

Non-Drug Ways To Lower Blood Pressure



Changing What You Eat

DASH Eating Plan: DASH stands for **D**ietary **A**pproaches to **S**top **H**ypertension.

Food Group	Why?
Vegetables and Fruits (8-10 servings/day)	<ul style="list-style-type: none">• They're high in magnesium, potassium, calcium and fiber, which help lower blood pressure.• Fiber also helps regulate blood sugar and hunger.
Lean Protein, Like Fish and Poultry (Up to 6 servings/day)	<ul style="list-style-type: none">• Fish (especially fatty types, like salmon and sardines) contain omega-3 fatty acids, which support heart health and decrease inflammation.• High-quality eggs are another good source of protein.• Low-quality, fatty and processed meats increase inflammation, risk of cancer and risk of heart problems.³
Dairy (2-3 servings/day)	<ul style="list-style-type: none">• Moderate amounts of dairy may help lower blood pressure slightly.²• Yogurt made with <i>L. Helveticus</i> is especially helpful.
Nuts and Seeds (4-5 servings/week)	<ul style="list-style-type: none">• They're high in "good" fats (including omega-3), minerals, fiber and vitamin E.• Pick walnuts, almonds, macadamia nuts or hazelnuts for the most benefit.
100% Whole Grains (6-8 servings/day)	<ul style="list-style-type: none">• They're high in fiber, minerals and B vitamins.• They regulate hunger and may decrease risk of heart problems.• Try to eat whole grains by themselves, without added ingredients.⁴
Fats (2-3 servings/day)	<ul style="list-style-type: none">• New studies have found that eating healthy fats (from foods like nuts, seeds and olive oil) do not negatively affect blood pressure.• Trans fats, like the ones found in fried foods and shortening, should be avoided completely.^{1,2}
Sugar (Up to 5 servings/week)	<ul style="list-style-type: none">• Sugar can worsen inflammation and increase the risk of diabetes and heart problems.¹

BETTER TOGETHERSM

Group Health Cooperative of South Central Wisconsin (GHC-SCW)
MK18-55-1(4.21)FL

 **Group Health Cooperative**

of South Central Wisconsin

ghcscw.com

Non-Drug Ways To Lower Blood Pressure



Limiting Salt

The American Heart Association says that eating less than 1,500mg of sodium per day is “ideal” for those with high blood pressure and has called out “The Salty Six.”⁵ These six popular foods have high amounts of sodium:



Pizza: Reduce the amount of cheese and top with veggies instead of meat.



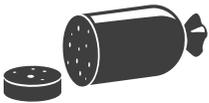
Sandwiches: Avoid sandwiches and burgers from fast food restaurants.



Bread (and other low sodium foods): Avoid eating too many servings of lower sodium foods throughout the day. It can add up!



Soup: One can of soup can contain almost a full day’s sodium! Be sure to check labels and choose lower sodium versions.



Deli Meats: Avoid lunch/deli meats or choose lower sodium versions.



Tacos: Seasoning packets, as well as taco and burrito fillings, can contain a lot of sodium! Make your own salt-free seasoning and use less cheese.

BETTER TOGETHERSM

Group Health Cooperative of South Central Wisconsin (GHC-SCW)
MK18-55-1(4.21)FL

 **Group Health
Cooperative**

of South Central Wisconsin

ghcsw.com

Non-Drug Ways To Lower Blood Pressure



→ Blood Pressure Super Foods⁶

Eat these foods to lower your blood pressure and your risk of heart disease!

- High-quality dark chocolate with at least 70% cocoa.
Eat about ¼ of a large chocolate bar daily to get the benefits of the cacao bean.
- Garlic: 1-2 cloves per day (in food, not in a supplement)
- Olive oil
- Onions and celery
- Soy protein (organic, non-GMO)
- Green tea
- Pomegranate and blueberries
- Cold water fish (salmon, sardines, herring, albacore tuna)
- Nuts and beans

→ Exercise⁷

Aim for 90 to 150 minutes of moderate exercise each week. Each episode should last at least 10 minutes, and be sure to include activities that include aerobic, strength and flexibility training. Examples of moderate aerobic exercise are: Brisk walking (> 3.0 mph), bicycling (< 10.0 mph), water aerobics, tennis, ballroom dancing, gardening. During moderate exercise, you should be able to hold a conversation. Find activities that you enjoy and ask a friend to join you; these things increase the likelihood you will stick with your new routine!

