

“Silence is not always golden...”

Live Healthy and Be Well

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As I was looking back through the article archives, I was surprised to see I had not yet written about a very common condition that affects many of us – high blood pressure. Also known as “Arterial Hypertension,” or just hypertension, this disease does not show itself dramatically. You may have it and not know, but over time it can be harmful to your organs, blood vessels, and heart. That is why it has sometimes been called “The Silent Killer.” It may be smoldering in your system for years, doing damage, and then by the time one finds out it is too late. Regular screenings and checks from your healthcare provider can discover this condition, and he or she can then help you manage it before it has a chance to do lasting damage.

The heart acts as the pump to circulate blood through the “arterial tree” throughout your body. Blood pressure is the pressure in the arterial system that results from the force of the heart pumping, the amount of fluid (blood cells and plasma) in the vascular space, and is also directly related to the amount of “resistance” that exists to the flow of blood. Arterial blood flow is pulsatile, caused by the force of the heartbeat, and has a high side and a low side of each pulse. That is why we measure blood pressure using two numbers. The top number is called the “systolic pressure,” and is a “peak pressure” measurement as the heart beats and that pulse pushes the blood in the arteries to maximum pressure. The bottom number is known as the “diastolic pressure,” and represents the residual pressure in the arteries between heartbeats. While the systolic reading is important as it tells us the maximum force in your vessels, the diastolic is also important as it represents the pressure in the arteries during the “rest phase” between each heartbeat. So, if you have elevated pressure even during that “rest period,” then your vessels and organs are subjected to a higher average pressure, and this will cause damage over time.

People often wonder what represents “normal” blood pressure. The number 120/80 is often used as a common average normal reading. These numbers use “millimeters of Mercury” as the unit of measure. But, as with anything else, normal is different for us all. If you are a thin, smaller person, a lower reading might be normal for you. A larger person might have a number a little higher than 120/80 and be okay. We can also be forgiving with older age – as your arteries tend to lose some of their elastic nature and that will increase resistance which raises the average pressure. Taking your BP at one of those machines in the pharmacy can act as a guide or help you see a trend in your pressure, but should not be thought of as an “official read.” This is something that has to be between you and your provider, probably getting information from several readings and not just one or two. Then, knowing your history, activity level, information about your diet, and other medications you may be on, he or she will be able to help you manage

your BP if it does need treatment. There are many different medicines that work in different ways – which is why you need to see a provider who knows the “big picture” by means of an accurate history and physical exam, possibly checking some labs, getting an EKG, Chest X-ray, or whatever is appropriate for accurate diagnosis.

High blood pressure is dangerous because it has damaging effects to not only your blood vessels themselves, but also the organs that they supply. Your organs, such as liver, kidneys, eyes, and brain are made for a certain pressure that allows them to be supplied with sufficient blood for their purpose. If this pressure is too high, they will react to this over time and it will cause damage and loss of normal function. The heart itself can be damaged by the fact that it has to pump against higher pressure than normal. As the heart is a muscle, it does what muscles do when stressed – it gets bigger, a condition known as “cardiomegaly.” As it enlarges, it does not pump as effectively or efficiently, and the pump may begin to fail and lead to congestive heart failure and all its symptoms, or it may start to beat out of normal (sinus) rhythm. If the pressure gets too high and stays high for a time, it can increase the risk of a heart attack or stroke in the brain. Kidney failure and blindness can also occur over time in those respective organ systems with longstanding hypertension. Lastly, constant high pressure in the large arteries over time can result in the walls thinning and bulging out, also known as arterial aneurysms, of which rupture is a great and often fatal risk.

As stated earlier, there are many causes for hypertension, such as too much fluid in the system, smaller (contracted) vessels, stress and anxiety (causes the release of adrenaline like hormones which can speed up the heart and contract the vessels), and uncontrolled diabetes harms arteries and makes them “stiff,” which increases resistance to blood flow and raises pressure in the vessels. With many such diseases, we often see a genetic component. If your parents had hypertension, you have increased risk of this condition. If you are diabetic, you need to check frequently and control high blood pressure if it develops. If you like to eat a lot of salt, realize that this can cause you to retain fluid which can also lead to increased blood pressure. Controlling and managing the amount of stress in your life, or learning effective and constructive ways to cope with it, will also pay dividends. If you smoke, well.....you know, that is not helping your heart, blood vessels, and blood pressure, either.

If you have mild hypertension, you may not need medicine, and may benefit from diet adjustment, increased activity, and better habits (good advice for all). The medicines used to treat hypertension range from simple “water pills” which help you get rid of extra fluid in the vascular system, to others which work on the heart to slow it and remodel it making it beat more efficiently. Some work on other organs to regulate the production of enzymes which can lead to high blood pressure. Others work on the blood vessels themselves, relaxing them to allow the pressure inside to be reduced. These medicines should only be prescribed and used under the supervision of your healthcare provider. Please, do not start taking someone else’s blood pressure pills – as that may not be what is best for your type of high blood pressure, and could lead to unwanted side effects!

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