Solving the Mystery of Hypertension

Identifying and Correcting the Cause Can Permanently Reduce High Blood Pressure

High blood pressure (hypertension) is a common, and potentially serious, health issue. According to CDC statistics, about 47% of adult Americans have hypertension. That's well over 100 million people. The CDC also says that only one in four of these people have their hypertension under control. Many don't even know they have it and for many others, the medications they are taking are not keeping their blood pressure in healthy ranges.

Although it's a serious problem, high blood pressure is not a disease, per se, but rather a symptom of problems with circulation. It needs to be addressed effectively because it increases the risk for several potentially deadly health issues. For starters, hypertension forces the heart to work harder, which can lead to various forms of heart disease. It also increases the risk of blood clots forming, which increases the risk of myocardial infarction (heart attacks), strokes, and various forms of thrombosis. It can cause blood vessels to blow from the pressure, causing an aneurism and can also damage the kidneys, eyes, brain, and other organs. So it's important to monitor your blood pressure and keep it within healthy ranges.

Understanding the High's (and Low's) of Blood Pressure

Blood pressure is measured by two numbers, systolic and diastolic, as in 120/80. Systolic is the first number, which represents the pressure exerted when the heart pumps blood through the blood vessels. The second number, or diastolic pressure, is the pressure in the blood vessels when the heart is not beating. It is also called the resting blood pressure.

Adult blood pressure is considered normal when it falls between 90-130 systolic and 60-90 diastolic or 90/60 to 130/90. While blood pressure above 130/90 is classified as hypertension, research has shown that 115/70 to 125/80 is optimal for health and longevity. If your blood pressure does not fall in this range, the information in this newsletter can help you properly regulate your blood pressure to protect your health.

Drugs Aren't the Answer

The drugs commonly used to treat high blood pressure don't provide a lasting solution to the problem. People who start taking high blood pressure medications often do so for the rest of their life. This is because they don't address the causes of high blood pressure, they only provide symptomatic relief. In addition they often stop working after a while and new drugs have to be prescribed. To permanently and naturally solve the problem, you need understand what's happening when blood pressure is high.

The diastolic pressure (the second number) is the pressure needed to maintain full blood vessels. The blood vessel must be able to expand or contract to match the volume of liquid it is carrying. If the diastolic pressure increases the heart must work harder, increasing the systolic pressure, to move the blood where it needs to go.

Your body has various signaling systems that dynamically raise or lower blood pressure according to the demand for blood supply throughout your body. To respond to these signals, arteries have muscular walls that can expand and contract, increasing or decreasing the diameter of the blood vessels. This regulates flow while increasing or decreasing the pressure.

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Important Notice

The information in *Sunshine Sharing* is for educational purposes only and should not be used to diagnose and treat diseases. If you have a health problem, we recommend you consult a competent health practitioner before embarking on any course of treatment.

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To put it simply, if there is insufficient blood flow to the extremities of the body, and the arteries can't relax to accommodate increased flow, then the heart will pump harder so the blood can get where it needs to go. This increases the pressure, but also strains the heart and other organs.

Drugs work by tampering with the signaling systems that regulate blood flow. However, if the circulation to various parts of the body continues to be obstructed, the body will compensate to increase the pressure in the attempt to get blood where it is needed. Therefore, the only lasting solution is to find out what's obstructing circulation and remove it so the blood can get where it needs to go.

Real Causes—Natural Solutions

With this understanding, we're now prepared to look at the causes of hypertension. We'll do this by identifying the most common root causes of high blood pressure and how popular high blood pressure medications try to work around them.

Magnesium and Calcium Channel Blockers

One class of drugs used to treat high blood pressure are calcium channel blockers. To understand these medications you need to understand the role calcium and magnesium play in muscle contraction and relaxation. When a muscle contracts, calcium is drawn into the muscle cells. As the muscle relaxes, calcium ions are displaced by magnesium ions, which causes the fibers to relax and elongate.

