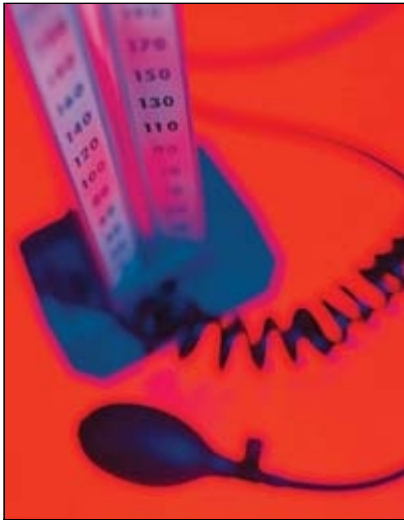


LE Magazine August 2003

REPORT

The New Guidelines For Hypertension
How Mainstream Medicine Has Again Caught Up With Anti-Aging Advocates

By Dr. Edward R. Rosick



It has become very interesting to watch mainstream medicine's reaction to the burgeoning interest in anti-aging medicine over the past decade. The American Medical Association (AMA) continues to bury its collective head in the sand when it comes to new and exciting research in the anti-aging field. It's only when mainstream medicine is faced with a mountain of overwhelming evidence (as in the case of folic acid protecting against birth defects) does it finally concede that perhaps there is some merit in what the anti-aging and holistic medicine proponents are saying.

Since we are fortunate to live in a free country, organizations like the AMA can believe and say what they want. The trouble is that when a respected mainstream medical organization pronounces something worthless, the majority of physicians and therefore their patients, often tend to believe these status-quo pronouncements. And when the pronouncement is about something vitally important, words can literally cost people their health or even their lives.

Hypertension-the silent killer of millions

For decades, the U.S. government has been putting out health guidelines that have been by and large advocated by mainstream medicine. One of these guidelines concerns the 'optimal' level of blood pressure. High blood pressure, or hypertension, affects over 50 million people in the United States and contributes to the death of almost a quarter million people a year.¹

Hypertension, often called 'the silent killer', since its devastating health effects take place insidiously over a period of decades, affects both men and women. It is estimated that two million new cases of hypertension will be diagnosed each year in the United States. While hypertension can strike any person at any time of their life, it's more commonly seen in older individuals-over 70% of American women and 50% of men over the age of 70 have hypertension. Other risk factors for developing hypertension include high cholesterol levels, smoking, obesity and diabetes.¹

How high is too high?

The pressure that a doctor takes when they place a sphygmomanometer around your arm is a result of the force of blood against blood vessels in the body. Doctors record blood pressure as two pressures-the systolic pressure (the force of blood in blood vessels as the heart contracts) and the diastolic pressure (the force of blood in blood vessels as the heart relaxes between beats). For many years, mainstream medicine guidelines defined normal blood pressure as systolic pressure of 130 or below and diastolic pressure of 85 or below. High normal was defined as pressures of 131 to 139 systolic and 86 to 89 diastolic. Hypertension was defined as blood pressure at or above 140 systolic over 90 diastolic.

The 'new' guidelines for hypertension

The problem with the above guidelines for blood pressure is that what was considered high 'normal' (i.e., 139/89) and even normal (130/85) is too high for optimal health. For years, Life Extension magazine has been informing its readers that failure to keep their blood pressures below 120/85 could result in serious health problems such as strokes and heart disease.^{2,3} Yet year after year, the government and the AMA kept reassuring the public that their blood pressure was within normal limits, and therefore, within a 'healthy' range, even if it was well above 120/85.

Fortunately, albeit at far too late a date, new government guidelines have recently been published which state that blood pressure should be considered normal only if it is at or below 119/79.⁴ Those with blood pressures of 120/80 up to 140/90 are now considered 'prehypertensive' and are encouraged to take immediate measures to decrease their blood pressure, such as daily

exercise, decreasing salt in their diet and consuming no more than two alcoholic drinks a day.

What causes high blood pressure?

Before natural strategies for controlling hypertension are discussed, it's worthwhile taking a few minutes to discuss hypertension in more detail. Hypertension is generally referred to as one of two types: essential or primary. It's still not known what causes essential hypertension, the type that accounts for 90% to 95% of high blood pressure, but current lines of research indicate that significant factors include a complex interaction between genetic, environmental and other variables. Secondary hypertension, a much less common type of hypertension, is high blood pressure caused by known medical conditions, such as kidney disease, pregnancy or sleep apnea.



