



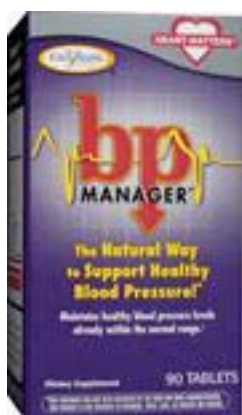
Control Your Blood Pressure

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Over 60 million Americans two-thirds of whom are under the age of 65-suffer from high blood pressure. Often called "the silent killer," high blood pressure can wreak havoc on the human system without any overt symptoms. In fact, most Americans don't realize they have high blood pressure until they've already experienced cardiovascular damage.

by Frances E FritzGerald

High blood pressure is a dangerous condition that can lead to stroke, enlarged heart, congestive heart failure, kidney and eye damage, atherosclerosis (hardening of the arteries), and premature death.



High blood pressure is also costly. According to R. McCarthy, in "The pharmacological treatment of hypertension: an update" (Drug Benefit Trends 9(9):7173, 77, 1997, the complete cost of high blood pressure in the United States totaled \$23.74 billion in 1995. That figure includes direct medical expenses, lost wages, and decreased productivity.

Explaining blood pressure Blood pressure refers to the force of the blood stream against the walls of the arteries as they deliver blood from the heart to the rest of the body. At the end of each artery, tiny blood vessels called arterioles transport blood to all the tissues. When the muscular walls of the arterioles tighten, blood pressure rises. When the muscle relax, blood pressure drops, explains The PDR "Family Guide to Nutrition and Health. (Sifton D [ed]). Montvale: Medical Economics, 1995.

Normal healthy blood pressure

ranges from about 110/80 to as high as 140/90. The higher number refers to systolic pressures which is the heart's contractions. The second number, the diastolic pressure, measures the rests between heartbeats.

In Principles of Ambulatory Medicine, Third Edition, edited by L.R. Barken (Williams and Wilkins), 1991, the levels are listed as:

- Normal - Less than 140/90
- Borderline - 141/91 to 159/94
- High - 160/90 or more

Who gets it?

High blood pressure, also known as hypertension, is particularly common in Western societies. Although high blood pressure can affect anyone, certain populations are especially vulnerable: Those with one or two hypertensive parents, individuals over the age of 40, heavy drinkers, African Americans, and obese people. Men are typically at higher risk of hypertension than women.

Barry Elson, M.D., a physician from Northampton, Massachusetts, adds that "Patients on a high sodium diet, or patients with persistent stress in their life that they haven't learned

how to manage properly" are also susceptible.

What causes it?

It is important to distinguish between the two primary types of high blood pressure. Secondary hypertension is usually triggered by kidney damage or endocrine dysfunction. Dr. Elson adds that thyroid dysfunction, food allergies, or toxic metal poisoning can also lead to high blood pressure. Secondary hypertension is usually controlled by addressing the primary cause.

Essential hypertension, which accounts for about 90 percent of all high blood pressure cases has no precise, absolutely clear cut cause. In this article, we will focus on essential hypertension.

Although there are still questions about the roots of essential hypertension, many researchers name two culprits: The typical American diet and lifestyle. Following are some of the factors implicated in this potentially deadly condition:

High-fat, high-sodium diet. William Lee Cowden, M.D., a cardiologist from Dallas, Texas, blames the average American diet for our high rate of hypertension.



He points out that high blood pressure is almost exclusively found in Western societies. Interestingly, vegetarians who normally eat a low fat, low sodium diet have a profoundly lower incidence of hypertension than nonvegetarians.

Fat imbalance. Julian Whitaker, M.D., author of *Is Heart Surgery Necessary?* (Washington: Regnery Publishing, 1995), says the Western diet contains too much saturated fat. We need more essential fatty acids to help clear the system of fat solids.

Dr. Barry Elson concurs. He recommends fish oil or flaxseed oil rich sources of omega-3 fatty acids to his hypertensive patients. "Omega-3 fatty acids decrease platelet aggregation" he explains, which reduces the risk of dangerous blood clots.

Nutritional deficiencies. People whose diets are low in potassium, magnesium, calcium, and vitamin C are at greater risk of hypertension.

Obesity. High blood pressure is almost six times more common among overweight people ages 20 to 44, and twice as common in those 45 to 74.

Smoking Chronic smoking decreases blood flow to the brain, increasing the risk of stroke among smoking hypertensives. In addition, smokers are more likely to consume plenty of alcohol, coffee, and sugar other factors associated with hypertension. Smokeless tobacco has also been implicated in high blood pressure.

Alcohol. Heavy drinking is another indicator of high blood pressure. *The PDR Family Guide to Nutrition and Health* recommends a daily alcohol intake of no more than one drink for women and two drinks for men. (A drink equals an ounce and a half of liquor, one average glass of wine, or a standard can of beer.)