By blocking the cell membrane channels that allow calcium into the artery muscles, calcium channel blockers inhibit contraction of blood vessels. Inhibiting this process will lower the blood pressure, but it comes at a cost. Side effects of these drugs can include heart palpitations, dizziness, swelling in the feet and legs, fatigue, constipation, and headaches.

The action of calcium channel blockers reveals one of the major underlying causes of high blood pressure. An estimated 70% of the population isn't getting enough magnesium in their diet. This means that their muscles have a hard time relaxing, including the muscles that regulate blood pressure.

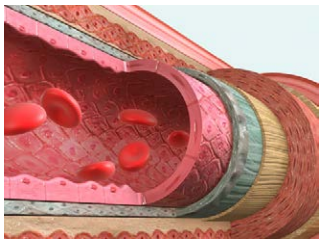
So, instead of trying to block the action of calcium with drugs, you can balance out muscular contraction and relaxation by getting a proper ratio of magnesium to calcium in your diet. Magnesium deficiency might by an underlying cause of hypertension if you have other symptoms of magnesium deficiency. These include muscle cramps, tension headaches, anxiety, nervousness, insomnia, sensitivity to minor irritations, and fatigue.

If signs of magnesium deficiency are present, start by taking 200 mg of magnesium a day. Increase this dose by 200 mg every 3-4 days until you notice improvement with less stress, greater relaxation and lowering of blood pressure. For most people 400-800 mg a day will be sufficient. If your stools become loose, you're taking too much.

In addition to bringing down your blood pressure, taking magnesium can reduce headaches, increase energy, aid concentration and focus, ease constipation, and reduce heart palpitations. So, why not give it a try?

Nervines, Adaptogens and Beta Blockers

Stress is another common cause of high blood pressure. Stress increases the activity of the sympathetic nervous system, which causes blood pressure to rise. The neurotransmitters responsible for this are epinephrine and norepinephrine. When these neurotransmitters attach to receptor sites in the circulatory system they increase blood pressure and heart rate, which moves more blood into the muscles to fight or flee from danger.



If you feel chronically stressed, your blood pressure will elevate. This is demonstrated by the fact that many people's blood pressure increases by 10 or 20 points the minute they walk into a doctors office, just because they are nervous. In contrast, relaxing and breathing deeply for five to ten minutes can drop your blood pressure by 20 points.

There are two basic types of receptors for epinephrine and norepinephrine. They are alpha receptors and beta receptors, which leads us to another class of drugs—alpha and beta blockers. Beta blockers are some the most commonly used drugs to treat high blood pressure. Blocking the action of these neurotransmitters doesn't actually reduce stress levels, and can produce a variety of side effects. These include dizziness, depression, slow heartbeat, asthmatic symptoms, impotence, short term memory loss, rapid changes in mood, the inability to concentrate or think clearly, and irregular heartbeat.

In addition to learning stress management skills there are natural remedies to help reduce the stress level and bring down blood pressure. Lobelia can be used as a natural alternative to beta blockers to temporarily reduce blood pressure. Lobeline, an alkaloid found in lobelia, acts as a natural beta blocker to relax blood vessels and lower blood pressure. At the same time, lobelia also causes the heart to beat slower, but with greater force, thus increasing blood flow to the extremities.

When blood pressure is too high, you can help bring it under control by taking 5-10 drops of a lobelia extract or tincture every five to ten minutes until the blood pressure comes into a more acceptable range. Larger doses can cause nausea and vomiting, so small, but frequent, doses work better.

Another powerful nervine that can help reduce blood pressure is mistletoe. This mildly toxic botanical is best used by professionally trained herbalists but can also be used as part of a nervine formula to reduce blood pressure. Other nervines known to help reduce stress and bring down blood pressure include

linden, passionflower, khella, black cohosh, and motherwort, which is also helpful for rapid heartbeat.

In addition to nervines, adaptogenic herbs may be helpful for high blood pressure caused by stress. These include ganoderma, and American and Korean ginseng.