Hypertension can damage your brain, heart, kidneys and more

At first glance, it may seem like having blood pressure that's elevated 10 or 15 points above normal should not be that big of a deal. When blood pressure is only elevated for a few months, as in pregnancy-induced hypertension, then it really isn't of much concern. The problem arises when blood pressure is elevated over a period of years and decades. During that time, hypertension can cause significant damage to blood vessels that supply life-nourishing oxygen and nutrients to all parts of the body. The brain, heart, kidneys, along with all other major body parts can all suffer irreparable harm from long-term elevation in blood pressure.

It's important to remember that even an elevation in one of the pressures (systolic or diastolic) can have disastrous long-term health consequences. Isolated high systolic pressure, which is the most common form of high blood pressure in older adults, is thought by many to be a significant indicator of heart attacks and strokes in people middle-aged and older. Isolated high diastolic pressure is a strong risk factor for heart attacks and strokes, especially in younger adults.

Treating high blood pressure only with prescription medications can be expensive and may cause potentially dangerous side effects. With over 50 million Americans having high blood pressure (and with the new guideline, that number is sure to rise), pharmaceutical corporations have introduced a large number of medications to combat this deadly health condition and in fact, studies have shown that a significant portion of prescribed medications in the U.S. are anti-hypertensives. With drug costs rising at an annual rate of at least 12% a year since 1993, patients, especially the elderly, can end up spending thousands of dollars a year on prescription medications to control their blood pressure. While the majority of prescription drugs (including diuretics, calcium channel blockers and ACE inhibitors) that are used to control hypertension work well, they can have troublesome to potentially deadly side effects, including hyperglycemia (high blood glucose), tinnitus (constant ringing or buzzing in the ears), kidney damage and heart failure.

Hypertension can be controlled naturally

For people with hypertension who are hesitant to use expensive prescription medications with potentially significant side effects, there are recognized non-drug strategies that may significantly help in controlling high blood pressure. Just by incorporating lifestyle modifications such as dietary changes, smoking cessation and weight loss, blood pressure can be brought down and controlled in a significant number of people.

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Eating right with the DASH diet

The Dietary Approaches to Stop Hypertension (DASH) diet is recommended by both mainstream and integrative medical practitioners as a first line approach to manage hypertension.⁵ The DASH diet is high in fruits, vegetables and other nutritious foods that are rich in potassium, calcium and magnesium (essential minerals that are discussed in more detail below). People who utilize the DASH diet are encouraged to decrease their saturated fats and replace them with foods high in monounsaturated fats and omega-3 fatty acids, such as those found in fish. Salt restriction is also a major part of the DASH diet-recommendations are that people with hypertension limit their salt intake to less than 2,400 mg (about one teaspoon) a day. Studies have shown that people who follow the DASH diet can decrease their systolic pressure by 11 points and their diastolic pressure by about six points.⁶



Smoking cessation is essential for blood pressure control

It should come as no surprise that cigarette use is a major contributing factor of high blood pressure. Even just smoking one cigarette can cause transient blood pressure increases of 10 points or more. People who smoke on a regular basis will have a sustained rise in their blood pressure due to the effects of nicotine and other dangerous chemicals found in cigarettes.⁷ With all the other known health risks associated with smoking-heart disease, diabetes and impotence, to name just a few-smoking cessation should be at the top of anyone's list that is looking to improve his or her blood pressure and overall health.

Obesity-an ever-growing problem and a cause of hypertension

Obesity is literally a huge public health problem in the Western world and is a significant contributor to many modern diseases, including hypertension. Being obese puts a person at increased risk of developing hypertension at an early age, as well as developing more severe hypertension. The good news is that with weight loss, hypertension can be significantly controlled; in a seven-year study of people who restricted their salt intake and were on a weight loss program, 80% of the people who stayed on the diet lowered their blood pressure to such a degree that they were able to completely stop their prescription blood pressure medication.⁹

Natural supplements can help in the battle against hypertension

Besides making some common-sense health decisions, such as following a DASH-type diet, quitting smoking and maintaining a healthy body weight, hypertension can be combated with the judicious use of natural supplements. While mainstream practitioners would have you believe (and probably believe it themselves) that expensive prescription medications are the only proven way to combat hypertension, the truth is that there are some scientifically proven supplements that can help keep your blood pressure below that all important 120/80 figure.

