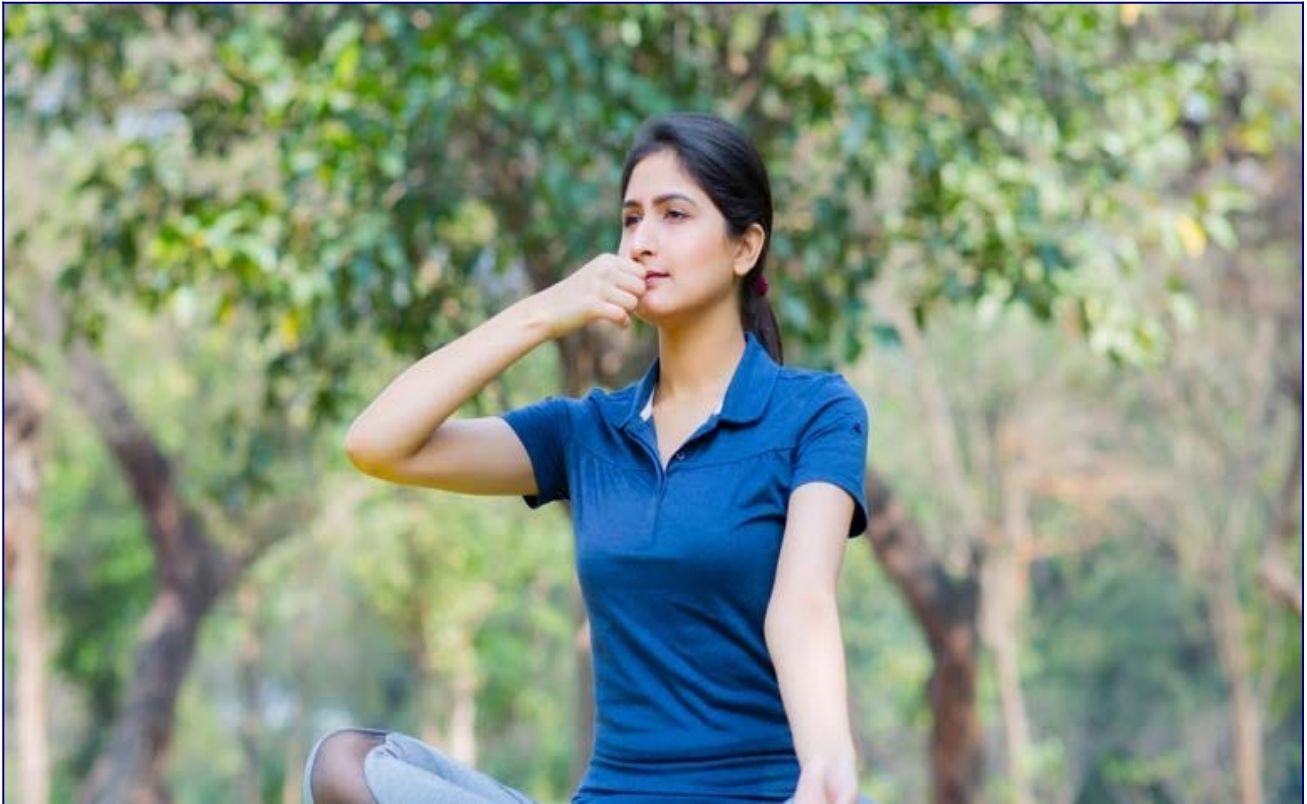


Breathing Exercise Could Reduce Blood Pressure

Lower your blood pressure and strengthen your respiratory muscles in just 30 breaths a day using this simple high-resistance breathing workout.



[Dr. Joseph Mercola](#)



STORY AT-A-GLANCE

- High-resistance inspiratory muscle strength training (IMST) rivals medication and lifestyle changes for lowering blood pressure
- People doing the high-resistance breathing exercise for six weeks had an average reduction of 9 mmHg in systolic blood pressure; the daily training consists of 30 breaths a day

- The breathing exercise takes just five to 10 minutes a day, with benefits noticeable within two weeks
- It involves the use of an inhaler-like device, which provides resistance as you take a breath, causing your respiratory muscles to get a workout
- Other breathing techniques lower blood pressure by increasing the bioavailability of nitric oxide and evoking your body's built-in relaxation response

A simple breathing exercise that strengthens respiratory muscles could be beneficial for the 47% of U.S. adults who have high blood pressure.¹ The exercise, known as high-resistance inspiratory muscle strength training (IMST), worked so well that it rivaled medication and lifestyle changes for lowering blood pressure.²

High blood pressure is a significant burden to public health, as it's a major risk factor for coronary, cerebrovascular and peripheral vascular diseases, along with heart attack and stroke.³ More than 1.28 billion people worldwide⁴ suffer from the condition, with most offered medications as the first line of treatment.

