www.RSNhope.org/health_info/health_library.php.