BETTER TOGETHERSM

Group Health Cooperative of South Central Wisconsin (GHC-SCW)
MK18-55-1(4.21)FL

 **Group Health
Cooperative**

of South Central Wisconsin

ghcsw.com

Non-Drug Ways To Lower Blood Pressure



Mind-Body^{8,9,10}

Meditation and yoga have been shown to reduce anxiety and stress as well as blood pressure. In one recent study, transcendental meditation was found to lower blood pressure as much as other non-drug treatments (exercise and weight loss). Mindfulness meditation is a different type of meditation that has been shown to lower blood pressure and risk of heart problems. Along with many other benefits, some studies have found that yoga and qigong reduces blood pressure. The GHC-SCW Complementary Medicine department offers yoga classes. To find the schedule and register for a class, visit ghcscw.com/wellness/sign-up-for-classes.

Deep Breathing⁶

Deep breathing, or "taking belly breaths," causes the nervous system to relax and lowers blood pressure if used correctly. The basic method is to slow the breath to 6 breaths per minute, and to make the exhalation (breath out) longer than the inhalation (breath in). Breathe in slowly for a count of 3-4 and breathe out slowly for a count of 6-7. Try to do a set of 30 of these 3 times each day. Some people use a biofeedback device to help them get the most out of deep breathing exercises. The device is a small tool that measures things like breathing rate, heart rate and muscle tension. It uses sensors, sounds and lights to teach you the breathing technique and tell you how well you're doing.



RESPeRATE (~\$300)

This FDA-approved device is recommended by the American Heart Association as a non-drug therapy for hypertension. It's been shown to reduce blood pressure by 14mmHg (systolic) and 8mmHg (diastolic). It's small in size and includes pictures on the screen to make it more user friendly.



EmWave-Heartmath (~\$200-\$500)

These devices help regulate breathing, increase heart rate variability and may also help with anxiety, sleep and focus. There are a few devices available in different sizes and prices. All of them connect to a home computer or tablet to track your progress. Visit heartmath.com to learn more.

BETTER TOGETHERSM

Group Health Cooperative of South Central Wisconsin (GHC-SCW)
MK18-55-1(4.21)FL

 **Group Health
Cooperative**

of South Central Wisconsin

ghcscw.com

Supplements^{6,11}



Coenzyme Q10

Coenzyme Q10 is found in every cell of the human body. Studies have linked low coenzyme Q10 with heart problems. Certain drugs can lower the coenzyme Q10 level, such as statins, antidepressants (tri-cyclic type) and metformin. Taking a supplement can lower blood pressure by as much as 16mmHg (systolic) and 10mmHg (diastolic). Consider taking a 100mg tablet 2 times daily. Take it with food that contains some fat to help with absorption, and be aware that it can take up to 4 weeks to see a drop in blood pressure.

Magnesium

A strong link has been found between magnesium deficiency and high blood pressure and, for some people, taking a magnesium supplement may help. Magnesium helps to relax the blood vessels, which lowers blood pressure. The best way to get more magnesium is to eat foods rich in this mineral, like spinach, almonds, pumpkin seeds, avocados and cultured yogurt. If you take a supplement, choose magnesium glycinate as this formulation is less likely to cause diarrhea. Dose: 6mg/kg (about 400mg for a 150lb person) per day.

Vitamin D

People with low vitamin D (< 40) are three times more likely to have high blood pressure. Low vitamin D also raises the risk of a heart attack more than twofold. It's not clear how much a vitamin D supplement can lower blood pressure, but if your level is less than 40, you could consider taking 1,000 IU of vitamin D3 daily until your level is above 40. You can expect 1,000 IU of vitamin D to raise your level by about 10 points in about 4 weeks.

Melatonin

Melatonin is a hormone commonly used to help with sleep; it can be helpful with nocturnal (nighttime)

blood pressure, too. Blood pressure is usually higher during the day and “dips” at night. Some people's blood pressure does not “dip” during the night, and this increases the risk for high blood pressure and other heart problems. Consider taking 3-5mg of controlled-release melatonin about an hour before bedtime. It can take up to 4 weeks to see a drop in blood pressure.

Potassium

The American Medical Association suggests that people with hypertension eat 3,500mg-5,000mg/day of potassium, unless they have chronic kidney disease. Studies have shown that potassium can lower blood pressure by about 8mmHg (systolic) and 5mmHg (diastolic). The best way to get more potassium is to eat foods rich in this mineral, like broccoli, bananas, squash, avocados, beets and oranges. Many blood pressure medicines can cause the potassium to go up or down as well, so ask your provider or pharmacist what to expect from your medicine. Be sure to tell your provider if you take a potassium supplement. It's important for blood potassium levels to be checked regularly to make sure your level doesn't get too high, which can cause problems with heart rhythm.