Atherosclerosis. A buildup of fatty deposits can narrow the blood vessels, leading to a rise in blood pressure. The increased resistance means the heart has to work harder to pump

blood through the body, placing it under incessant strain.

High sugar intake. Dr. Elson cites several studies in which "people who had more sugar in their diet had markedly increased blood pressure." Other triggers for hypertension include lack of exercise, stress, diabetes, and environmental factors.

Blood pressure drugs

When is standard blood pressure medication indicated? In cases of severe hypertension (160+/115+), a drug may be necessary to initially lower it. Although Dr. Elson prefers lifestyle changes to drug therapy, he concurs that medication is occasionally necessary. "Some people still need medicines and there is a place for them, because high blood pressure can cause strokes and heart disease," he says. "But I would venture to say that most patients on high blood pressure medicine do not need it or will not need it if they do the proper lifestyle modifications and nutrient support."

Essential nutrients for blood pressure

What you eat has a powerful influence on your blood pressure—as well as almost every other aspect of your health. Population studies confirm that certain nutrients promote healthy blood pressure, and certain nutritional deficiencies can contribute to hypertension.

The most well-known dietary bugaboo for hypertensives is sodium. Sodium chloride does increase blood pressure in certain salt-sensitive individuals. More recent research, however, suggests that for most people, the sodium/potassium ratio is more significant than sodium alone. We should be consuming about five times more potassium than sodium (5:1), but the typical American diet includes half as much potassium as

sodium (1:2).

By eating more potassium-rich foods, you can reverse the ratio and promote healthy blood pressure. Foods such as bananas, oranges, tangerines, beans, dried peas, and potatoes provide a wealth of natural potassium. Magnesium is another vital nutrient for blood pressure. One theory is that magnesium activates the body's cellular membrane pump, which pumps sodium out and potassium into the cells.

Population studies have demonstrated that where the magnesium content is high in the water supply, the rates of heart disease and hypertension are lower, according to P.K. Whelton and Klag in "Magnesium and blood pressure: review of the epidemiologic and clinical trial experience" In a clinical trial, magnesium supplementation reduced blood pressure in 19 of 20 hypertensives, compared to zero of four in the control group.

Magnesium rich foods include nuts (especially almonds, cashews, and pecans), rice, bananas, potatoes, wheat germ, kidney and lima beans, peas, soy products, molasses, oats, bran, and fish. Calcium counts, too. Many hypertensives have a lower daily calcium intake than individuals with healthy blood pressure, reports *Alternative Medicine The Definitive Guide*, from the Burton Goldberg Group (Puyallup: Future Medicine Publishing, Inc., 1994). People with high blood pressure are advised to eat more calcium-rich foods such as nuts, salmon, sardines, low-fat dairy foods, watercress, kale, broccoli, turnip greens, collard greens, and mustard greens.

Anti-hypertensive diet

So what is the ideal, blood pressure friendly diet? The following guidelines can help you keep your blood pressure on track:

Follow a low fat diet. You should get no more than 25 percent of your

total daily intake of calories from fat, according to author and physician Ray Sahelian, M.D. Fats raise blood pressure by making the blood thicker. They also activate hormones that narrow the blood vessels. Furthermore, restricting the fat in your diet will help you lose weight, which almost always lowers blood pressure. Restricting your consumption of animal products is an excellent way to cut down on saturated fat.



Alternative Medicine lists specific hypertension fighting foods: avocados, bananas, cantaloupe, honeydew melon, grapefruit, nectarines, oranges, asparagus, broccoli, cabbage, cauliflower, green peas, potatoes, and squash. Onions, garlic, and celery are also anti-hypertensive foods.

Lifestyle recommendations

Diet is only one component of your blood pressure strategy. Since excess body fat is a primary risk factor in hypertension, it is critical to maintain a healthy weight. The above dietary recommendations will help, as well as consistent physical activity.

One study of nearly 15,000 Harvard male alumni found that regular physical exercise was closely associated with a reduced risk of hypertension, reports Michael Janson, M.D., in "Drug free management of hypertension" (*The American journal of Natural Medicine*" 4(8:14-17, October 1997). The study found that the sedentary men had a 35 percent higher risk of hypertension than their active counterparts.

Other critical lifestyle changes include eliminating smoking, and restricting or avoiding caffeine.

Naturally, sweeping lifestyle changes can be very difficult. Dr. Elson says, "I have a stress management counselor and a nutrition and exercise counselor, and we'll get them involved. Patients get a lot of reinforcement and a lot of support toward making these changes. Some patients need a lot of work and a lot of help, and it is very important that we give them the support they need."

Summary

Certainly, standard blood pressure medications may be indicated in cases of severe hypertension. The implications of untreated high blood pressure are too serious to go untreated. And for any serious health condition like hypertension, one should always consult a qualified healthcare professional.