It is important to understand, however, that nervines and adaptogens are not substitutes for finding ways to reduce one's stress level. It may be helpful to get counseling, learn meditation, practice relaxation and deep breathing, get moderate exercise, or adopt other long-term stress management skills.

Inflammation, Blood Pressure, and Cardiovascular Health

All the thousands of miles of blood vessels in your body are coated with a lining, just one cell thick, known as the endothelial lining. The endothelial cells produce nitric oxide (NO), a chemical messenger that helps blood vessels dilate. We'll discuss ways to increase NO next, but right now, let's focus on the health of endothelial lining. Dr. Sherry A. Rogers, MD, author of *The High Blood Pressure Hoax!*, believes that dysfunction of this endothelial lining is the primary factor in developing high blood pressure.

When this lining becomes inflamed, due to irritants (e.g. chemicals, heavy metals, infection) in the bloodstream, it will cause swelling in the artery wall. This immediately decreases blood flow. Inflammation also leads to the deposition of arterial plaque, which narrows blood vessels and further diminishes blood flow. And, as we have seen, diminished blood flow results in increased blood pressure.

The fat-soluble vitamins A, D, E, and K are all essential for the function of the endothelial lining and protecting cardiovascular health. These vitamins not only protect this membrane from oxidative stress and inflammation, they also inhibit the oxidation of cholesterol and the formation of arterial plaque. Vitamin C also inhibits arterial inflammation and plaque development.

The ***Oral Chelation Formula*** contains large doses of these vitamins and other nutrients that promote a healthy endothelial lining. Many people have found that blood flow improves dramatically, causing a permanent reduction in blood pressure, by taking this formula regularly. Try taking 2 tablets twice daily in place of a vitamin and mineral supplement for at least six months and see if it works for you.

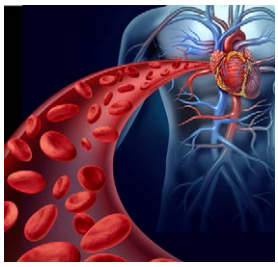
An alternative to the Oral Chelation Formula is the ***Cardiovascular Nutritional Program***. This contains high doses of the same nutrients along with omega-3 essential fatty acids and nutrients that inhibit the oxidation of cholesterol.

Other remedies that reduce cardiovascular inflammation that can help dramatically improve cardiovascular health while lowering blood pressure include alpha lipoic acid, Co-Q10, and omega-3 essential fatty acids. Alpha lipoic acid is particularly helpful if you also have high blood sugar levels as elevated blood sugar is a major cause of increased cardiovascular inflammation.

If you have gum disease, Co-Q10 is a good choice. There is a strong correlation between gingivitis, arterial inflammation and plaque formation. Co-Q10 helps reverse this process. It can also strengthen heart energy production, enabling the heart to be healthier at the same time.

Nitroglycerine and Nitric Oxide

As previously mentioned, the endothelial lining produces a chemical messenger called nitric oxide (NO), which dilates arteries and improves blood flow. The nitroglycerine pills used for angina create a release of NO, which is why they work to relieve angina. They cause a quick dilation of the arteries bringing more blood into the heart and reducing sensations of pressure and pain in the chest.



Recent research suggests that declining levels of NO may be the cause of essential hypertension (high blood pressure from unknown causes). The research suggests that increasing NO levels can help prevent, slow, or even reverse arterial plaque, thereby helping to keep arteries healthy and flexible. It can also help prevent thrombosis, the formation of blood clots in the circulatory system that cause heart attacks, strokes, and other problems.

Reduced blood flow from a lack of NO is also one of the causes of erectile dysfunction (ED) in men. In fact, many drugs for ED work by increasing NO levels.

Another benefit of NO is that increased levels can improve athletic performance by helping more blood (and oxygen) get to the muscles. Adequate levels of NO will help reduce muscle soreness after exercise.

