**CAP health & wellness handout: Hypertension**

**Also known as “high blood pressure”**

For many decades, hypertension has been considered a “silent killer” because there are so few symptoms that indicate the presence of hypertension. However, the potential consequences of untreated hypertension are many:

◆ Stroke ◆ Heart Attack ◆ Kidney Failure ◆ Blindness and more

Hypertension is defined as an excessively high pressure within the blood vessels of our bodies. It is usually described by two numbers: The Systolic pressure and the Diastolic pressure. This is usually written as xxx/xx (ie. 140/90 mm Hg). The “mm Hg” refers to the use of a mercury filled tube with a very precise weight that reflects the pressure in a cuff surrounding the arm that is filled with air. The amount of air in the cuff is increased to the point where the blood flow is completely blocked and then slowly reduced. While there are several different methods of measuring the blood pressure, the original method involved listening over an artery below the air-filled cuff for the sound of blood spurting into the vessel.

**Systolic:** This refers to the peak pressure produced when the heart contracts. The systolic pressure is the highest pressure that the system experiences and can cause the rupture of weak points in blood vessels. It is identified by the point at which the pulsation can first be heard or felt as the pressure in the cuff is lowered and is the first and highest number written.

**Diastolic:** This refers to the lowest pressure in the system that occurs when the heart relaxes between contractions. It is identified as the point at which the pulsations disappear, indicating that the pressure within the artery is greater than that in the cuff, and is the second and lower number when written.

It is important to recognize that our blood pressure is a highly variable factor and can fluctuate quite widely over just a short period of time. This is actually a very important aspect of how our circulatory system works, allowing the body to respond quickly to emergencies (“fight or flight”), and then relax back to a resting state when the danger passes.

Sustained hypertension, with systolic pressures exceeding 140 mm Hg for long periods of time can cause damage to blood vessels through “shear forces” on the walls of the vessels.

**Recognition and Identification of Hypertension:** Because hypertension produces very few or no symptoms, the only way to effectively recognize the development of hypertension is through regular screening. This usually involves having one’s blood pressure checked. It is possible to monitor one’s own blood pressure at home using one of the many devices now available, or at a pharmacy or medical office. There is actually an advantage in monitoring one’s own blood pressure at home as it more accurately reflects one’s day to day blood pressure.

**Prevention and Treatment:** Hypertension can often be prevented and treated through lifestyle activities, such as maintaining a healthy weight and a low salt diet. Regular exercise and relaxation training, with the daily use of a relaxation exercise has been shown to significantly lower blood pressure. Diet can also be an important factor as an excessive amount of salt in the diet of some people can actually cause hypertension.

When lifestyle measures are not sufficient to keep the blood pressure within a healthy range, medication may well be needed. There are many medications that can be used to treat hypertension, and these are usually prescribed by a physician.

Once hypertension has been diagnosed, it becomes even more important to monitor one’s own blood pressure on a regular basis and continue both lifestyle activities and appropriate medication to keep the blood pressure in a healthy range.

In general, aiming for a systolic pressure under 140 is a good goal. For those with diabetes, prior heart attack or stroke, or coronary artery disease, the recommended maximum pressure is often below 130. It is important to follow a physician’s guidance when managing hypertension.