



Stewardship of the Body

“I give you thanks that I am fearfully, wonderfully made” (Ps. 139)

Hypertension

What is hypertension? Hypertension is defined as a condition in which the blood pressure (BP) is higher than 140 mm Hg systolic or 90 mm Hg diastolic on three separate readings recorded several weeks apart. People who are being treated for the disease and whose BP has reached normal levels with treatment are still considered to have hypertension.

What is blood pressure? Every time your heart beats it pumps blood into your arteries that then carry it to all parts of your body. Blood pressure is determined by the amount of blood your heart pumps and the amount of resistance to blood flow in your arteries.

What do the two numbers mean? The top number is your systolic pressure – or the pressure that occurs when your heart beats while pumping blood. The bottom number is your diastolic pressure – or the pressure that occurs when your heart is resting between beats.

What is a normal blood pressure? In a healthy adult, the normal blood pressure should be less than 120/80.

What happens if the blood pressure is higher than that? A blood pressure between 120/80 and 139/89 is considered to be prehypertension. This means that you don't have hypertension now, but are likely to develop it in the future if you don't take measures to control your blood pressure. A blood pressure reading of 140/90 or more is defined as either stage 1 or stage 2 hypertension, depending on how high the numbers get (140/90 to 159/99 is stage 1 while 160/100 or more is stage 2).

What causes hypertension? There are a number of factors that can raise your risk of developing hypertension including:

- **AGE:** The chance of developing hypertension increases in women 55 and older and in men 45 and older. In the US more than half of adults age 60 and older have hypertension.
- **RACE:** Hypertension can affect anyone, but occurs more often in black adults than in white or Hispanic adults.
- **FAMILY HISTORY:** If your parents or other immediate blood relatives had hypertension your risk is increased.
- **EXCESS WEIGHT:** Being overweight or obese increases your risk of developing hypertension or prehypertension. This is because the more you weigh, the more blood it takes to supply oxygen and nutrients to your tissues. When more blood has to be pumped through the blood vessels, the pressure on the artery walls increases.
- **LACK OF EXERCISE:** People who are not physically active tend to have higher heart rates. The higher heart rate means your heart must work harder with each contraction, putting more force on the arteries.
- **SMOKING:** The chemicals in tobacco can lead to increased blood pressure by damaging the lining of the artery walls. This can happen whether you use tobacco yourself or are exposed to secondhand smoke. In smokers, the blood pressure goes up temporarily every time they light up.

- **HIGH SODIUM DIET:** Too much sodium can cause your body to retain fluid which increases blood pressure.
- **HEAVY ALCOHOL USE:** Using too much alcohol, over time, can damage your heart and affect your blood pressure.
- **STRESS:** Blood pressure normally goes up during stressful situations. Research has shown that continuous stress or a high-stress life can have an effect on the heart and blood vessel health. Also people who have high stress also tend to overindulge in eating, drinking and smoking.
- **CERTAIN CONDITIONS OR MEDICATIONS:** In some cases, hypertension can result from other conditions, such as chronic kidney disease, excess of certain hormones, or sleep apnea. This is called “secondary hypertension”. Some medications, such as antidepressants, decongestants, over-the-counter pain relievers and herbal supplements can raise the blood pressure. In some women, blood pressure can go up during pregnancy.

Can you feel when you have hypertension? Many people can have hypertension for years and not know it as there may be no symptoms; that’s why it is called the “silent killer”. That is why it is important to have your blood pressure checked periodically.

Why is hypertension a problem? Untreated hypertension primarily attacks the brain, eyes, heart and kidneys. It can lead to some serious conditions such as:

- **HEART ATTACK OR STROKE:** hypertension can cause hardening & thickening of the arteries affecting blood flow to the heart and brain.
- **ANEURYSM:** high blood pressure can cause the blood vessels to weaken and bulge, forming an aneurysm. If it gets large enough it can burst & cause internal bleeding or death.
- **HEART FAILURE:** high blood pressure makes the heart work harder to circulate the blood throughout the body. Over time, this can cause your heart muscle to become thicker and eventually make it too stiff or too weak to effectively pump blood.
- **KIDNEY DAMAGE:** hypertension can cause blood vessels in the kidneys to thicken and narrow, preventing the kidneys from working properly. This loss of function can eventually lead to end-stage kidney disease requiring dialysis or a transplant.
- **EYE DAMAGE:** added pressure on blood vessels in the eyes can result in those vessels bursting or bleeding which may lead to vision changes or blindness.
- **METABOLIC SYNDROME:** This syndrome is a cluster of disorders including increased weight around the waist, high triglycerides, low good cholesterol, and insulin resistance. Some or all of these problems can increase the risk of diabetes, heart disease and stroke.
- **DEMENTIA:** hypertension can narrow or block arteries that supply blood to the brain, leading to vascular dementia. This includes memory problems, confusion, and impaired thinking, speaking and reasoning.

Resources: Mayo Clinic Women’s Healthsource, March, 2011
 Taber’s Medical Dictionary, 20th Edition

To be continued