

TerranearPMC Safety Share

Week of September 10, 2012 – High Blood Pressure on the Rise!

High blood pressure is known as a silent killer as there are no specific symptoms that are directly attributed to this condition. As such, one out of four Americans does not even realize that they have high blood pressure (often referred to as hypertension). Hypertension is defined as abnormally elevated blood pressure, or an arterial disease in which chronic high blood pressure is the primary characteristic. Thus, if you have high blood pressure, it means that the heart muscle is working harder than normal to deliver the blood and oxygen the body needs to survive.

Blood pressure is defined as *the pressure of the blood in the vessels, especially the arteries, as it circulates through the body*. Blood pressure varies with the strength of the heartbeat, the volume of blood being pumped, and the elasticity of the blood vessels. Arterial blood pressure is usually measured by a sphygmomanometer (aka blood pressure meter) and is composed of an inflatable cuff to restrict blood flow, and a mercury or mechanical manometer. Blood pressure measurements are reported in millimeters of mercury and in terms of a fraction; such as “120 over 80.” The number, “120,” referred to as the systolic pressure, is a measure of the blood pressure within the arteries when the heart is contracting (or actually forcing blood through the circulatory system). The number “80” or denominator is the diastolic pressure and is a measure of the pressure in the arteries when the heart is refilling with blood. Older models of sphygmomanometers needed the aid of a stethoscope to detect these numbers as the systolic pressure would be determined when the blood’s pulse could be audibly detected once the inflatable cuff’s resistance was relaxed, followed by noting when the pulse would disappear again (diastolic pressure).

While normal pressure is 120/80, high blood pressure is defined as blood pressure greater than or equal to 140/90 mm-Hg. When your blood pressure is high, you are four times more likely to die from a stroke **AND** three times more likely to die from heart disease. As a matter of fact, the Centers for Disease Control (CDC) estimates that over 1000 people in the United States die every day due to these illnesses. In addition, high blood pressure has incurred a direct annual health care cost of \$131 billion.

Even blood pressure that is slightly high can put you at greater risk. High blood pressure can damage not only your heart, but also your brain, kidneys and other organs.

Obviously, blood pressure is not just important; it is paramount for us to survive. For this is what moves blood through the arteries and carries oxygen and other vital life-sources to where it’s needed in the body. However, too much pressure for too long can have the following effects:

- Damages and hardens the arteries
- Weakens the artery walls, making them more likely to break or burst
- Promotes fatty plaque buildup, called atherosclerosis, which narrows the arteries and restricts blood flow
- Increases the amount of work the heart has to do - this can eventually enlarge and weaken the heart muscle

Nearly one-third of all American adults have high blood pressure and more than half of them (36 million) don't have it under control. Most people with uncontrolled high blood pressure know they have high blood pressure. They even see their doctor and take prescribed medicine. Yet, curiously, according to a health awareness publication by the CDC, called Vital Signs, their condition is still not under control. So if people visit their doctor and take medications for their high blood pressure, why is their medical condition still out-of-control? Apparently too many people, doctors and patients alike, are not paying strict attention to their condition and are just going through their health program by rote; that is, they are just going through their routine without understanding the importance of the medical regimen they are participating and ignoring warnings signals: as long as they are on their medical program, there is no need to do anything else.

Visiting the doctor and taking medication alone is not the complete answer. Patients should be counseled to make important lifestyle changes that affect blood pressure, including eating a healthy, low sodium diet, exercising, maintaining a healthy weight and not smoking. This is easier said than done, as such practices for most Americans goes against the grain of our normal lifestyle and therefore, requires a strong commitment to change. Unfortunately many people who need to take this lifestyle change are unwilling to do so and refuse to accept the inevitable consequence.

Salt has long been an issue when it comes to blood pressure. This is because when you consume salt, the kidneys attempt to maintain a balance between what the body needs to survive and any excess, which needs to be excreted. However, a high-salt diet can be too much for the kidneys to keep up with, and levels of sodium may get too high. As sodium levels build, the body retains more fluid, which means there is more fluid for the heart to pump. This excess fluid places pressure on the blood vessel walls, making them thick and narrow, which drives blood pressure up. The American Heart Association suggests limiting salt intake to no more than 1500 mg per day, which is a little less than 3/4 tsp.

Not only can we take control of our health (particularly high blood pressure) through diet and watching our caloric and salt intake, but we can exercise! Exercise does many great things for us, including the prevention of heart disease and stroke by keeping our hearts strong. Remember, that's pressure we're placing on our arteries and weak arterial walls or a heart too weak to pump blood spells certain disaster. Therefore exercise strengthens your heart, which, in turn allows your heart to pump blood with less effort

The best exercise for your heart is aerobic activity. That means anything that works large groups of muscles such as your legs, arms and shoulders. Swimming, brisk walking, running, cycling, dancing and even digging your garden are all types of aerobic activity. You should aim to exercise for 30 minutes on five days out of seven, if not daily. For exercise to be effective it needs to raise your heart beat. While for the general population this is a good thing, people with heart problems need to take care not to put the heart under too much pressure.

There are so many factors that can lead to high blood pressure and yet, even though we have the ability to control many of them, these indicators remain unchecked or even ignored. We *can* lower the rise in high blood pressure. It's our choice.

"It does not do to dwell on dreams and forget to live."

J.K. Rowling, (*Harry Potter and the Philosopher's Stone*)