



Article 24\*

## The Non-Medicated Life: Preventing and Treating High Blood Pressure, Part One

by Paul E. Lemanski, MD, MS, FACP

\*Originally published in Adirondack Sports & Fitness Magazine ([www.ADKSportsFitness.com](http://www.ADKSportsFitness.com))

*This is the 24th in a series on optimal diet and lifestyle to help prevent disease and responsibly avoid an over reliance on medications. This complementary approach is based in the medical evidence of the most successful research trials and the best science available. Any planned change in diet, exercise or treatment should be discussed with and approved by your personal physician before implementation. Consultation with a registered dietitian is strongly advised.*

Medicines are a mainstay of American life and the healthcare system not only because they are perceived to work by the individual taking them, but also because their benefit may be shown by the objective assessment of scientific study. Clinical research trials have shown that some of the medicines of Western science may reduce the risk of heart attacks, strokes, and cardiovascular death.

In the first twenty-three installments of the Non-Medicated Life, informed diet and lifestyle have been shown to accomplish naturally for the majority of individuals, many, if not most of the benefits of medications. This is especially true for the management of high blood pressure or hypertension. Diet, exercise and lifestyle have an important place in the prevention of hypertension. However, even for those with hypertension, especially those with early hypertension, non-medicated interventions may reduce or even obviate the need for medications. The non-medicated approaches to hypertension include dietary changes, lifestyle changes such as increased exercise and weight management, and supplements. Part 1 will define hypertension and begin to address dietary approaches and Part 2 will address the remainder. Please bear in mind, as is true with most prevention strategies, the earlier the intervention the better.

In order to address a non-medicated approach to hypertension, the first step is to define

it. Hypertension is a persisting, abnormal elevation of blood pressure in the arteries of the body. The arteries are conduits which carry oxygenated blood away from the heart, with the larger arteries having elastic fibers in their walls, allowing them to expand to accommodate additional volume. As the heart beats, the pressure in arteries normally cycles between a higher and a lower value. It is highest just after a heartbeat when the blood which has filled the main pumping chamber of the heart between beats is pumped into the arterial system expanding the elastic arteries with the additional volume. It is lowest just before the next contraction of the heart at which time the volume of blood in the arteries is less with some blood already squeezed into the veins by the recoil of the elastic arteries. Physicians speak of this higher and lower pressure as a ratio of the systolic pressure over the diastolic pressure. An optimal average resting blood pressure for most people is 120/80.

In order to address a non-medicated approach to hypertension, it is also necessary to describe the three types of hypertension because each may not respond equally well to such an approach. The most common type of hypertension is called essential hypertension. Essential hypertension may be likened to a thermostat which has been reset to a higher temperature. The furnace and blowers all function normally, but the

*(continued on next page)*



CENTER FOR  
PREVENTIVE MEDICINE  
Prime Care Physicians, PLLC 

temperature is too high.

While the average blood pressure cited above is considered optimal for most people, it must be emphasized that even in people with normal resting blood pressure, values may change minute by minute and transient significant elevations above the average may be normal. It is not an uncommon experience for patients rushing to an appointment with their physician to initially have elevation of blood pressure, only to have the pressure return to a normal level on a second retest minutes later. People who truly have essential hypertension will never return to a normal range even in sleep.

Another type of hypertension is called secondary hypertension in which the elevation is secondary to an identifiable cause. An example would be hypertension caused by a narrowing of an artery going to a kidney. Physicians typically check for secondary causes because correcting the cause may cure the hypertension. Finally, labile hypertension is an elevation of pressure in which blood pressure may return to the normal range, but due to environmental factors such as a stressful job, may be elevated for the majority of the day and cause damage to organs regardless.

It is strongly recommended that prior to implementing a non-medicated approach to hypertension, individuals diagnosed with hypertension or wishing to prevent hypertension and currently taking medication for other conditions discuss the issue in detail with their personal physician to identify type, severity and possible contraindications to some suggestions made below. For example, to increase potassium intake while taking certain medications may cause sudden, serious and indeed life threatening alterations in blood potassium levels without any warning symptoms. Moreover, to discontinue or avoid taking prescribed high blood pressure medications without your physicians guidance and approval could lead to heart attack, stroke and possibly also be life threatening.

A non-medicated approach to preventing and treating hypertension, especially essential hypertension, first may include a change in diet.

For many individuals, lowering salt (sodium chloride) intake may lower blood pressure. A simple way to lower sodium intake is to avoid salty foods such as potato chips and pretzels, avoid using a salt shaker, and avoid hidden sources of sodium such as prepared soups, pickles and deli meats. Fast foods also contain a large amount of salt and should generally be avoided. What is not usually appreciated is that for individuals sensitive to salt, eating a high salt meal even once a week can increase the blood pressure for four days. Thus, two salty meals per week evenly spaced through the week may cause a continuous elevation of blood pressure. Learning to read food labels also is an excellent way to reduce sodium intake. Generally, it is best to reduce sodium to less than 2,000 mg/day.

An alternative alteration in diet which may significantly reduce blood pressure involves the more comprehensive changes shown in the DASH (Dietary Approaches to Stop Hypertension) Trial. The DASH trial investigated the use of a control diet low in fruits and vegetables versus a diet high in fruits and vegetables versus a combination diet consisting of more fruits and vegetables, an increase in low fat dairy products as well as a restriction in saturated fat and total fat. The combination diet is subsequently referred to as the DASH combination diet. Each of the three diets had the same number of calories and did not result in weight loss.

In the DASH trial individuals with blood pressures under 160/80-95 were randomly assigned to one of the three diets. Within two weeks, individuals with hypertension randomized to the fruits and vegetable diet had reduced the systolic by 5.5 mmHg and the diastolic by 3.0 mmHg. In hypertensive individuals randomized to the DASH combination diet systolic pressure was reduced 11.4 mmHg and diastolic pressure was reduced 5.5 mmHg. Those considering a DASH diet should first discuss this with their physician and should be referred to a registered dietitian to implement properly.

*(continued on next page)*

In summary, hypertension may be effectively treated with a combination of diet, lifestyle change, and exercise in certain individuals depending on type of hypertension, severity, and related medical conditions which are best known to one's personal physician. After a discussion and with the direction of one's physician, alterations in diet may help lower blood pressure. Although modest, reductions as seen in the DASH combination diet are significant and when added to other dietary interventions and combined with weight loss and exercise, may, as will be shown in Part 2, rival reductions seen with medication.

**Paul E. Lemanski, MD, MS, FACP** is a board certified internist with a master's degree in human nutrition. He is director of the Center for Preventive Medicine, Albany Associates in Cardiology, Prime Care Physicians, P.C.

*Dr. Lemanski is an assistant clinical professor of medicine at Albany Medical College and a fellow of the American College of Physicians.*