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Regulating Blood Pressure Naturally

High blood pressure (also known as hypertension) affects about 73 million Americans, or about 1 in 3 adults. There are many potential causes of hypertension, but not necessarily any symptoms. In fact, nearly 30 percent of the people who have high blood pressure don't even realize it.¹⁻³

In other words, just because you don't have symptoms doesn't mean you don't have high blood pressure. That's why it's called "The Silent Killer." And, make no mistake about it: high blood pressure is dangerous. It is the number one modifiable cause of stroke. Just lowering blood pressure reduces the chance of stroke by 35 to 40 percent. Other conditions, including heart attack and heart failure, can be reduced from 25 and 50 percent, respectively.⁴

In this issue of *Ask the Doctor*, we're going to talk about high blood pressure and an exciting natural treatment to lower blood pressure safely and effectively.⁵

Obviously changing blood pressure numbers depends, in a large part, on the choices we make everyday—how much we exercise, the foods we eat, and our lifestyle overall. But, for those times we need extra help, there is a new, clinically-studied supplement to help us along our path to better health and lower blood pressure.

Blood pressure guidelines from the National Heart, Lung, and Blood Institute ⁶			
Category	Systolic (mm/Hg)	Diastolic (mm/Hg)	Result
Normal	Less than 120	And Less than 80	Excellent!
Prehypertension	120-139	Or 80-89	Make changes in eating and drinking habits, get more exercise and lose any extra pounds.
Hypertension	140 or higher	Or 90 or higher	You have high blood pressure. Talk to your healthcare professional on how to control it.

Figure 1.

This chart (Figure 1) shows the latest guidelines for determining normal, prehypertensive, and high blood pressure. The combined population with blood pressure concerns may be over 170 million Americans!

Q. What exactly is blood pressure?

A. The measure of blood pressure consists of two parts, systolic and diastolic. Systolic pressure is the force of blood flow through an artery when the heart beats. Diastolic is the pressure within blood vessels when the heart rests between beats. When blood pressure numbers are written out, like "120/80," 120 is the systolic pressure and 80 is the diastolic pressure. The unit of measurement for blood pressure is millimeters of mercury, written as "mm/Hg."

Q. What is considered high blood pressure?

A. A person's blood pressure can naturally vary throughout the day—even between heartbeats.

However, if the numbers are consistently high, over 120 systolic and 80 diastolic, after of multiple visits to your healthcare practitioner, you may have either pre-hypertension or high blood pressure (hypertension).

Young arteries and arteries that are maintained through healthy diet and exercise are typically more elastic and unclogged. Blood flows through them easily and without much effort. However, as we age, our arteries become more prone to plaque buildup (due to diets high in saturated fat and sedentary lifestyles) and don't "flex" as well under pressure. The result is faster blood flow, all the time. Over the long term, it damages heart tissue, arteries, kidney and other major organs.

To get a better idea of high blood pressure, compare your arteries to a garden hose. When unblocked, a garden hose allows water to flow through it quickly and easily—without any real rush or stress. However, if you block the end of the hose with your thumb, closing it off even a little, water rushes out much more quickly.

For many years, high diastolic pressure was considered even more of a threat than high systolic pressure. That thinking has changed somewhat, but

high diastolic numbers could still mean organ damage in your body—especially for individuals under 50.⁴

Q. What causes high blood pressure?

A. The reasons why people develop hypertension are not always clear; yet there are lifestyle factors that contribute to high blood pressure that you can change:

Body type: Weight isn't always a reliable indicator of whether or not you'll have high blood pressure—but the type of weight is. Lean body mass—muscle—doesn't increase blood pressure levels the way that fat can. However, fat body mass, especially fat around your middle, can contribute to high blood pressure.

Sedentary lifestyle: Too often, many of us sit down all day at work, and then sit down all night at home. Over time, this inactivity usually leads to weight gain, making the heart work harder to pump blood through the body. In a way, it almost seems contradictory, but inactivity usually leads to higher heart rates.