However, in cases of borderline to moderate hypertension, diet, lifestyle, and supplements can address the causes instead of merely masking the symptoms. So if your blood pressure isn't dangerously high, suggest to your doctor that you'd like to try lifestyle changes before taking a drug. You may discover that by making smart choices, you can control your own blood pressure. And you'll have yet more proof that, to a great degree, you are truly in charge of your own health.

Frances E. FritzGerald is the editor at IMPAKT Communications, Inc. She has a Bachelor of Science degree in psychology from Grand Valley State University in Allendale, MI, and a Master's degree in English from the University of Illinois, Chicago. She is also an ad hoc composition professor at the University of Wisconsin, Green Bay.

Increase your intake of potassium, magnesium, and calcium. You can do this by including more plant foods in your meals.

Reduce your intake of salt

This is particularly important for salt sensitive individuals. Sodium is present not only in table salt, but also in many processed foods. You can cut down on sodium by emphasizing fresh, natural foods.

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- Barry Elson, M.D.

Restrict your consumption of refined sugars.

Refined sugar is often converted to body fat, which is a primary risk factor in hypertension.

Reduce your intake of alcohol. Chronic alcohol intake is one of the strongest indicators of hypertension.

Natural Compounds For Healthy Blood Pressure

Diet, exercise, and lifestyle changes

are essential for controlling blood pressure.

Specific foods and supplements may also help

Hawthorn can widen blood vessels, especially; the coronary arteries; according to a report published in the *Lawrence Review of Natural Products* The relaxation of the blood vessels smooth muscles appears to cause this effect. in addition, some of the flavonoids in hawthorn help prevent the narrowing of blood vessels, explains B. Havsteen in *Flavonoids*, a class of natural products of high pharmacological, potency (*Biochem Pharm* 32: 1141-1148,.1982).

Cayenne reduces the risk of atherosclerosis which can lead to hypertension.

Kudzu contains a chemical (puerarin) that decreased blood pressure by 15 percent in laboratory animals, reports James A. Duke, Ph.D. In addition puerarin has many times the antioxidant activity of vitamin E thus reducing the risk of. heart disease and cancer:

Saffron contains a blood pressure lowering chemical called crocetin. Some researchers speculate that the low rate of heart disease in Spain is due the Spaniards high consumption of saffron.

Valerian promotes higher levels of gamma amino butyric acid (GABA) in the body. GABA helps regulate blood pressure. In addition, valerian has sedative activity, which has a beneficial impact on blood pressure.

Potassium supplementation may be especially beneficial for hypertensives over the age of 65, suggests naturopath and author Michael T. Murray, N.D., in *Encyclopedia of Nutritional Supplements* (Roclin: Prima Publishing, 1960. He writes, "The elderly often do not respond to blood pressure lowering drug, which makes the use of potassium supplementation an exciting possibility."

Magnesium supplements may also lower blood pressure. One double-blind study focused on 91 middle aged and elderly women with mild to moderately high blood pressure. They randomly received either 480 mg of magnesium aspartate or a placebo each day for six

months. At the end of the study, both systolic and diastolic levels dropped significantly in the magnesium group, according to J.C.M Wtteman, et al., in "Reduction of blood pressure with oral magnesium supplementation in women with mild to moderate hypertension" (*American Journal of Clinical Nutrition* 60:129-135, 1994)

Vitamin C supplementation has exerted a modest, blood pressure lowering effect in people with mild hypertension, reports Encyclopedia of Nutritional Supplements. One way Vitamin C may support healthy blood pressure is by promoting the excretion of lead, which is linked to hypertension.

CoQ 10 shows promise for hypertensives. *Coenzyme Q10* is a nutrient that naturally occurs in our bodies. One study investigated 26 hypertensives who took 50 mg of CoQ 10 twice a day or 10 weeks. At the end of the study, systolic blood pressure had dropped from an average of 165 to 147, and diastolic blood pressure dropped from 98 to 86, according to Ray Sahelian, M.D., in *Coenzyme Q10: Nature's Heart Energizer* (Green Bay: IMPAKT Communications,, Inc., 1997) .

Garlic helps reduce cholesterol as well as blood pressure, reports Dr. Duke in *The Green Pharmacy* Emmaus: Rodale Press; 1996). In a 1993 study, people with high blood pressure consumed one clove of garlic a day for 12 weeks. At the conclusion of the study demonstrated significantly lower diastolic blood pressure and cholesterol levels.

Onions are also recommended for hypertensives. In one study two to three tablespoons of onion essential oil a day lowered blood pressure in 67 percent of people with moderately high blood pressure. Their systolic levels fell an average of 25 points and their diastolic readings fell 15 points. Onion essential oil is not available but you can promote healthy blood pressure by adding more onions to your diet.

Fennel, oregano, black pepper, basil and tarragon all contain several blood pressure lowering compounds.