Potassium, calcium and magnesium-essential minerals for controlling hypertension

One of the ways in which the DASH diet helps to decrease hypertension is through its emphasis on eating significant amounts of fruits and vegetables-foods that are high in potassium, calcium and magnesium, minerals that are an essential component of any hypertension-controlling regime. There have been numerous studies showing that changing to a diet high in these vitally important minerals, or taking them as supplements, can significantly help control hypertension.^{10,11,12,13} A very robust study, started in 1980, followed 58,218 nurses aged 34 to 59 years over a four-year period and recorded their dietary habits, as well as their risk of developing hypertension. Over that four-year period, 3,275 of those women developed high blood pressure, with advancing age, obesity and excessive alcohol consumption being the strongest predictors of hypertension development. However, the authors of the study noted that the amounts of dietary calcium and magnesium consumed were also strong indicators for hypertension. Women who consumed at least 800 mg of calcium and 300 mg of magnesium were at significantly less risk for developing hypertension when compared to women who consumed less of these minerals.¹² A recent review article that examined the data from several

large studies done over the past 15 years on the association between calcium, potassium and magnesium intake and hypertension came to the conclusion that "it appears prudent for physicians and health care providers to ensure that patients who are either hypertensive or at risk of developing high blood pressure consume adequate calcium, potassium, and magnesium on a daily basis."¹³

Vitamin E

It seems like you can't read a health-related magazine and not see at least one article on the many beneficial effects of vitamin E. Now the list of those beneficial effects has gotten even longer as studies have indicated that vitamin E supplements can help in the fight against hypertension. One manner in which vitamin E may control hypertension is through its actions as an antioxidant, molecules that decrease the destructive effects of free radicals. These highly reactive compounds are formed continuously in the body and are now being linked to a variety of disease states, including hypertension. Preliminary studies have shown that people who have hypertension often have low levels of essential antioxidants such as vitamin E.¹⁴ While human studies are forthcoming, animal studies with rats have shown that supplementation with a form of vitamin E (gamma tocotrienol) protected the animals against the development of age-related hypertension.¹⁵

Vitamin C

Like vitamin E, its antioxidant first cousin, vitamin C is proving to be increasingly useful in treating more and more age-related disease states including heart disease, cancer and hypertension. Several studies have now shown that there is a significant link between vitamin C levels and hypertension.^{16,17,18,19} Studies done as early as the 1980s showed that people who had low levels of vitamin C intake had higher levels of hypertension.^{16,17} Other randomized, placebo-controlled studies have shown that 500 mg of vitamin C daily caused a statistically significant drop in blood pressure in both men and women who had hypertension.¹⁸ The manner in which vitamin C works to control hypertension is still being studied. While some researchers believe that vitamin C controls hypertension through its antioxidant actions, others believe that vitamin C may also work through its role of modulating the activity of a chemically simple, yet very important gas known as nitric oxide.

Arginine

Similar to vitamin C, arginine, an amino acid, may be a potent weapon in the fight against hypertension. Arginine is thought to work through its ability to produce nitric oxide (NO), a simple gas made up of nitrogen and oxygen that penetrates and crosses the membranes of almost all cells in the human body and helps regulate many cellular functions. In blood vessels, NO is extremely important because it regulates the tone of the layer of cells known as endothelial cells that line the inside of blood vessels. If these endothelial cells become dysfunctional, they can cause spasms or constrictions of the blood vessels that can then lead to hypertension.

With this knowledge, researchers have begun to examine the effects of NO enhancers such as arginine on hypertension, and the results have been quite promising. A recent study from Italy examined blood pressure changes among six male volunteers who were placed on three different diets.²⁰ The first diet consisted of foods that contained three to four grams of arginine. The second diet was high in arginine-rich foods so that these volunteers consumed about 10 grams of arginine daily. People in diet three ate the same foods as people in diet one, but took 10 grams of arginine supplements daily. After only one week on either diet two or diet three (the arginine-rich/supplementation diets) significant decreases in blood pressure were observed in the volunteers on those diets, as compared to those on diet one. Because of these impressive results, the authors concluded "the present study indicates that an approximately two-fold increase in dietary arginine intake had significantly hemodynamic and metabolic effects in a group of healthy men."

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Are You Taking The Proper Anti-Hypertensive Medication?

The Life Extension Foundation has repeatedly warned those with high blood pressure to not depend on one-a-day dosing of anti-hypertensive drugs. The reason is many of these drugs do not provide complete 24-hour protection. When an anti-hypertensive drug wears off, the patient is vulnerable to suffering a stroke. One solution to this problem is to take a lower dose of the anti-hypertensive drug twice a day, even though the FDA claims that one-a-day dosing is adequate.