Sodium intake: Sometimes it's hard to believe how much salt there is in processed foods. However, salt intake in itself is not necessarily bad. For people with a history of congestive heart failure, ischemia, and high blood pressure, sodium is definitely out. For those individuals, it leads to more water retention, which increases blood pressure. (Salt's effect on water retention is one reason that so many sports drinks have fairly high sodium content—the sodium in the drink prevents your body from sweating out too much water.) But, for healthy individuals, moderate salt intake, especially a mixed mineral salt like sea salt or Celtic salt (good salt should never be white) is fine.

Low potassium intake: Unlike sodium, potassium is a mineral which most Americans get too little of. Potassium helps regulate the amount of sodium in our cells, expelling excess amounts through the kidneys. Low levels of this mineral can allow too much sodium to build up in the body.

Heavy alcohol intake: Having three or more alcoholic drinks a day (two or more for women) nearly doubles an individual's chance of developing high blood pressure. Over time, heavy drinking puts a lot of stress on the organs, including the heart, liver, pancreas and brain.

Unhealthy eating: Eating a lot of processed or fatty foods contributes to high blood pressure. Adapting a diet that is rich in fruits and vegetables, whole grain products, fish, nuts and magnesium and potassium (like the Dietary Approaches to Stop Hypertension, known as the "DASH" diet) can bring it back down.

Smoking: If you smoke, stop. Smoking damages the heart and arteries—period. Nicotine constricts blood vessels, increases heart rate, and raises blood pressure. This in turn, increases hormone production and adrenaline levels, further stressing the body.

As if that weren't bad enough, the carbon monoxide in cigarette smoke replaces the oxygen in the blood, making the heart work even harder to make up the difference. Since the effect of a single cigarette can last for an hour, smoking throughout the day leads to continuously revved-up blood pressure.

Some of these factors might sound like a lot to overcome. The important thing to remember is that all of these behaviors are changeable. If you have high blood pressure, modifying any of these can significantly lower blood pressure as part of an overall plan.⁶

Q. What are the blood pressure numbers I should see?

A. Experts consider healthy blood pressure numbers to be 115/75 mm/Hg. The reason? They found that the risk of cardiovascular disease doubles at each increment of 20/10 mm/Hg over 115/75 mm/Hg. Even small jumps in blood pressure numbers increase the risk of stroke and heart attack.

Q. Okay, so other than diet, exercise and lifestyle changes, are there other natural ways or supplements I can use to lower my blood pressure?

A. Yes, in fact, you hear about some of them in the news all the time—fish oil, CoQ10, and garlic. As effective as these supplements are, they typically lower systolic pressure much more than diastolic pressure.⁸⁻¹⁵

However, there *is* a blend of scientifically and clinically studied natural ingredients that lower high blood pressure separately, and work even better when they're combined. This combination blend contains: dandelion leaf extract, lycopene, stevia extract, olive leaf extract and hawthorn extract.

Every one of these ingredients has been studied and recommended for years. But now, clinical trials on a supplement that combines them in one synergistic formula, show encouraging results in lowering both systolic **and** diastolic blood pressure.⁵

Let's take a look at each:

Stevia leaf extract	Supports healthy blood pressure levels according to clinical studies.
Hawthorne extract	Supports the heart and balances sodium and fluid levels.
Olive leaf extract	Scientifically shown to support healthy blood pressure.
Dandelion leaf	Helps reduce fluid retention.
Lycopene	Clinically shown to support arteries, circulation and heart health.

Dandelion leaf extract:

Dandelion (*Taraxacum officinale*) leaves provide a healthy supply of vitamins, much like spinach. In fact, although it has become the bane of North American gardeners and lawn owners, dandelion greens are a component of many gourmet salads.