High blood pressure drugs carry “burdensome” side effects that often cause people to stop taking them, researchers noted in *The Journal of Alternative and Complementary Medicine*.⁵ Further, about 46% of adults with high blood pressure don't know that they have it, putting them at increased risk of related heart, brain and kidney diseases.⁶

Breathing exercises could again provide an answer, as it takes just minutes a day to glean the benefits. Even for those without high blood pressure — or who don't know they're at risk — spending five minutes on focused breath training offers myriad benefits with virtually no downside.

Five-Minute Daily Breathing Workout Lowers Blood Pressure

For the study, researchers from the University of Colorado Boulder and the University of Arizona split 128 adults aged 18 to 82 years into two groups. One group did high-resistance IMST training consisting of 30 breaths a day for six weeks.

The other group did a low-resistance sham breathing exercise for the same period.⁷ Conventionally, IMST is used for recovery in people who have been on a ventilator, as well as to support breathing in those with asthma, chronic obstructive pulmonary disease and other breathing disorders.⁸

While no changes in systolic blood pressure (SBP) or diastolic blood pressure (DBP) occurred in the placebo group, those doing the high-resistance breathing exercise had an average reduction of 9 mmHg in systolic blood pressure.⁹

According to study author Daniel Craighead, the reduction is similar to what may be achieved with medication and potentially more effective than weight loss or reducing sodium in your diet. He told *Insider*, “People can expect fairly rapid results. We would expect that if you went longer, blood

pressure would go down even more.” He recommended the technique for those with high blood pressure and those hoping to prevent it:[10](#)

“What’s really exciting about this is that it’s helpful for a wide range of adults. People with blood pressure at an unhealthy level could stand to benefit from adding this to their routine now. But someone could start in their thirties and stick to it for years to help delay or prevent hypertension.”

The breathing exercise takes just five to 10 minutes a day, with benefits noticeable within two weeks. It involves the use of an inhaler-like device, which provides resistance as you take a breath, causing your respiratory muscles to get a workout. While the trial used a \$500 device, less expensive models are commercially available right now.[11](#)

According to the study, “These compiled findings from multiple independent trials provide the strongest evidence to date that high-resistance IMST evokes clinically significant reductions in SBP and DBP.”[12](#)

Also noteworthy, the participants did the breathing exercises for six weeks, then took a six-week break. When their blood pressure was tested after the break, it was nearly as low as it was immediately after the exercise session ended. The researchers are now looking into whether a “maintenance dose” of the breathing exercise could help extend the blood pressure reductions even longer.[13](#)

Controlled Breathing Calms Your Brain, Relieves Stress

One way that IMST appears to be beneficial is by toning and strengthening the muscles used in breathing. Past research also found that high-resistance IMST lowered blood pressure and improved endothelial function in middle-age and older adults with above-normal blood pressure. The breathing technique increased the bioavailability of nitric oxide, helping widen arteries, and reduced oxidative stress.[14](#)

Stress is another factor in high blood pressure and relieving it may offer some relief. This is another mechanism by which controlled breathing may help blood pressure. The way you breathe — whether fast or slow, shallow or deep — is intricately tied to your body as a whole, sending messages that affect your mood, your stress levels and even your immune system.

In early 2017, researchers discovered breathing may directly affect your brain activity, including your state of arousal and higher-order brain function.[15](#) As such, controlled breathing exercises may modify stress coping behaviors and initiate appropriate balance in cardiac autonomic tone, which is a term that describes your heart’s ability to respond to and recover from stressors.[16](#)

Also intriguing is a 2016 study published in BMC Complementary and Alternative Medicine, which found yogic breathing reduces levels of proinflammatory biomarkers in saliva.[17](#) Controlled breathing triggers your relaxation response, activating your parasympathetic nervous system, which in turn may slow down your heart rate and digestion while helping you feel calm.

By evoking your body's built-in relaxation response you can change the expression of your genes for the better, including in areas related to energy metabolism, mitochondrial function, insulin secretion, the inflammatory response and stress-related pathways.[18](#)

Slow breathing also reduces blood pressure and enhances baroreflex sensitivity, a mechanism to control blood pressure via heart rate, in people with high blood pressure.[19](#) The finding was so strong that researchers suggested slow breathing “appear[s] potentially beneficial in the management of hypertension.”[20](#)

Which Breathing Techniques Are Best?