Failure to keep blood pressure at optimal low levels (below 120/80) dramatically increases mortality risk. The government used to state that blood pressure readings as high as 140/90 were acceptable,¹⁸ but published human studies clearly show that maintaining levels below 120/80 confer longevity and protection against heart attack and stroke.^{19,20}

The best selling anti-hypertensive drugs in the United States are not necessarily the most effective. Drug company advertising and physician "force-of-habit" prescribing often results in hypertensive individuals taking drugs that do not provide optimal blood pressure lowering effects.

Life Extension long ago recommended a class of anti-hypertension drugs known as angiotension II receptor blockers. Some of the first drugs approved in this class were Cozaar® and Hyzaar® and Life Extension suggested them as first line therapy. The only drawback to these drugs was that they did not provide consistent one-a-day protection.

A new drug in this class is called Benicar®, and a recent study indicates that it may be the first to provide true 24-hour blood pressure reduction.²¹ Typical starting dose of Benicar® is 20 mg a day. For patients requiring further reduction in blood pressure, the dose can be increased to 40 mg a day after two weeks.

Optimal control of hypertension requires blood pressure checks throughout the day. This is the only way to make sure the anti-hypertensive drug is not wearing off and endangering the arterial system. Even if you are taking Benicar®, it is still critical to verify it is really keeping your blood pressure suppressed during the entire 24-hour period.



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CoQ10

While CoQ10 has been in the news lately in regards to its ability to fight Parkinson's disease, several studies have shown that this important supplement can also help decrease blood pressure. 21.22.23.24 A recent randomized, double-blind placebo controlled trial reported on the efficacy of CoQ10 in combating hypertension in a group of 76 men and women with isolated systolic hypertension. 25 For 12 weeks, the patients were either given 60mg/day of CoQ10 or a placebo. At the end of the 12 weeks, the patients taking the CoQ10 showed a mean reduction in their systolic blood pressure of approximately 18 points, leading the authors of the study to conclude that "our results suggest CoQ10 may be safely offered to hypertensive patients as an alternative treatment option."

Garlic

Garlic has been used for centuries as a folk remedy for a variety of ailments. Now, modern medicine is (again!) catching up with age-old wisdoms and demonstrating through rigorous scientific testing that garlic indeed is important for both its culinary and medicinal uses. Multiple reports have shown that both fresh garlic and garlic supplements can slightly lower total cholesterol and triglyceride levels.²⁶ An article in the prestigious Journal of Hypertension examined the results of seven randomized, placebo-controlled studies on garlic's effect on hypertension.²⁷ The authors of the study found that garlic supplements, in the dose of 600 to 900 mg/day (which is roughly equivalent to two to three cloves of fresh garlic), reduced systolic blood pressure from 7.7 to 11.1 points and diastolic pressure by 5.0 to 6.5 points.

Fish oil

Fish oil supplements have gained the 'honor' of being one of the few nutraceuticals that have been endorsed by a major health organization in the United States—in this case, the American Heart Association (AHA). In the fall of 2002, the AHA made the formal declaration that people with known heart disease should consume approximately 1 gram of the active ingredients in fish oil (i.e., the omega-3 fatty acids EPA and DHA). In order to follow that recommendation, people who don't consume large quantities of fresh fish every single day need to take fish oil supplements.

In addition to being quite useful in preventing the deadly consequences of heart disease, fish oil supplements also are proving to be effective fighters of hypertension. A randomized, double-blind, placebo-controlled study of 78 people with untreated hypertension showed that fish oil supplements, besides decreasing triglycerides and LDL cholesterol levels, caused a statistically significant decrease in both systolic and diastolic blood pressure measurements.²⁸

Preventing hypertension is a matter of life and death

It is basic human nature to promptly respond to immediate threats to our health and safety. However, threats such as hypertension, which can take years or decades to exert its damaging effects on the body, are easy to forget about or rationalize in an attitude of "it can't happen to me." Unfortunately, such an attitude can lead to heart disease, impotence, non-Alzheimer's dementia and an early death. By following a healthy lifestyle that includes a diet high in fruits and vegetables, avoiding all tobacco products, maintaining a reasonable weight and taking safe and effective supplements, stealth diseases such as hypertension can be kept from stealing your health and your life.



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