There is a relationship between cardiovascular inflammation and NO levels. Inflammation decreases NO production, while increasing NO production decreases arterial inflammation.

There are two pathways for the creation of NO. The first depends on an amino acid called l-arginine. L-arginine supplements have been used to help cardiovascular disease, angina, intermittent claudication, dementia, erectile dysfunction, improve immune function, and increase athletic performance, as well as reduce blood pressure. Oxygen is required for NO synthesis from l-arginine and another amino acid, l-citrulline can help to recycle l-arginine and make it more effective.

The second NO pathway does not require oxygen. The body can also produce NO from nitrate (NO3) and nitrite (NO2). Nitrates are naturally found in many common vegetables, including lettuce, arugula, spinach, parsley, cabbage, and turnips. Beets, however, are one of the best sources.

Dietary nitrates are absorbed in the stomach and intestines. They are carried through the bloodstream to the salivary glands,

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which extract the nitrates and concentrate them in the salvia. Bacteria in the mouth convert the nitrates to nitrite, which is swallowed and converted into NO under the influence of hydrochloric acid.

A ***Nitric Oxide Boosting Formula***, which contains both l-arginine and nitrates from beets, is a good way to reduce blood pressure and improve overall circulation and health. It also contains many of the vitamins and nutrients that protect the endothelial lining and keep it healthy.

Circulatory Enhancing Herbs and Formulas

Pungent herbs like capsicum, ginger, and garlic tend to improve blood flow, especially peripheral circulation. This gets more blood into the extremities of the body, which gets these tissues the blood they need. What's especially helpful is that they not only have a moderate effect on reducing blood pressure (usually 10-20 point), but also help to regulate problems with low blood pressure.

A ***Circulatory Formula*** containing capsicum, garlic, ginger, and/or prickly ash can be taken regularly as a tonic to improve both blood flow and blood pressure. These formulas are also helpful for problems with cholesterol.

Hawthorn, ginkgo, and olive leaf are also helpful for blood pressure. Hawthorn aids heart function and ginkgo improves circulation in the brain. These herbs can be taken singularly or in combination to enhance cardiovascular health.

Water, Electrolytes, and Diuretics

Inflammation causes swelling in tissues, which also constricts blood flow. Edema and excess weight also constrict blood flow. In addition, the kidneys play a role in regulating blood pressure and poor kidney health and dehydration are contributing factors to blood pressure problems.

This is why doctors often prescribe diuretics for people with high blood pressure. Herbal diuretics, therefore, can also be helpful additions to a program to reduce high blood pressure. Particularly helpful are the non-irritating diuretics, which include dandelion leaf, goldenrod, and cleavers.

In his book *You're Not Sick, You're Thirsty*, Dr. F. Batmanghelidj, MD, explains how dehydration causes an increase in blood pressure. In fact, it's fairly easy to see if you understand that the diastolic pressure is dependent on the volume of blood in the circulatory system. If you're dehydrated, it reduces the volume of blood in your blood vessels, which causes them to contract and increases the pressure.

The reduced amount of water in the blood makes the sodium level in the blood higher, which is why medical doctors often recommend a reduction in salt intake. So drinking more water and taking an ***Herbal Potassium Formula*** may improve blood pressure.

We've covered some major strategies you can employ to help reduce high blood pressure naturally. A ***Blood Pressure Reducing Formula*** will address many of these issues. It contains l-arginine, olive leaf, coleus root, hawthorn berry, and goldenrod. Other factors that will help maintain healthy blood pressure include controlling your blood sugar, losing weight, exercising, getting enough sleep, and avoiding stimulants like caffeine.

Additional Help and Information

For more information about ways to naturally lower high blood pressure contact the person who gave you this newsletter. You can also consult the following resources:

Strategies for Health by Steven Horne

The High Blood Pressure Hoax by Sherry A. Rogers, MD

The Nitric Oxide (NO) Solution by Nathan S. Bryan, PhD and Jenet Zand, OMD