Vitamin C

Vitamin C has been shown in many studies to significantly lower blood pressure. Scientists think vitamin C lowers blood pressure through its antioxidant properties, by improving function of the blood vessels and by increasing urination. Consider taking 500mg per day of vitamin C to get these benefits.

BETTER TOGETHERSM

Group Health Cooperative of South Central Wisconsin (GHC-SCW)
MK18-55-1(4.21)FL

 **Group Health
Cooperative**

of South Central Wisconsin

ghcsw.com

Summary



→ Eating

- Reduce sodium.
- Eat lots of fruits and vegetables.
- Include “blood pressure super foods” in your meals.

→ Exercise

- Do 90-150 minutes of moderate exercise each week. Find activities that make it fun!

→ Mind-Body

- Try transcendental or mindfulness meditation to reduce anxiety and blood pressure.
- “Belly breathing” for blood pressure lowering: Breathe in slowly for a count of 3-4 and breathe out slowly for a count of 6-7. Try to do a set of 30 of these 3 times each day.

→ Supplements

- Coenzyme Q10 tablets: 100mg two times daily
- Melatonin controlled-release: 3-5mg daily, 1 hour before bedtime
- Vitamin C: 500mg daily
- Potassium: 3,500mg-5,000mg/day (not suggested for those with chronic kidney disease).
- Magnesium: Eat foods rich in this mineral. Take a supplement if your provider says you need one.



BETTER TOGETHERSM

Group Health Cooperative of South Central Wisconsin (GHC-SCW)
MK18-55-1(4.21)FL

 **Group Health
Cooperative**

of South Central Wisconsin

ghcsw.com

References



1. Lucan SC, O'Keefe JH, DiNicolantonio JJ. The Evidence for Saturated Fat and for Sugar Related to Coronary Heart Disease. *Prog Cardiovasc Dis* 2016 Mar-Apr; 58(5): 464-72.
2. Chiu S, Bergeron N, Williams PT, Bray GA, Sutherland B, Krauss RM. Comparison of the DASH (Dietary Approaches to Stop Hypertension) diet and a higher-fat DASH diet on blood pressure and lipids and lipoproteins: a randomized controlled trial. *Am J Clin Nutr* 2016 Feb; 103(2): 341-7.
3. Haskins CP, Henderson G, Champ CE. Meat, eggs, full-fat dairy, and nutritional boogeymen: Does the way in which animals are raised affect health differently in humans? *Crit Rev Food Sci Nutr* 2018 Apr 19:1-23.
4. Harvard TH Chan School of Public Health. The nutrition source: Whole grains. <https://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/whole-grains/>. Accessed May 15, 2018.
5. American Heart Association. The salty six infographic. <https://healthyforgood.heart.org/eat-smart/infographics/salty-six-infographic>. Accessed May 15, 2018.
6. Rakel David MD, in association with the University of Wisconsin Integrative Health Program. Non-drug ways to promote health by lowering blood pressure: Patient handout. January 2009.
7. American Heart Association. Moderate to vigorous exercise: What is your level of intensity? http://www.heart.org/HEARTORG/HealthyLiving/PhysicalActivity/FitnessBasics/Moderate-to-Vigorous---What-is-your-level-of-intensity_UCM_463775_Article.jsp#.Wv3IXJWG-Uk. Accessed May 17, 2018.
8. Ooi SL, Giovino M, Pak SC. Transcendental meditation for lowering blood pressure: An overview of systematic reviews and meta-analyses. *Complement Ther Med* 2017 Oct; 34:26-34.
9. Park SH, Han KS. Blood Pressure Response to Meditation and Yoga: A Systematic Review and Meta-Analysis. *J Altern Complement Med* 2017 Sep; 23(9): 685-695.
10. Chu P, Gotink RA, Yeh GY, Goldie SJ, Hunink MG. The effectiveness of yoga in modifying risk factors for cardiovascular disease and metabolic syndrome: A systematic review and meta-analysis of randomized controlled trials. *Eur J Prev Cardiol* 2016 Feb; 23(3): 291-307.
11. Peng Wong A, Walid Kassab Y, Latiff Mohamed A, Mohammed Abdul Qader A. Beyond conventional therapies: Complementary and alternative medicine in the management of hypertension: An evidence-based review. *Pak J Pharm Sci* 2018 Jan; 31(1): 237-44.

BETTER TOGETHERSM

Group Health Cooperative of South Central Wisconsin (GHC-SCW)
MK18-55-1(4.21)FL

 **Group Health
Cooperative**

of South Central Wisconsin

ghcsw.com