It's possible to incorporate a variety of beneficial breathing techniques into your day to propel yourself toward optimal health — healthy blood pressure levels included. One of the most basic breathing techniques is to make sure you're always breathing through your nose. Mouth breathing tends to promote hyperventilation, which decreases tissue oxygenation.

Mouth breathing also results in diminished levels of CO₂ in your body and a decreased ability to filter toxic pollutants from the air. Mouth breathing can also elevate your heart rate and blood pressure, sometimes resulting in fatigue and dizziness.[21](#)

The Buteyko Breathing Method is one way to reverse health problems associated with improper breathing, the most common of which include over-breathing and mouth breathing. When you stop mouth breathing and learn to bring your breathing volume toward normal, you have better oxygenation of your tissues and organs. The Buteyko Breathing Method allows you to retain and gently accumulate CO₂, which calms breathing and reduces anxiety:

1. Take a small breath into your nose, followed by a small breath out
2. Hold your nose for five seconds in order to hold your breath, and then release your nose to resume breathing
3. Breathe normally for 10 seconds
4. Repeat the sequence

Box breathing is another form of breath control that triggers the parasympathetic nervous system to help manage stress. This technique, also called square breathing or four-square breathing, is used by Navy SEALs to help reduce stress in high-pressure situations.

It involves nose breathing to slow over-breathing and raise CO₂ levels to balance oxygenation. To begin practicing box breathing, get in a quiet place where you can concentrate and maintain good posture. Work up to using the technique for five-minute increments:[22](#)

- Step 1 — Begin by exhaling the air out of your lungs to a slow count of four. Some recommend exhaling through your mouth, others through your nose.
- Step 2 — Hold your breath for a slow count of four.

- Step 3 — Inhale slowly to a slow count of four through your nose, keeping your back straight and breathing through your abdomen so your shoulders do not rise.
- Step 4 — Hold your breath for a slow count of four and return to step 1.

You can also experiment with other forms of controlled breathing to see if it makes a difference for you. Here are several examples of yogic breathing compiled by the Journal of Ayurveda and Integrative Medicine:[23](#)

- Nadishodhana/Nadishuddhi (Alternate nostril breathing) — With your right thumb, close the right nostril and inhale through left nostril. Closing the left nostril, exhale through right, following which inhalation should be done through right nostril. Closing the right nostril, breath out through left nostril. This is one round. The procedure is repeated for desired number of rounds.
- Suryanuloma Viloma (Right uninostril breathing) — Closing the left nostril, both inhalation and exhalation should be done through right nostril, without altering the normal pace of breathing.
- Chandranuloma Viloma (Left uninostril breathing) — Procedure similar to Suryanuloma Viloma, breathing is done through left nostril alone, by closing the right nostril.
- Suryabhedana (Right nostril initiated breathing) — Closing the left nostril, inhalation should be done through right nostril. At the end of inhalation, close the right nostril and exhale through the left nostril. This is one round. The procedure is repeated for desired number of rounds.
- Ujjayi (Psychic breath) — Inhalation and exhalation are done through the nose at normal pace, with partial contraction of glottis, which produce light snoring sound. One should be aware of the passage of breath through the throat during the practice.
- Bhramari (Female honeybee humming breath) — After a full inhalation, closing the ears using the index fingers, one should exhale making a soft humming sound similar to that of a female honeybee.

Lowering Blood Pressure With Herbs and Magnesium

Breathing techniques are important but they shouldn't be considered a panacea. Optimizing your blood pressure requires a comprehensive approach for best results. For instance, imbalanced gut microbes, known as gut dysbiosis, play a role in high blood pressure.[24](#) A strong link between sleep quality and a type of high blood pressure known as resistant hypertension, which does not respond to typical drug-based treatments, has also been found.[25](#)

Getting a good night's sleep, eating right, exercising, addressing stress and avoiding environmental toxins like air pollution are all important for healthy blood pressure. Eating a diet rich in magnesium could also reduce the risk of high blood pressure,[26](#) as can herbs and spices.

In a controlled feeding study of people with known risk factors for heart disease, eating 6.5 grams of 24

herbs and spices — such as basil, thyme, cinnamon and turmeric²⁷ — each day lowered systolic and diastolic blood pressure.²⁸ Study author Penny Kris-Etherton said in a news release:²⁹

“I think it’s really significant that participants consumed an average American diet throughout the study and we still found these results. We didn’t decrease sodium, we didn’t increase fruits and vegetables, we just added herbs and spices. It begs the next question that if we did alter the diet ... how much better would the results be?”

As we’ve seen time and again, whether you’re interested in lowering your blood pressure or simply keeping it in a healthy range, small daily habits — like engaging in breathing exercises and eating herbs and spices — add up to big changes for your health.

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