Medicinally, dandelion has been used for centuries, dating back to ancient Greece. Leaves intended for medicinal use are harvested before flowering, to ensure the most nutrients.¹⁶

They are a very rich source of vitamin A, and contain vitamin D, vitamin C, various B vitamins, iron, silicon, magnesium, zinc and manganese, too. Dandelion leaves produce a diuretic effect in the body, similar to a prescription drug. Since one of dandelion leaf's traditional uses was the treatment of water retention, it's really not too surprising. Dandelion leaf is also rich in potassium—one of the vital minerals many Americans lack in their diet. So, even though it may act as a diuretic, it replaces more potassium than the body expels.¹⁷⁻¹⁹

The diuretic effect of dandelion can relieve hypertension by drawing excess water and sodium from the body and releasing it through the kidneys as urine. Getting rid of extra water and sodium allows the blood vessels to relax—lowering blood pressure.

Lycopene:

Lycopene is found mostly in tomatoes and processed tomato products, like pasta and pizza sauce. Related to beta-carotene, lycopene shows great antioxidant abilities among its many benefits. In fact, it shows even greater free-radical scavenging properties than beta-carotene, it's more famous cousin.²⁰ Healthy intakes of lycopene can guard against a variety of chronic conditions, including lowering LDL (bad) cholesterol, lowering homocysteine (a risk factor for atherosclerosis) levels and reducing blood platelet stickiness that can lead to clogged arteries. It's even being studied for its protective effect against prostate cancer.²¹⁻²³

And, for proof, you don't have to look too far to see the amazing effect lycopene intake can have on health. The Mediterranean diet provides an excellent example. Its high intakes of vegetables, (tomatoes, of course, playing a central role) fish, and whole grains improve cholesterol levels and lower blood pressure.²⁴⁻²⁶

The research on lycopene as a stand-alone nutrient has been compelling. A randomized clinical trial found that not having enough lycopene was associated with early thickening of the arteries.²⁷

So, it makes sense that other clinical trials, showed that higher intakes of lycopene frequently meant less thickening of arteries, and with a reduced risk of heart attack. In one study, the risk of heart attack was 60% lower in individuals with the highest levels of lycopene. In a multicenter study, similar results were found—men with the highest levels of lycopene had a 48% lower risk of heart attack.²⁸⁻³⁰

Stevia:

Stevia (*Stevia rebaudiana*) originated in South America, and is often used as a sweetener. Glycosides in stevia, particularly stevioside, give the plant its sweet flavor—anywhere from 100 to 200 times sweeter than sugar.

The leaf of stevia is considered the medicinal part of the plant. Research shows that extracts of the leaf relaxes arteries and helps prevent the buildup of calcium on artery walls—keeping them healthy and reducing blood pressure.³¹⁻³³

In a long-term, randomized, placebo-controlled clinical study, stevia reduced systolic and diastolic blood pressure. On average, participants' blood pressure reduced from baseline 150 mm/Hg to 140 mm/Hg systolic and 95 mm/Hg to 89 mm/Hg diastolic.³⁴

And, in another double-blind, placebo-controlled clinical study, stevia lowered blood pressure quite significantly—by an average of 14 millimeters of mercury in both systolic and diastolic readings. Those are impressive numbers!³⁵

Despite its role as a sweetener, stevia may have a side benefit to for those with hypertension—blood sugar regulation. Scientific studies show that extracts of stevia showed regulated blood sugar and reduced blood pressure.³⁶

A clinical study showed that stevia extract actually improved glucose tolerance by decreasing plasma glucose levels during the test and after overnight fasting in all participants.³⁷ Regulating blood sugar is very important for those with high blood pressure. When blood sugar levels are high, blood vessels are inflamed. Many people with diabetes have high blood pressure as well. In a paired, cross-over clinical study, stevioside (one of the compounds in stevia) reduced glucose levels in individuals with type 2 diabetes. Further scientific studies show that stevia works to control blood sugar levels by stimulating insulin secretion by the pancreatic beta cells. It shows great potential in treating type 2 diabetes as well as hypertension.^{38,39}

Olive leaf extract:

Olive leaf (*Olea europaea*) comes up again and again in scientific and clinical studies as having beneficial effects on hypertension. One of olive leaf's most beneficial compounds is oleuropein—the same compound that makes olive oil so helpful in reducing blood pressure. Here again, we have to look at the traditional Mediterranean diet, which features voluminous use of olives and olive oil. Not surprisingly, blood pressure is generally much lower in Greek and Italian populations.⁴⁰⁻⁴³

But it's not just the diet—scientific studies showed that oleuropein lowered blood pressure by relaxing the blood vessels and prevented build up of plaque in the arteries. Plus, whether in olive leaf extract or in olive oil, oleuropein works as an antioxidant as well.⁴¹⁻⁴⁷

Hawthorn extract:

Hawthorn (*Crataegus* spp. *oxyantha*) has been used since ancient times as a medicinal herb—even being mentioned by the Greek herbalist Dioscorides, in the first century AD. Traditionally, it has generally been used for support of the heart. Modern research points to bioflavonoid-like complexes in hawthorn leaf and flower that seem to be most responsible for its benefits on cardiac health, like blood vessel elasticity.

The bioflavonoids found in hawthorn include oligomeric procyanidins, vitexin, quercetin, and hyperoside. They have numerous benefits on the cardiovascular system. Hawthorn can improve coronary artery blood flow and the contractions of the heart muscle. Scientific studies show that the procyanidins in hawthorn are responsible for its ability to make the aorta and other blood vessels more flexible and relaxed, so that blood pumps more slowly and with less effort—sparing the cardiovascular system such a hard workout.⁴⁸

The procyanidins in hawthorn also have antioxidant properties—protecting against free radical cellular damage.

And, hawthorn may also inhibit angiotensin-converting enzyme (ACE).^{49,50} Angiotensin converting enzyme is responsible for retaining sodium and water, and may have roots in our evolutionary development. It influences blood vessel contraction and dilation, sodium and water balance and heart cell development—just about everything that has to do with blood pressure. This may have developed as a way of dealing with periods of drought and stress. By narrowing the blood vessels, the body could guarantee an adequate supply of blood and focus on repairing tissue.

Unfortunately, that can lead to real problems these days. Since many of us live in an industrialized society, and frequently have pretty sedentary lifestyles, conserving sodium just makes the conditions for high blood pressure that much worse.⁵¹

Like the other ingredients in this combination, hawthorn showed benefits on other body systems, too. In clinical and scientific studies, it not only lowered blood pressure, but also showed anti-anxiety properties and regulated blood sugar.^{52,53}

Q. What can I expect taking this herbal combination?

A. You should notice both systolic and diastolic numbers lowering in about two weeks. Clinical trials show that for pre-hypertensive and stage I (early hypertensive individuals), this combination of ingredients lowers both systolic and diastolic blood pressure.⁵

When you're taking herbs to support your blood pressure, it's important to keep it monitored so you have an accurate reading (and record) of your numbers. Getting a home blood pressure monitoring device can be very useful. These can retail for anywhere from \$30 all the way up to \$200, but buying one in the \$30 to \$50 range is money well spent. Consider taking the machine to your local doctor's office or fire department to have it tested for accuracy against a professional blood pressure monitor.

Tips for Accurate Blood Pressure Monitoring:

- Relax for about 5 to 10 minutes before measurement.
- If you have just come inside from cold outdoors allow yourself to warm up.
- Remove tight-fitting clothing and jewelry.
- Unless your physician recommends otherwise, use left arm to measure pressure.
- Sit, don't stand.
- Remain still and do not talk while using the monitor.

Q. Are there any side effects?

A. There were no side effects noted in the clinical trials. However, because of the diuretic effect of dandelion leaf extract, you may notice an increase in trips to the bathroom. It's important with any diuretic to make sure you don't get dehydrated, so you may want to drink more water during the day.

Conclusion:

A. High blood pressure doesn't happen overnight. As we get older, the likelihood of developing hypertension increases. And, stressful, fast-forward lifestyles, bad diets and no exercise conspire to raise our blood pressure.

In my own practice I have helped patients move toward a healthier lifestyle, including diet, exercise, and blood-pressure reducing supplements. They live better, more vibrant lives as a result, and their blood pressure normalizes. It really can happen—you can bring your blood pressure back to normal, and this combination of scientifically and clinically validated ingredients can help.



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